BARGAIN BASEMENT ONLINE RETAIL SHOP APPLICATION: GIVE AND GET SOCIAL ENTREPRENEURSHIP PROJECT

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BARGAIN BASEMENT ONLINE RETAIL SHOP APPLICATION: GIVE AND GET SOCIAL ENTREPRENEURSHIP PROJECT

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A project report submitted in partial fulfilment of the requirements for the award of Bachelor of Science (Honours) Software Engineering

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September 2022

DECLARATION

I hereby declare that this project report is based on my original work except for citations and quotations which have been duly acknowledged. I also declare that it has not been previously and concurrently submitted for any other degree or award at UTAR or other institutions.

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ABSTRACT

Bargain Basement, a charity retail outfit that collects preloved items from the public and resell them at very low prices in brick-and-mortar stores and on its website. However, the daily operation of Bargain Basement physical outlets has affected by the Covid-19 pandemic. Additionally, the current Bargain Basement website has limited functions as an online platform for second-hand sales, which has limited the exposure and awareness of Bargain Basement project to public. To support Bargain Basement project, a cross-platforms online retail shop application was proposed with the development of a mobile-based application for the customers to place orders and a web-based management system for the staffs to manage the online shop. The mobile application provides offer making feature that allows customers bargain with sellers to buy their products at lower prices, while the web-based management system provides features such as product batch uploading and automatic reporting that can help Bargain Basement better manage the online shop. Evolutionary prototyping methodology was chosen as the software development methodology in this project. The requirements were gathered by conducting an interview with the staff of Bargain Basement and also by distributing a questionnaire in the planning and requirement gathering phases. After that, the prototype implementation phase will go through three iterations, and the system prototype was developed at the first iteration and refined at the end of each iteration. After completed the development process, the usability of the system was tested by 12 users, and 90 scores were obtained as the result. In conclusion, a crossplatforms online retail shop application was developed at the end of this project and all the objectives were achieved.

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LIST OF SYMBOLS / ABBREVIATIONS

API	Application Programming Interface
CRUD	Create, Retrieve, Update, and Delete
HTTP	Hypertext Transfer Protocol
LR	Literature Review
MVC	Model-View-Controller
SDLC	Software Development Life Cycle
UAT	User Acceptance Test
WBS	Work Breakdown Structure

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CHAPTER 1

INTRODUCTION

1.1 Introduction

This project's main purpose is to develop an online retail shop mobile application with its web management system for Bargain Basement. In this chapter, the background of Bargain Basement is first discussed, then following by the problem statement, project objectives, project solution, project approach and lastly the scope of the project.

1.2 Background of Bargain Basement

Bargain Basement is a charity retail establishment run by the IOI's foundation, Yayasan Tan Sri Lee Shin Cheng (Yayasan TSLSC). The executive director of Yayasan TSLSC, Datin Joanne Wong started the charity outlet in early 2016 when her house was full of items she was not using. When she was trying to find a way to handle these used items with good condition, she decided to offer an arrangement to resell the pre-loved items and turn them into money for charity and it becomes today's Bargain Basement project.

The primary objective of this project is to gather the used items and make it profitable, all the proceeds gain from the pre-loved items will be contributed to the society and various charities. Since its establishment in June 2016, they have donated more than RM260,000 to 20 various charities. Bargain Basement promote 3Rs (Reduce, Reuse, and Recycle), and provides valuable items to the community with lower price, very purchase of customers is a donation to the underprivileged. Bargain Basement provides drop off points in their physical stores, people can go to their branches to donate their preloved goods, such as clothing, household items, decorations, books that will be examined and valued by their staffs before being placed on shelves for sale. These items will be sold to the public at a low price, and the net proceeds from all sales will go to various charities.

To-date, there are two physical outlets for Bargain Basement: IOI City Mall (Putrajaya) and IOI Mall (Puchong) respectively. However, the Covid-19

pandemic has affected the normal operation of their physical stores. They are not allowed to operate their stores during lock-down period, thus, they started to sell on their products through their website, Bargainbasement.com, and other online platforms such as Carousell and Facebook.

After interviewing with the project manager of Bargain Basement and doing research on the website, some problems found on their current website which directly and indirectly affecting the sales performance. The purpose of this project is to develop an online retail shop that consists of mobile application for customer usage and a web-based management system for the staffs to manage the store. This proposed system will provide a better customer experience for the users and enable the staff to manage the orders and the inventory in a more effective and efficient way.

1.3 Problem Statement

i. Limited exposure and awareness of Bargain Basement project to public with only running a website

Bargain Basement has a limitation in promoting their project to public and attract more community involvement by using a single digital channel which is their web application. Due to the rising of smartphone usage in worldwide, mobile application is being a most important channel that helps to improve the marketing reach of the e-commerce business. According to Neti (2018), many businesses nowadays are running both websites and mobile application because this can give them the best opportunity to expand their business to new customer groups. By developing a mobile application that can run on both Android and iOS phones, it could help in expanding the group of audience for the Bargain Basement project and getting more communities involved in the project.

ii. Current Bargain Basement website is not user-friendly with limited functionality as an online platform for second-hand sales.

Bargain Basement website has limited functionality that only fulfills the basic needs of an e-commerce website. When customers want to

purchase items on the website, they are only allowed to browse the products, add the item into their shopping cart, and perform checkout. To enhance customers' shopping experience, there are some extra features which is important for a pre-loved selling platform. There are many pre-loved platforms like Carousell and eBay. Apart from the basic features of a usual e-commerce website, Carousell and eBay provide some extra features such as allow the customers to make offer, contact the seller by live chat instead of email, and share the item to others through social media. These three features are the key features that are commonly adopted by most of the second-hand selling platform, but not yet implemented on Bargain Basement website.

a) Lack of opportunity for price negotiation

Research done by Alam (2014) shows that people are most concerned about product price and product risk when buying second-hand goods. When people are looking at the used items, they are expecting the price to be much lower than the original price. In fact, different people will have different perspective on the pricing of the second-hand items based on its conditions. Sometimes buyers may feel that the price set by the seller is too high and decide not to buy. Thus, it is important to have a bargaining function to allow users to have a chance to negotiate with seller. By creating a bargain environment, customers are more willing to repurchase from the same store and it helps to increase the sales of the store as well.

b) Lack of real-time communication channels with sellers

Other than price, people are also concern about the product risks which is more about the quality and condition of the product (Alam, 2014). When customers shop online, they cannot see the actual conditions of the items as they can in a physical outlet. It is hard for customers to determine the quality of a product based on the images and descriptions posted by the seller. Thus, they need to contact with the seller to clarify it before purchasing the items. Bargain Basement website is providing an enquiry form for customers to fill it and submit to the staffs if they are having any problems, but it is not specifically for the product enquiry. Yet, it is not an efficient way for customers to asking only some simple questions. They have to fill up all the required information in the form and they need to wait for a long time to get the respond from the seller. Therefore, it is better for the online store to provide an alternative way for customers to connect with seller more quickly and easily, thus increasing customer satisfaction.

c) Cross-sharing and cross-posting

Next, social sharing button is very a common and useful function on all e-commerce platforms. It not only makes it easier for customers to share products, but also helps in promoting their businesses. A social share button can help customers who want to post a product on their social media to skip the steps from copying, pasting, and posting the web address of the product. With the social sharing feature, it is easier for customers to share the products and let more people know about this charity project.

iii. Ineffective and inefficient inventory management

Bargain Basement do not have a centralized inventory management system to manage the inventory of all products that they received. According to the interview with the staff, they are currently using a free stock-recording mobile application as their inventory system. However, the inventory mobile app is only used to record of the products that are been kept in the storeroom. All the products that are selling on both physical and online shop will not be recorded in the inventory system.

The overview of the workflow for the staffs in managing the items received will be illustrated in Figure 1.1. Whenever there is a new coming product that has been filtered by the staffs, if they want to put the product into the storeroom, they will register it into the inventory

mobile app. Else, if they want to put the new coming product on sale either in the physical store or online store, they will not register it into the inventory system. Besides, when they want to put an item that has been stored in the inventory system to sale, they have to first remove the item from the inventory record.

Obviously, this is not a good practice in managing the inventory of a retail shop. They exclude the managing of the items that are currently on sale and only store the record for the items in the storeroom. They will face problems when they want to track the inventory of the items that put in their outlets. For example, the staffs are unlikely to know when there is any loses of items in their store because there is no record of the listed items can be referred.

In addition, the inventory system of the Bargain Basement website does not support a batch upload function that allow the staffs to upload a batch of products onto the online shop at once. The staffs are required to manually register the products one by one, which is inefficient and time consuming when there is a batch of products waiting to be uploaded. A centralized inventory system not only can make the inventory tracking and tracing process easier but also helps the staffs have a better insight of their stock status by generating an inventory report.



Figure 1.1 Workflow of Managing Items Received by the Staffs

iv. Limited products are available on the website

Since Bargain Basement have no centralized inventory management system to handle all the products, this further complicates the stock recording and handling for sold items. Thus, the staff are forced to distinguish between the goods to be sold in physical and online stores to avoid any mishandling of inventory. The items that put on the website are usually stored in the storeroom and the staffs will also selectively update the items that appear in the outlet which are easy to trace such as electric appliances to the website. Once these selected big items are sold in the outlet, the staff can still recognize it and they can manually remove it from the listing of the online shop. However, the separation between online and physical shop will limit the number of products can be put on sale in their website. Most of the items that are displayed in the physical shop will not be put on their website.

v. Lack of periodic and detailed reporting

Bargain Basement website does not implement with a reporting function that can generate business reports such as inventory report, sales report, performance report, etc. In fact, these reports are the key for a business to monitor and analyze their business performance and help in identifying the potential issues that may affecting the growth of business. Without business reports, it is hard for the team to evaluate the performance of the online shop and thus failed to define future growth opportunities.

According to Chan (2019), business reports will give valuable information which is helpful for the business to develop future forecasts, marketing strategies, and strategic decision making that can lead to the growth of business. For example, the product performance reports can help Bargain Basement to identify which categories of products are the most popular based on sales volume and the number of customers viewed and are likely to help bring in significant revenue to the online shop. Based on the information provided, the staffs can more emphasize on the popular group of products and upload more products from the categories, thus increase the number of sales of the online shop.

1.4 Project Objectives

- i. To **analyse** user requirements by conducting interview and LR on existing pre-loved platform-bases business and applications.
- To develop a cross-platforms online retail shop application to support Bargain Basement project.

- Web-based management system for the Bargain Basement staffs to manage the online shop.
- Mobile-based application that serves as a platform for people to browse and purchase the second-hand goods.
- iii. To evaluate the usability of the application by scoring 80 out of 100 in System Usability Scale (SUS) test.

1.5 Project Solution

To solve the problems faced by Bargain Basement, a cross-platforms online retail shop application is developed. This application consists of a web-based management system for the admins to manage and monitor the operation of the online shop and a mobile application for the customers to browse and buy the products.

This online shop application has the functions and features listed below to solve the problems stated:

i. Allows customers to make offer for products

The customers can choose to make offer for the products listed on the online shop if they think the price labelled is too high for them. This function will provide them an opportunity to bargaining the price and they have given the chance to purchase the items with a price they satisfied with. They are required to enter the price they want to offer before submitting the request to the staffs. Once their offer is approved by the staffs, the item will be added to their shopping cart, and they can buy the item with a lower price.

ii. Allows customers to contact seller in a faster way

The customers are able to contact the seller through the in-app chat system. Customers can approach to the seller for any enquiries by sending text messages from the mobile app. The admins can also reply to the customers' enquiries by sending text messages or images from the web app.

iii. Allows customers to share the products on social media

The customers can share the products to their friends and family through social media. They can click a sharing button and the system will direct them to the posting page on the social media with the product link copied. This function can help to ease the way of sharing their products by skipping the steps of copy and paste of the link. This will help in promoting the charity project since the sharing function are easy to be used by customers.

iv. Allows administrators to upload a batch of products at once

The admins can upload a batch of products by importing a CVS file into the system. The CVS file must contain all the necessary data of the products to be uploaded and all the data fields must be arranged orderly. This function will help to reduce the time taken and human force when the admins required to upload many products onto the online shop.

v. Auto reporting feature

The system will retrieve the necessary data from the database and automatically generate business reports which can provide some useful information for the admins to better monitor the performance of the online shop. The business reports including sales summary reports, daily sales reports, monthly sales reports, product upload history, inventory summary reports, and product performance reports.

1.6 Project Approach



Figure 1.2 Evolutionary Prototyping Modal (Dennis, Wixom and Tegarden, 2013)

As seen in Figure 1.2, the development approach to be used throughout this project is evolutionary prototyping methodology. Evolutionary prototyping methodology is an iterative and incremental model that continuously deliver working prototypes to clients and the enhancement of the prototype will be done based on their feedback (Tegarden, Dennis and Wixom, 2013). Unlike the traditional development methodologies like waterfall and v-model, the evolutionary prototyping methodology does not request the developers to gather and define all the user requirements clearly in the early stage of the development process. Evolutionary prototyping methodology emphasis on the fast development of the working prototype, that the first prototype that only implemented with minimum features will be developed and it will be sent to the clients shortly. The feedback that collected from the clients will help the developers to identify the missing important features and refine the unclear requirements. Then, the prototype will be improved and enhanced accordingly and again deliver to the clients in the second iteration. The processes will continue until all the requirements are clearly defined and the clients are satisfied with the prototype, and it will become the final system at the end of the development process (Tegarden, Dennis and Wixom, 2013).

Evolutionary prototyping methodology is suitable for this project due to the high level of user engagement throughout the project. In this project, the developer has to constantly communicate with the clients to understand their requirements and the business domain to ensure the final system developed is compatible with their needs. Prototypes can be used not only to clarify any ambiguous requirements, but also to help the early detection of faults and flaws caused by misconceptions and misinterpretations of requirements.

In addition, the clients can continuously provide some constructive feedback and comments on the overall user interface design after reviewing the prototypes. The user interface design can be modified and redesigned based on customer feedback across numerous iterations, resulting in a more user-friendly system delivered at the end of the project.

1.7 Scope of Project

1.7.1 Target Users

The target users of this system will be the Bargain Basement staffs and the customers. Customers will use the mobile application to browse and shop the pre-loved items, while Bargain Basement staffs will use the web-based application as administrators to manage and monitor the online store's operation.

1.7.2 System Scope

This project is to develop an online retail shop system for Bargain Basement administrative staffs and their customers. The system is built in two platforms, which is web-based and mobile application. The web application is for administrators to manage and monitor the operation of the online shop, whereas customers can browse the items and make orders through the mobile application.

The system allows customers to register a new account and the customers are required to log in with the registered account before entering the main page. After customers log in, the system will display all the products on sale in the online shop. A search engine provided in the system for admins and customers to search relevant products by entering keywords or by filtering based on different categories. If customers found what they want, they can click the product from the listing and the system will display the product detail page that shows all the details of the product. In this page, they can add the products into their shopping cart, contact seller and share the product to social media. Customers are allowed to make an offer for any products when they think the price labelled is too high. Every request made by customers will be sent to admins for approval. Once the request has been approved, they can add the product into their shopping cart with the lower price offered. Customers can view all the products in their shopping cart, they can also remove the unwanted products from the cart. Customers can choose the delivery option at the checkout page whether they want for a standard delivery or self pick-up from the physical stores. Customers can view the status of their order and all the order history will be stored in their account. Once the order is completed, they can rate and review the order. If customers have any questions, they can contact the seller by sending a text message from the system.
Administrators can log on to the system to manage all products on sales in the system. They are given authority to perform create, retrieve, update, and delete (CRUD) operations on the products in the online shop. In order to increase the efficiency, admins can choose to upload a batch of products to the system at once by importing a CSV file into the system. The CSV file must contain all the necessary data for the products with proper formatting. Admins can also manage all the orders and make offer requests from customers. Other than that, the system can generate business reports such as sales reports and inventory reports for administrators to analyse and monitor the performance of the online shop.

1.7.3 Project Modules

1.7.3.1 Work Breakdown Structure Diagram

Figure 1.3 and 1.4 shows the WBS diagram of the project modules in overview. Figure 1.3 represent the WBS of the modules for the mobile application which is the online shop platform for customers. There are 5 main modules for the mobile applications which are product module, offer module, order module, payment module, delivery module, and user account module. Each of the main module represent a main feature for the mobile application, and each module can be further break down to some smaller modules that used to support the functionality of their parent module. Figure 1.4 shows the WBS of the modules for the web-based application which is the admin panel that used by the staffs to manage the online shop. The main modules for the admin system more related to the management functions, which consist of product listing management, inventory management, make offer management, order management, delivery management, and reporting module.



Figure 1.3 WBS of Modules for Mobile Application



Figure 1.4 WBS of Modules for Web-Based Application

1.7.3.2 Work Breakdown Structure

This is the WBS of the overall system modules that combines the customer-side mobile application and the administrator-side web application. All the main modules will be explained in the next section.

0.0 Online Shop System

1.0 Customer-side System Module (Mobile application)

- 1.1 Product Module
 - 1.1.1 View product
 - 1.1.1.1 Search product
 - 1.1.1.2 Filter and sort
 - 1.1.2 View product details
 - 1.1.2.1 Social media sharing
- 1.2 Shopping Cart Module
 - 1.2.1 Add product to shopping cart
 - 1.2.2 View cart item
 - 1.2.3 Update cart item quantity
 - 1.2.4 Remove product from cart
- 1.3 Favourite Module
 - 1.3.1 Add product to favourite
 - 1.3.2 View favourite product
 - 1.3.3 Remove product from favourite
- 1.4 Offer Module
 - 1.4.1 Make new offer
 - 1.4.2 View offer
 - 1.4.3 Update offer
 - 1.4.3.1 Cancel offer
 - 1.4.3.2 Accept offer
 - 1.4.3.3 Counter offer
- 1.5 Order Module
 - 1.5.1 Create new order
 - 1.5.1.1 Select delivery method
 - 1.5.1.1.1 Standard shipping

1.5.1.1.2 Self pick up

1.5.2 View order

1.5.3 Review and rating

1.6 Contact seller

1.7 Address Module

1.7.1 View address

1.7.2 Create address

1.7.3 Update address

1.7.4 Delete address

1.8 Customer Account Module

1.8.1 Register new account

1.8.2 Login

1.8.3 View account details

1.8.4 Update account details

1.8.5 Reset password

2.0 Administrator-side System Module (Web application)

2.1 Product Management Module

2.1.1 Add new product

2.1.1.1 Add single product

2.1.1.2 Product batch upload

2.1.2 View product

2.1.3 Update product

2.1.4 Delete product

2.1.5 Export product

2.2 Offer Management Module

2.2.1 View offer

2.2.2 Update offer status

2.2.2.1 Accept offer

2.2.2.2 Reject offer

2.2.2.3 Counter offer

2.3 Order Management Module

2.3.1 View order

2.3.2 Update order

2.4 Reporting Module

2.4.1 Sales report

2.4.1.1 Daily sales report

2.4.1.2 Monthly sales report

2.4.1.3 Yearly sales report

2.4.1.4 Custom date range

2.4.2 Inventory report

2.4.2.1 Inventory summary report

2.4.2.2 Product upload history

2.4.2.3 Product performance report

2.4.2.3.1 By sales

2.4.2.3.2 By number of views

2.5 Customer Management Module

2.5.1 View customer

2.5.2 Customer service

2.6 Review Management Module

2.6.1 View review

2.7 Admin Account Module

2.7.1 Register new account

- 2.7.2 Login
- 2.7.3 Reset password

1.7.3.3 Explanation of Project Main Modules

1. Product Module

Customers can view all products on sale in the product list page. They can find the specific product by using the search and filter functions. They can either search the product by entering the keywords or filter the product based on different categories. They can view more information of the product by click into the products that displayed on the catalogue and enter the product detail page. The product detail page will display all the product details including the product name, price, images, and description. Customers can also share the products on the social media. 2. Shopping Cart Module

Customers can add the products they want to buy to their shopping cart, they can also update the quantity of the product or remove the products from the shopping cart.

3. Favourite Module

Customers can add the products they like to their favourite list. They can view all their favourite products from the favourite list. They can also remove the products from their favourite list.

4. Offer Module

Customers can choose to make offer for a product when they think the price labelled is too high. They are required to enter the offer price to make an offer. Customers can view all the offer record in the offer list page. If the staff has made a counteroffer, customers can choose whether they want to accept the offer from the staff or they can make another counteroffer. Once the offer is accepted, customers can add the product into the shopping cart, and they are able to purchase it with the latest offer price.

5. Order Module

Customers can create a new order by checking out their shopping cart. In the checkout page, customers can choose whether they want for a standard shipping or self pick up as the delivery method for the order. If standard shipping is chosen, customers are required to choose a delivery address from their address book. Customers can view all the order record with the order status in the order list page. Once the order is completed, customers can submit a review and rating on the completed order in the order details page.

6. Contact Seller Module

Customers can contact Bargain Basement staff through the in-app chat function if they have any questions to ask.

7. Address Module

Customers can create new addresses and store to their address book. These addresses are used as the delivery address when customers checkout. Customers can update or delete the addresses created.

8. Customer Account Module

Customers can register a new account if they are first time user. Customers are required to fill in the necessary information such as email address, password, and name. If the email entered was taken by others, customers will be asked to choose another email for their account. Customers can use the registered email and password to login to the mobile app. Customers can update their profile details, such as name and phone number. If a customer forgets his account password, he can request for a password reset link, which will be sent to the customer's email address.

9. Product Management Module

Admins are authorized to manage and perform create, retrieve, update, and delete (CRUD) operations on the product listing of the online shop. Admins can choose to create a single product or upload a batch of products to the online shop at once. To create a new product, admins are required to manually fill up the details of the product. Other than that, they can also perform product batch upload by importing an Excel file to the system. The Excel file must contain the records of all the new products with necessary information that arranged in a correct format. Admins can also export all the product records in the online shop to an Excel file.

10. Offer Management Module

Admins can view all the offers made by customers in a list. Admins can choose to accept or reject an offer. Other than that, admins can also make a counteroffer to the customer.

11. Order Management Module

Admins can view all the orders created by customers in a list. Admins can update the status of an order from the order list.

12. Reporting Module

This module will generate the sales report and inventory reports for the online shop. For the sales report, admins can choose to view the daily, monthly, yearly report, or they can custom the date range for the report. The reports will show the total sales amount, number of orders, and number of products sold in a period. The sales performance of different product categories and different outlets is also included in the sales report. Administrators can compare the current sales report to previous one to measure and analyse the performance of the online shop.

The inventory reports consist of inventory summary report, product upload history and product performance report. The inventory summary report will show the total number of products in stock, number of products out of stock, the list of categories with stock number, and the list of products out of stock. For product upload history, it will show the list of newly added products, the staff that upload the products, and the date of uploading it. The performance report will show which are the popular categories and products based on the number of sales and the number of views by customers.

13. Customer Management Module

Admins can view all the customers information in a list. Admins can also reply to customers' enquiries by sending text messages or images to the customers.

14. Review Management Module

Admins can view all the reviews and ratings submitted by customers in a list.

15. Admin Account Module

Admins can register a new account by filling in the necessary information such as email address, password, and name. If the email entered was taken by others, admins will be asked to choose another email for their account. Admins can use the registered email and password to login to the web app. If an admin forgets his account password, he can request for a password reset link, which will be sent to the admin's email address.

1.7.4 Out of Scope

1) Actual payment transaction

The actual payment transaction between customers and sellers are not included in this project. The system will skip the money transaction during payment process. When customers click the "Place Order" button, the system will assume the payment successfully and new order are made.

1.7.5 Assumption of Scope

1) Single repository used to store all the items

Bargain Basement currently doesn't have a centralized repository to store all the items that has been filtered. In contrast, they are only record the items stored in storerooms. If they continue to manage the inventory of items separately between the online shop, outlets, and storerooms, it is impossible for the staffs be able to upload all the items onto the online shop. The ununiform of inventory records uploading will further complicate the data stored in the inventory system and will cause data loses and item duplicated. Therefore, they should have only one repository to record all the items with their details together. After the items has been filtered, sorted, and labelled with price, they should all be recorded into a single excel file, which represent as the centralized repository. The excel file that contains all the items data will then be uploaded onto the system and stored into the inventory management system. The inventory of the online shop should be the centralized inventory system that can be used to keep track all the items stored.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter started with a short overview on the evolution of charity shop to adopt online shop, following by the comparison of existing online secondhand marketplace's mobile applications to reveal the common features to be implemented in this project's mobile application. Besides, different software development methodologies have been studied and compared to choose the one that fit most to this project. Lastly, the negotiation process in e-commerce has been studied.

2.2 Online Charity Shop

Charity shop, which also known as thrift shop or opportunity shop, is a retail shop that sells used goods such as men's and women's clothing, books, furniture, toys, electronic devices, video games, kitchenware, etc. (Podkalicka and Hurtado, 2021; Curkan and Curkan, 2019). The charity shops are usually run by non-for-profit organizations that collect donations of the used items from public and then resell them to the public at lower prices.

As the internet has become more integrated into people live, people nowadays are more inclined to shop online, which makes many charity shops start to set up their own online shops to follow the trend. According to the Charity Retail Association's 2018 survey, 55 per cent of 138 charity shops in UK sell donated goods online, with 97 per cent on eBay, 31 per cent on Amazon and 40 per cent on their own websites. The respondents state that online sales allow them to sell their goods at higher price, help them expand customer reach, and increase brand awareness. However, there are still 45 per cent of the charity shops not able to adopt the online sales because of lack skills and funds in managing the online shop. Therefore, this project aims to develop an online charity shop mobile application and its management web application with simple interface and easy to use even for the staff without IT knowledge.

2.3 Existing Second-Hand Shopping Mobile Application

In this section, three existing second-hand shopping mobile applications are studied. The main features of these three applications are identified and evaluated.

2.3.1 Carousell (Carousell, n.d.)

Carousell is a customer-to-customer and business-to-customer online marketplace for buying and selling new and used goods. It was first launched as a web application in Singapore on 14 May 2012, and its mobile application was released in August of the same year. It provides a platform for people to fast sell their valuable preloved items on the marketplace in simple steps. To date, Carousell has become one of the world's largest marketplaces in South-East Asia.



Figure 2.1 Interface of Carousell (Carousell, n.d.)

Main features of Carousell

• Sign up and login

Users can register new accounts and sign in their registered account using username and password, or via third parties account which are Google and Facebook account. • Search item

Users can search for an item by input the item's name, or by scanning a photo to find the item.

• Push notification of favourite item in stock

Users can save their searches as their favourite search queries. If there is a new listing that matches their favourite searches is added to the marketplace, users will be informed by receiving a push notification by the app.

• Filter and sort search results

Users can filter the searching result using categories, price range, and item condition in order to find the best match's item. Users can also sort the item list by most related, most recent, high to low price, and low to high price.

Item category

The items listed in the shop have been sorted according to their categories. Users can just browse the items from the category they like.

• Rating and review

Buyers and sellers can leave a review for each other after completing an order. They can leave a rating on a scale of 1 to 5 stars for different criteria, such as communication, coordination of meetup or delivery, coordination of payment, and actual item to description. Other than rating by stars, they can write a short review as feedback for the shopping experience. The rating and review for sellers can be a useful reference for the other buyers when they want to buy items from the sellers.

• Favourite list / watchlist

Users can add the items they like but not yet ready to buy into their watchlist, they can refer back their watchlist when they want to buy it.

• Chat with sellers

Buyers can directly communicate with sellers in the app to negotiate, ask for more details, coordinate the meet-up time and location, or for any other purposes.

• Different delivery options

Buyers can choose the delivery option for their purchases if they want the seller to ship the items to their address or they prefer to meet up faceto-face with the seller in a place that suggested by the seller.

• Make offer

Buyers can offer a price lower than the price labelled by the sellers to buy the item, sellers can choose to accept or reject the offer made by buyers, once the offer is accepted, buyers can buy the item from the sellers with the price offered

• Share item

Users can share the item's information via social media platforms, such as Facebook, WhatsApp, WeChat, etc.

Findings and evaluation on Carousell

The best feature of Carousell is it allows buyers to save their searches to their favourite searches list, and they will receive a notification when there is new item that matches their favourite searches listed in the marketplace. When buyers failed to search for something they want, they no need to keep searching every day to check if it is available or not. Instead, Carousell will know what the buyers are looking for based on their saved favourite searches, and the application will automatically notify the buyers when there is a seller put their wanted item on sale.

Also, Carousell provides an offer platform for the sellers and buyers. Buyers can bargain the product price with the sellers through the in-app chatting system. This feature allows sellers to sell their items more easily by providing a chance to the buyers to offer a lower price to buy the item. In fact, buyers always hope they can buy an item with minimum price when they are shopping secondhand items marketplace. Buyers may want to continue shopping if they can get a discount, increasing sellers' sales.

Besides, Carousell allows sellers and buyers to choose among two different options for delivering their items which is either ship by courier or meet up in person. It provides flexibility for the sellers and buyers where they can discuss to choose either one method based on their concern. By meeting face-to-face, buyers feel safer as they can check the quality of goods before confirming the deal, while sellers can save on shipping fees. If they cannot meet due to distances, buyers can still ask the sellers to ship the items to their address.

Furthermore, Carousell allows bidirectional rating and review between sellers and buyers after they complete every purchase. The high ratings and good reviews can become a prove for their reputation. This feature provides a reference to all users, and they are more willing to deal with the high rated sellers or buyers.

Moreover, Carousell has a in-app chat system that allows communications between buyers and sellers within the app. Buyers can easily approach to the sellers if they have any problems with the items.

2.3.2 eBay (eBay, n.d.)

eBay is an American multinational online ecommerce platform that runs on web-based and mobile application to allow people to buy and sell new or used goods. eBay is first developed as an auction website for people to bid their favourite items and it further developed into a modern e-commerce website and the auction feature remained to this day.



Figure 2.2 Interface of eBay (eBay, n.d.)

Main features of eBay

• Sign up and login

Users can register new accounts and sign in their registered account using email address and password, or via third parties account which are Google and Facebook account.

Search item

Users can search for an item by input the item's name, voice text or by scanning the product's barcode.

• Push notification of favorite item

Users can save their searches as their favorite search queries. If there is a new listing that matches their favorite searches is added to the marketplace, users will be informed by receiving a push notification by the app.

• Sort and filter search results

Users can filter the searching result by categories, price range, and item condition in order to find the best match's item. Users can also sort the item list by most related, most recent, high to low price, and low to high price.

• Category

The items listed in the shop have been sorted according to their categories. Users can just browse the items from the category they like.

• Rating and review

Buyers can leave feedback for a seller after they made a purchase. They can leave a rating on a scale of 1 to 5 stars for different criteria, such as item description, communication, shipping time and charges. Other than rating by stars, they can write a short review as feedback for the shopping experience. The rating and review for sellers can be a useful reference for the other buyers when they want to buy items from the sellers.

• Chat with seller

Buyers can directly contact the seller in the app to ask for more details about the item.

• Make offer

Buyers can offer a price lower than the price labelled by the sellers to buy the item, sellers can choose to accept or reject the offer made by buyers, once the offer is accepted, buyers can buy the item from the sellers with the price offered

Auction

Sellers can list their items in an auction style, seller will set the starting price and the duration for the auction, buyer will start bidding against other and the bidder with the highest bidding price will win the auction and pays the price to buy the item.

• Shopping cart

Users can add multiple items to the shopping cart and checkout together. Users can update the quantity of the items or remove the items from their shopping cart if they want.

Add to favorite / watchlist

Users can add the items they like but not yet ready to buy into their watchlist, they can refer back their watchlist when they want to buy it

• Share item

Users can share the item's information via social media platforms, such as Facebook, WhatsApp, WeChat, etc.

Findings and evaluation on eBay

As one of the world's largest e-commerce platforms that compete with Carousell, most of the strengths of the eBay are overlapped with Carousell. Both eBay and Carousell implemented the automatic push notification when there is new listing of customers' wanted item, make offer function that allows customers to bargain the price with sellers, rating and review system, and in-app chat system. On top of that, eBay provides an extra selling method which is auction. It provides flexibility for sellers to choose a selling method among fixed price, price negotiable, or auction which is most suitable for their products to sell. Besides, eBay provides a shopping cart which not available in Carousell for customers to put the items they want to buy in the shopping cart and lets customers to check out all the items in one go.

However, if compared to Carousell, eBay does not give extra options for customers to choose whether they want the seller to hand-deliver the items or let the courier to ship the items to the customers' address. Sellers will pack the items and pass to the shipping company to deliver the parcel and customers will only receive their items after making the payment. In other words, the customers do not have a chance to check the quality of the items before completing the transaction, but it is one of the main concerns of customers buying used items.

In conclusion, as mentioned at the findings on Carousell, all the main features will be implemented into the mobile application for this project except the automatic push notification function that also provided by eBay. On top of that, the shopping cart function that applied in eBay but not in Carousell will be added since it facilitates the checkout process for customers. Besides, the delivery options will still be included in this project as it plays an important role for an ecommerce platform that sells used goods. However, the auction selling method that mentioned as a strength of eBay will not be included in this project. The auction for second goods does not provide much value but increase the work for customers to buy an item (Hennessey, 2022).

2.3.3 Mudah.my (Mudah.my, n.d.)

Mudah,my is an online marketplace in Malaysia that providing a free and convenient platform for individuals to purchase and sell new and preloved items. Mudah.my has its website and mobile application as well. Mudah.my is a part of the Carousell Group business that focuses on Malaysia market. Therefore, its application is very similar to the Carousell application in terms of functionality.

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		-	
Manage My ads	My Saved Searches	My Favourite Ads	Unread Chats
🖸 SE	LL The	Q FIN	ID
Snap it. Post	it. Make RM	Chat. Che	eck. COD
Browse Cate	egories		
Cars	Properties for Sale	Jobs	Pets
			SZ.
Electronics	Properties for Rent	Furniture	Sports & Hc
_			

Figure 2.3 Interface of Mudah.my (Mudah.my, n.d.)

Main features of eBay

• Sign up and login

Users can register new accounts and sign in their registered account using email address and password, or via third parties account which are Google and Facebook account.

• Search item

Users can search for an item by input the item's name.

• Push notification of favorite item in stock

Users can save their searches as their favorite search queries. If there is a new listing that matches their favorite searches is added to the marketplace, users will be informed by receiving a push notification by the app.

• Sort and filter search results

Users can filter the searching result by categories, ad type, and seller type in order to find the best match's item. Users can also sort the item list by latest, high to low price, and low to high price.

• Category

The items listed in the shop have been sorted according to their categories. Users can just browse the items from the category they like.

• Chat with seller

Users can use the in-app chat function to communicate with the seller and make a deal with the seller. Other than that, users can also contact the seller through phone call, SMS, or email as the contact information has given by each seller.

• Add to favorite / watchlist

Users can add the items they like but not yet ready to buy into their watchlist, they can refer back their watchlist when they want to buy it

• Share item

Users can share the item's information via social media platforms, such as Facebook, WhatsApp, WeChat, etc.

Findings and evaluation on eBay

As a subsidiary of Carousell Group, Mudah.my is more like a simplified version of Carousell app. Although it inherited some of the features from Carousell app, but it is just a marketplace on which sellers can post their items on it, while buyers have to communicate with the sellers in order to purchase their items. It does not provide with any built-in payment methods or delivery services in the app. Therefore, the seller has to communicate with buyers via the in-app chat system or phone call to discuss and decide on the payment method and delivery method by themselves. Even though buyers still can bargain with the seller on the price of the product, and they still can choose to meet with the seller to deliver the product, but it is through traditional way which is direct communication between buyers and sellers. Unlike the Carousell app, Mudah.my has not digitalize these features and implemented into their mobile app. Moreover, Mudah.my does not allow buyers to give rating or review to the seller after they complete a purchase. Buyers may have higher chance to deal with some low-quality sellers because the app is not provided the rating and review system as references.

In conclusion, Mudah.my is a simplified version of Carousell app that only provides some of its features. Mudah.my may not be the main reference for this project in term of the functionality, but it can still be the reference for interface or activity flow design of the mobile app in this project.

2.3.4 Comparison of Carousell, eBay, and Mudah.my

Carousell		eBay	Mudah.my
Sign up and	Support account	Support account	Support account
login	registration using	registration using	registration using
	username and	email and	email and
	password, or	password, or	password, or
	using Google and	using Google and	using Google and
	Facebook account	Facebook account	Facebook
			account
Product	Support product	Support product	Support product
searching	searching by	searching by	searching by
	name and photo	name, voice text,	name
	scanning	and barcode	
		scanning	
Push	Support	Support	Support
notification of	notification when	notification when	notification when
favourite item	favourite item in	favourite item in	favourite item in
in stock	stock	stock	stock
Filter and sort	Support filter by	Support filter by	Support filter by
search result	categories, price	categories, price	categories, ad
	range, and item	range, and item	type, and seller
	condition, or sort	condition, or sort	type or sort by
	by most related,	by most related,	most recent, and
			price

Table 2.1 Comparison Matrix of Carousell, eBay, and Mudah.my

	most recent, and	most recent, and	
	price	price	
Product	All products are	All products are	All products are
categorization	well categorized	well categorized	well categorized
Shopping cart	Not Available	Support shopping	Not Available
		cart feature	
Favourite list	Support favourite	Support favourite	Support favourite
	list feature	list feature	list feature
Chat with	Support real time	Support real time	Support real time
seller	chat with sellers	chat with sellers	chat with sellers
Rating and	Support rate and	Support rate and	Not Available
review	review on sellers	review on sellers	
Make offer	Make offer Support make		Not Available
	offer on products	offer on products	
Auction	Not Available	Support auction	Not Available
Delivery	Support shipping	Not Available	Not Available
option and meet up with			
selection	selection sellers		
Social media	Support social	Support social	Support social
sharing	media sharing	media sharing	media sharing

2.3.5 Conclusion

In conclusion, there are three ecommerce mobile apps that provide second-hand goods marketplace has been reviewed. After finishing the comparison, we found all three applications share many common features, which are the basic that all e-commerce mobile applications should have. Among the three applications, Carousell and eBay are the ecommerce mobile app that bring the most comprehensive features. Therefore, Carousell and eBay will be the main reference for the design and implementation of this project's mobile app. The following features are chosen to be incorporated in this project:

i. Sign up and login

This is a basic feature that allow users to register their own account and login using email address and password. Users can store their basic information such as their name and address in their registered account that will be used in the checkout process. Users can also check back their purchase history that will be stored in their account.

ii. Product searching

By having this feature, users can search the products they are looking for in the online shop by entering the product's name in the search bar. The system will return a list of products that match with the search.

iii. Filter and sort search result

The filter and sort function will help users to find their wanted product faster and easier.

- iv. Product categorization
 Product categorization will help in the organization of products so that users can quickly find what they are looking for.
- v. Shopping cart

Shopping cart allows users to add the products they want to buy in the cart, and then check out all the products in the cart at once.

vi. Favourite list

Favourite list is for users to save the products they like but not yet ready to buy, they can refer back the list at any time when they want to buy it.

- vii. Chat with sellerThis feature provides a channel where users can contact sellers in a fast manner for any queries.
- viii. Rating and review

After completing a purchase using the mobile app, users can leave ratings and reviews, which can be fed back to the staffs and other customers for reference.

ix. Make offer

Users can offer a lower price to buy the item, and the staff can choose whether to accept or reject the offering. On top of that, the staff can decide which products that allow users to make offer.

x. Delivery option selection

When users purchased an item using the mobile app, they can choose whether they want to pick up the item in the physical store or let the staff to ship the item to their address.

xi. Social media sharing

Users can share the product's information via social media platforms, such as Facebook, WhatsApp, WeChat, etc

2.4 Software Development Methodology

Software development lifecycle consists of four basic phases which are planning, analysis, design, and implementation. Software development methodology defines a formal approach on how to implement the SDLC with a specific workflow and different methodologies may vary with each other's. Each of the methodology is unique in terms of the sequence and emphasis it focuses on each SDLC phases (Tegarden, Dennis and Wixom, 2013). These SDLC models has its own level of effectiveness based on the characteristic of the software project. Therefore, it is important for the developers to select a suitable development methodology for their project in order to deliver a software product that meets client expectations while staying on schedule and under budget. In this section, four development methodology will be further study and discuss, which are waterfall methodology, v-model methodology, agile methodology, and prototyping methodology.

2.4.1 Waterfall Methodology



Figure 2.4 Waterfall Model (Tegarden, Dennis and Wixom, 2013)

Waterfall technique is a conventional methodology that follows a sequential development strategy, in which the SDLC phases are completed one after the other without overlap (Chowdhury, et al., 2020). Only after the current phase is complete does the next phase begin. All phases will end with some key deliverables, and it will become the input for the next phase after approval form the project sponsor (Tegarden, Dennis and Wixom, 2013). For example, before moving on to the design phase, all of the user requirements must be gathered, documented, and approved by the stakeholders.

As the requirements are identified in the early phase, the developers have a better understanding and clarity of the features to be included in the system. Therefore, at the end of the development process, the developers are better able to deliver a system that satisfies the clients' expectations. However, the waterfall model is a one-way process that does not encourage any reverse process after it starts. Hence, any changes to the requirements will not be accepted at all times once the requirements specification is finalized and approved by all the stakeholders. If the clients request for changes at development phase, their request will not be included in the current release, and this will result low clients' satisfaction.

After a review of the waterfall methodology, this methodology is not be considered in this project due to its nature of resisting any changes to the user requirements in the middle of SDLC processes. Therefore, it is not suitable for this project due to the unclear user requirements and the clients may request for changes at any time. Also, each SDLC phases in the waterfall model takes a long time to process, which means that clients only get a chance to try out the working system almost at the end of the project. If the clients do not satisfy with the interface design or the working flow of the system, the whole SDLC cycle needed to be repeat again to implement the changes and the project may not be able to finish within the schedule.



Figure 2.5 V-Model (Kumar and Bhatia, 2014)

V-model which also known as validation and verification model is an alternative form of the waterfall model that emphasizes testing throughout the SDLC processes. After the coding phase, the process steps are twisted upwards to form the V shape, rather than continuing down linearly as the waterfall model. The left side of the V-model consists of the analysis and design activities while the right side consists of the test and integration activities of the SDLC. For each of the analysis and design phases, there is an associated testing phase in its opposite side (Kumar and Bhatia, 2014). It means that the deliverables of each analysis and design activity are prepared with the associated test plans and then verified when comes to the test phases.

In this development model, developers and testers will work parallelly, in order to develop correspond test plan for each of the development phase. After the developers finish the coding, the project moves into the testing phases of the SDLC where the previously established test plans are placed to perform testing. The advantage of using this methodology is the involvement of the testing in the early stage, which can help to eliminate the potential bugs and defects earlier, thus deliver a high-quality product at the end of the project cycle. However, V-model has the same issue as the waterfall model, which is rigid and limited flexibility to changes (Kumar and Bhatia, 2014). Any changes in the middle of the development process are difficult and costly because not only the requirement documents needed to be updated but all the test plan that developed from the beginning needed to be updated as well to adapt the changes.

Due to the limitation that stated above, this model is not suitable for this project. The requirement for this project is not clear enough to defined clearly at the early stage. It has to go through several discussions with clients in this project, any changes may happen in the middle of the development process. Therefore, if all the test plans are starting to develop from the beginning, it may need frequent changes, which can be time consuming, and developer may end up lack of time to finish this project. In short, the waterfall approach and V-model are only suitable for the small project where the requirements can be easily and clearly defined. These two development models are not suitable for projects that involve many changes on the user requirements.

2.4.3 Agile Methodology



Figure 2.6 Agile Methodology (Balaji and Murugaiyan, 2012)

Agile methodology is a subgroup of evolutionary models that develop software incrementally and iteratively. The agility of this methodology is reflected in the rapid production and delivery of working solutions, with less focus on the planning and documentation in the early stages (Tegarden, Dennis and Wixom, 2013). Each of iteration of the development process takes comparatively short

time and comes with a small part of the final product. The customer involvement of this methodology is very high by focus the constant face-to-face communication between the developers and customers, and continuous delivery of software to customers in order to maximize the customer satisfaction. As a result, agile methodology is very flexible to the changing of the requirements. Due to the high involvement of customers and rapid development cycles, customers can request for any changes based on the current version of release (Casteren, 2017). The request for changes will be adopted in the next iteration and the new version of the system will be handed to customers shortly.

There are several variations of agile model, which are Scrum, Dynamic System Development Method, Extreme Programming, Feature Driven Model, and Crystal (Chowdhury, et al., 2020). The most significant advantage of adopting an agile model is its high degree of acceptance of changing requirements and the nature of rapid and continuous delivery systems maximizes customer satisfaction. However, because it is an incremental development model, developers do not know the scope and specifications of the final product at the outset, making it difficult for them to predict how much effort, time, and other resources to devote to the software project. These challenges will become more apparent as the project grows in size and complexity (Balaji and Murugaiyan, 2012).

Based on the above study on the agile methodology, it is not suitable for this project even it provides the flexibility on changing of the requirements. This is because it places a greater emphasis on building a working system and delivering it to clients as quickly as possible, resulting in a lack of actual documentation written during the development processes. Therefore, it is not suitable for an inexperienced developer to adopt this methodology alone without the assistance of senior developers. The inexperienced developer may be unable to carry out the project smoothly with the unclear objectives, scopes, design, and business domain of the project.

2.4.4 Prototyping Methodology

Prototyping methodology focuses on developing prototypes, and a prototype is a quick and dirty version of a system created for clients and developers to have an idea of how the actual system looks and functions (Tegarden, Dennis and Wixom, 2013). In this methodology, a system prototype is delivered as the outcome after performing the analysis, design, and implementation phases in SDLC. These three phases are repeated as a cycle, and the prototype is continuously improved until it meets customer satisfaction (Tegarden, Dennis and Wixom, 2013). There are two types of prototyping methodology, which are the evolutionary prototyping and throwaway prototyping.



Figure 2.7 Evolutionary Prototyping Model (Tegarden, Dennis and Wixom, 2013)

For the evolutionary prototyping, the first prototype is usually the first version of the system that only implemented with very limited functionality. After the first prototype is developed, it is passed to the customers or project sponsors for trial and then provide feedback regarding the interface design as well as the fulfilment of the user requirements that will be served as inputs to the next iteration of the three SDLC phases. After the next cycle of analysis, design, and implementation processes, the second version of the prototype with additional features implemented is produced based on clients' feedback from the previous iteration. This process repeats until the clients satisfy with the system prototype and the developers can proceed to the final implementation to develop the actual system from the prototype (Tegarden, Dennis and Wixom, 2013).



Figure 2.8 Throwaway Prototyping Model (Tegarden, Dennis and Wixom, 2013)

Unlike the evolutionary prototyping model, the prototype that used in the throwaway prototyping is not a real working system, but it is a design prototype that helps clients to more understand on the possible issues that may face when developing the system (Tegarden, Dennis and Wixom, 2013). By developing the design prototype, it can help to reduce the potential risk especially when the clients are not completely clear about how the system should work. The design prototype will not be implemented to be a part of the system, it may be discarded once the issue is discussed and understood by the developers and clients. In contrast, the prototype in the evolutionary prototyping will be continuously added-on new features and the prototype will become the final product at the end of the development process (Tegarden, Dennis and Wixom, 2013).

The prototyping methodology has similar characteristics to the agile methodology in that both are iterative and incremental models that continuously deliver systems for client feedback. This can help the developers to identify all the missing important features and refine the unclear requirements with the use of prototype (Tegarden, Dennis and Wixom, 2013). A high degree of user involvement helps developers better understand the real needs of users and develop high-quality systems that users are satisfied with.

In conclusion, evolutionary prototyping methodology will be used in this project as the software development methodology. This is due to the high level of user engagement practiced in this approach that is suitable for this project, as we need to constantly communicate with our clients to understand their requirements and business domain in order to deliver a system that is compatible with their needs. Prototypes can be used not only to clarify any ambiguous requirements, but also to help detect errors and defects in early phase resulting from misunderstandings and misinterpretations of requirements. In addition, the clients can continuously provide some feedback to the overall interface design through a review of the prototypes. The user interface design can be improved and redesigned through multiple iterations based on feedback from the clients so that a more user-friendly system can be developed at the end of the project.

2.4.5 Comparison of Software Development Methodologies

 Table 2.2
 Comparison Matrix of Software Development Methodologies

Ability to	Waterfall	V-Model	Agile	Prototyping
Develop				
Systems				
With Unclear	Poor.	Poor.	Good.	Good.
Licon				
User	The waterfall	The test plans are	The development process will	The development process will
Requirements	methodology is a one-way	developed from the	go through several iterations.	go through several iterations.
	process that does not	beginning, so any changes	The system will be	The prototype will be
	encourage any reverse	on the user requirements	continuously delivered to the	continuously delivered to the
	process. All the user	will cause the rework of all	users and get the feedback. The	users and get the feedback. The
	requirements should be	development	developers can keep redefine	developers can keep redefine
	clearly defined in the	documentations as well as	the user requirements based on	the user requirements based on
	early phase and does not	test plans, which is costly	the feedback until all the	the feedback until all the
	allow any changes.	and time consuming.	requirements is clarified.	requirements is clarified.

With	Good.	Good.	Poor.	Medium.
Unfamiliar	Each of the phase takes	Similar to the waterfall	The agile methodology focuses	Even though the developer
Technology	longer time to complete,	methodology, the	on the rapid delivery of system	needs to develop a prototype in
	thus the developer will	developer will have the	to the client, so the development	the early stages, but the early
	have enough time to	opportunity to discover and	process will take place in the	prototypes usually just touch
	investigate and learn the	learn the new technology	early stages. The developer may	the surface of the new
	new technology before	during the analysis and	not have enough time to learn	technology. The developer may
	entering the development	design phases.	the new technology needed for	have experience and adopt the
	phase.		the project.	new technology after
				developing some prototypes.
That Are	Good.	Good.	Poor.	Evolutionary prototyping –
Complex	The time taken for each	A complex system requires	As the system is getting more	Poor.
	phase of the waterfall	careful and detailed	complex, it is hard for the agile	Same as the agile methodology,
	methodology is longer,	analysis and design, and	methodology to perform well	evolutionary prototyping only
		each analysis and design	because it only focuses on the	focuses on developing the

thus it is suitable to handle	phases in the V-model are	system development without	working prototype without
the complex projects.	assigned with a test phase	detailed and careful analysis	detailed and careful analysis
	to verify the deliverables,	and design processes up front.	and design processes up front.
	thus ensuring high quality		
	of the complex system		
	developed.		Throwaway prototyping –
			Good.
			Unlike the evolutionary
			prototyping, the prototype in
			the throwaway prototyping is
			only used for clarifying the
			requirements, there is still a
			detailed analysis and design
			performed before the
			implementation of the actual
			system.

With a Short	Poor.	Poor.	Good.	Good.
Time Schedule	Each of the phase of the	Each phase of the V-model	Avoid of spending much time	Similar to the agile
	waterfall methodology	also takes a long time to	on defining the user	methodology, does not spend
	takes a longer time to	complete due to the	requirements and preparing the	much time to define the
	complete because it is not	preparation of the	documents in the early phases.	complete user requirements in
	an iterative model, thus it	corresponding test plans	The develop of system started	the early phases. The
	is not appropriate for the	and the execution of the	from the beginning, the	development of prototype
	project that has short time	validation process for each	redefining of requirements and	started from the beginning, the
	schedule.	analysis and design phases.	the improvement of the system	redefining of requirements and
			were carried out	the improvement of the
			simultaneously, which	prototype were carried out
			shortened the schedule.	simultaneously, which
				shortened the schedule.
2.5 Negotiation in E-Commerce

Negotiation in e-commerce is a process between sellers and buyers in order to establish an agreement that is favourable to both parties by taking into account several aspects of a product, which commonly includes product price, quality, delivery (Rodrigues, 2018). According to Rodrigues (2018), a negotiation process is an iterative back and forth process where one party will start with making an offer to another party, then another party evaluating the offer and making counteroffer based on their interest. The negotiation process goes iteratively and end with a final agreement that should benefits for both parties.

2.5.1 Alternating Offer Protocol

Alternating offer protocol also known as sequential bargaining is a traditional way of bargaining between two parties which does not require any prior knowledge or rules (Rodrigues, 2018). In this protocol, seller and buyer will take turn to make offer and counteroffer until both parties accept the offer. This process is illustrated in diagram in Figure 2.9 below. The seller initiates the process by labelling price for a product on the shop. When the buyer has intention to buy the product, the buyer has to make decision whether to accept the price or not. If the buyer thinks that the product is not worth with the price labelled, he can raise a counteroffer to the seller, and now is the turn for the seller to decide whether to accept the offer or make a counteroffer again. This process continues until one party accept the offer made by another party and reach an agreement.



Figure 2.9 Alternating Offer Protocol (Rodrigues, 2018)

2.5.2 Rule-based automated approach

In rule-based negotiation approach, software agent is used to help the seller to automatically negotiate the price based on the rules predefined and stored in the agent (Rodrigues, 2018). In the negotiation process, the agent uses decision-making statements to make the offer or counteroffer that could bring the maximum payoff. The automated decision making is supported and implemented by using Artificial Intelligence techniques, where the software agent will act and behaviour like the seller through iterative learning process and help the seller to make the best decision in the negotiation process (Rodrigues, 2018).

2.5.3 Conclusion

In conclusion, the negotiation feature of this project will refer to the alternating offer protocol. Both the buyer and the seller make offers and counteroffers on the price of the product and ultimately reach a mutually satisfactory deal. The main purpose of having this negotiation feature in this project is to clear out the items that have been in stock for too long, hence, the manager of the shop can determine which items are available for negotiation by using the system. Therefore, it is not necessary to have an automated negotiation system since the negotiation requests is not too heavy to handle.

CHAPTER 3

METHODOLOGY AND WORK PLAN

3.1 Introduction

This chapter will cover the discussion in detail of the software development methodology phases, following by the development tools, and the project plan with work breakdown structure and Gantt chart.

3.2 Software Development Methodology

After reviewing and comparing on four different types of software development methodologies in Chapter 2, the approach selected for this project is the evolutionary prototyping model as it is most suitable to this project as discussed earlier. Figure 3.1 shows the overall development cycle of evolutionary prototyping model in diagram.



Figure 3.1 Evolutionary Prototyping Model (Tegarden, Dennis and Wixom, 2013)

3.2.1 Planning Phase

In the planning phase of this project, an interview was conducted with the staff of Bargain Basement to understand their current working flow starting from receiving donation from public until selling product to customers. The problems of their current process or workflow as well as the limitations on the functionality of the Bargain Basement website were identified and became the problem statements of this project. The problem statements of this project can be split into two aspects, one is about the problems on the inventory management, another is about the functionality of the current Bargain Basement website.

After finish identifying the problem statements, the objective of this project was established which is to develop a cross platform system to solve the problems faced by Bargain Basement as stated above. The project solution, project approach, and project scopes were determined and proposed after the problem statements were clearly defined. The proposed project solution suggests a way that can solve the problems identified previously by developing a system. The project approach was determined by selecting a development methodology that most fit to the project nature. An appropriate development methodology can make the development cycle more structured and organized by acting as a guideline to the developer. The project scope outlined what are the necessary features to be included in order to meet the project's goals.

After determined the project scope, a work breakdown structure was developed. The work breakdown structure listed all the tasks and subtasks to be carried out in this project. Then, a Gantt Chart was created to define the schedule of the project by allocating the time frame for each task and subtask in the WBS.

3.2.2 Requirement Gathering Phase

To gather the requirements of this project, several activities were carried out, which includes the interview with the staff of Bargain Basement, distribution of questionnaire to public, and the review of existing online second-hand marketplaces applications.

The online interview with the staff of Bargain Basement was conducted on Google Meet, where a set of interview questions was prepared and reviewed by my supervisor, Dr. Winnie before conducting the interview. During the interview session, the questions were asked to better understand their daily operations which includes the workflow of processing the donated items and how they manage the inventory for their physical and online shop.

Besides, the questionnaire consisted of 10 closed-ended and open-ended questions was prepared and sent out through online platforms such as Facebook and WhatsApp. The purposes of conducting the questionnaire are to understand people's behaviour on shopping online second-hand marketplaces, awareness on the online charity shop in Malaysia, and their ideas on the features should be implemented by an online charity retail shop mobile app. At the end, the questionnaire managed to collect the responses from 30 respondents.

Next, the review and evaluation of the online second-hand marketplace mobile applications was conducted. Total of 3 mobile applications were selected which are Carousell, eBay, and Mudah.my as these are the most popular and commonly used online second-hand marketplaces in Malaysia. These 3 applications were studied and compared to identify the common and important features to be included in the mobile app of this project. As the bargaining feature was identified as the key feature of a second-hand retail app and it will be implemented in this project, the bargaining process in e-commerce was studied by reviewing literature.

At the end of this phase, the functional and non-functional requirements were identified after going through all the requirement gathering processes.

3.2.3 Prototype Implementation Phase

The prototype development and implementation phase in this project will be divided into three iterations. The prototype will keep enhanced and refined iteratively and it will finally be implemented into the final system after going through the three iterations.

3.2.3.1 First Iteration

The first iteration of the prototype implementation was focus on the front-end development of the system which only includes the user interfaces for both mobile and web application. At the design phase, the use case diagram and use case description were developed to represent how the users interact with the system. Use case diagram illustrates the functionality of the system in overview, while use case description provides the details of each use case.

Based on the use case diagram and use case description, a preliminary prototype that without back-end system was developed. The preliminary prototype was sent to the end users to get their feedback on the interface design of the system. The feedback was recorded and will be implemented in the second iteration of prototype development.

3.2.3.2 Second Iteration

In the second iteration, the interface design of the prototype was refined based on the feedback collected in the first iteration. The missing requirements as well as the use cases also identified during the evaluation of the first prototype.

Besides, the activity diagram and entity relationship diagram were designed and developed during this phase. These diagrams were useful as a guild line for the developer during the back-end development by visualizing the overall flow of data and business process in the system.

Next, the back-end part of both web application and mobile application was developed and implemented in the prototype. All the features and system modules were developed in sequence as per mentioned in the project schedule. The database for the system was created with all the database tables as stated in the entity relationship diagram.

At the end of the development process in this iteration, the first functional prototype was developed. Same as the first iteration, the prototype developed was again tested by the end users for gaining their feedback on the functionality of the prototype.

3.2.3.3 Third Iteration

The final iteration of the project focuses on identify and make refinement if there are any defects on the functionality of the prototype due to missing or misinterpretation of requirements. The refined prototype was sent to the end users for the last evaluation, and the prototype was again refined according to their feedback. The user requirements were clearly defined and finalized at this stage, and the final prototype was accomplished all the requirements.

3.2.4 Testing Phase

Once the final prototype was developed, it will be tested through several software testing mechanisms which involved unit testing, integration testing, user acceptance testing, and usability testing in order to ensure the quality of the final system developed.

12 users were selected to participate in the user acceptance test to evaluate both the mobile app and the web app. After the testers finished their user acceptance tests, they were required to fill out a user satisfaction survey form for the usability testing. The results of the user satisfaction survey were tabulated and analysed.

3.3 Development Tools

3.3.1 Laravel

Laravel is a PHP framework for web application development. Laravel adopts the Model-View-Controller (MVC) architecture where it separates the web application into three different logical components which are the model, view, controller. With the separation of front and back-end components, the developer can understand better with the architecture of the framework and thus fasten the development process. Besides, Laravel simplified the implementation of common features such as authentication, authorization, routing, sessions, and caching which are necessary for the system development of this project.

3.3.2 React Native

React Native is a JavaScript framework that used for creation of native mobile applications that can run on both Android and iOS mobile operating systems. By adapting React Native in mobile application development, the developer only needs to code an application, instead of code two separate applications for Android and iOS platforms. This saves the developer a lot of time and cost at the same time ensured the extendibility of the project.

3.3.3 Bootstrap

Bootstrap is a front-end framework that help in fast development and design of the interfaces of web applications. Bootstrap provides a large number of prestyled components such as buttons, dropdown buttons, input text fields, and navigation bars. The developer can directly use the pre-styled components from Bootstrap in the web application without needing of define the HTML, CSS, and JavaScript for the component's creation. This will help to fasten the development process as many developers are struggling on the components creation and waste a lot of time on the defining the CSS for the HTML components.

3.3.4 MySQL

MySQL is a relational database management system (RDBMS) that used to manage the database of systems. MySQL is one of the most popular databases in the world and widely used by popular websites such as Facebook, YouTube, WordPress, and Twitter.

3.4 Project Planning

In this section, a work breakdown structure and a Gantt chart are developed to illustrate the scope and schedule of this project.

3.4.1 Work Breakdown Structure (WBS)

1.0 Planning

- 1.1 Study Background of the Project
- 1.2 Define Problem Statements
- 1.3 Define Project's Objectives
- 1.4 Propose Project Solution
- 1.5 Propose Project Approach
- 1.6 Determine Project Scope
 - 1.6.1 Identify Target Users
 - 1.6.2 Identify Scope Covered
 - 1.6.3 Identify Project's Modules
 - 1.6.4 Identify Topic Out of Scope
 - 1.6.5 Identify Assumption of Scope
- 1.7 Develop Work Plan
 - 1.7.1 Develop Work Breakdown Structure
 - 1.7.2 Develop Gantt Chart
- 2.0 Requirement Gathering and Elicitation
 - 2.1 Distribute Questionnaire
 - 2.1.1 Generate Questions
 - 2.1.2 Distribute Questionnaire
 - 2.1.3 Analyse and Interpret the Findings
 - 2.2 Review on Existing Applications
 - 2.2.1 Review on Carousell
 - 2.2.2 Review on eBay

- 2.2.3 Review on mudah.my
- 2.2.4 Identify the key features
- 2.3 Literature Review
 - 2.3.1 Research on Online Charity Shop
 - 2.3.2 Review on Software Development Methodology
 - 2.3.2.1 Review on Waterfall Methodology
 - 2.3.2.2 Review on V-Model Methodology
 - 2.3.2.3 Review on Prototyping Methodology
 - 2.3.2.4 Review on Agile Methodology
 - 2.3.3 Research on Bargaining in E-Commerce
- 2.4 Writing Literature Review
- 3.0 Prototype Development
 - 3.1 First Iteration
 - 3.1.1 Determine Use Case Diagram
 - 3.1.2 Determine Use Case Description
 - 3.1.3 Develop Prototype
 - 3.1.4 Collect User Feedback
 - 3.2 Second Iteration
 - 3.2.1 Develop Activity Diagram
 - 3.2.2 Develop ERD Diagram
 - 3.2.3 Develop Prototype

3.2.3.1	Customer Account Module
3.2.3.2	Product Module
3.2.3.3	Shopping Cart Module
3.2.3.4	Favourite Module
3.2.3.5	Offer Module
3.2.3.6	Order Module
3.2.3.7	Contact Seller Module
3.2.3.8	Address Module
3.2.3.9	Admin Account Module
3.2.3.10	Product Management Module
3.2.3.11	Offer Management Module
3.2.3.12	Order Management Module
3.2.3.13	Reporting Module

- 3.2.3.14 Customer Management Module
- 3.2.3.15 Review Management Module
- 3.2.4 Collect User Feedback
- 3.3 Third Iteration
 - 3.3.1 Add-on Missing Requirements
 - 3.3.2 Refine Prototype
 - 3.3.3 Collect User Feedback
 - 3.3.4 Implement Prototype to Final System

4.0 Testing

- 4.1 Perform Unit Testing
- 4.2 Perform Integration Testing
- 4.3 Perform User Acceptance Testing
- 4.4 Perform Usability Testing

3.4.2 Gantt Chart

Name	Duration	Start	Finish	23 Jan 22	30 Jan 22	6 Feb 22
⊟1.0 Planning	26 days	1/24/22 8:00 AM	2/18/22 5:00 PM			100000
1.1 Study Background of the Project	5 days	1/24/22 8:00 AM	1/28/22 5:00 PM		.	
1.2 Define Problem Statements	7 days	1/29/22 8:00 AM	2/4/22 5:00 PM			.
1.3 Define Project's Objectives	2 days	2/5/22 8:00 AM	2/6/22 5:00 PM			T T
1.4 Propose Project Solution	2 days	2/7/22 8:00 AM	2/8/22 5:00 PM			
1.5 Propose Project Approach	3 days	2/9/22 8:00 AM	2/11/22 5:00 PM			- 1
□1.6 Determine Project Scope	2 days	2/12/22 8:00 AM	2/13/22 5:00 PM			
1.6.1 Identify Target Users	1 day	2/12/22 8:00 AM	2/12/22 5:00 PM			
1.6.2 Identify Scope Covered	1 day	2/12/22 8:00 AM	2/12/22 5:00 PM			
1.6.3 Identify Project's Modules	2 days	2/12/22 8:00 AM	2/13/22 5:00 PM			
1.6.4 Identify Topic Out of Scope	1 day	2/12/22 8:00 AM	2/12/22 5:00 PM			
1.6.5 Identify Assumption of Scope	1 day	2/12/22 8:00 AM	2/12/22 5:00 PM			
⊡1.7 Develop Work Plan	5 days	2/14/22 8:00 AM	2/18/22 5:00 PM			
1.7.1 Develop Work Breakdown Structure	2 days	2/14/22 8:00 AM	2/15/22 5:00 PM			
1.7.2 Develop Gantt Chart	3 days	2/16/22 8:00 AM	2/18/22 5:00 PM			

Figure 3.2 First Part of Gantt Chart



Figure 3.3 Second Part of Gantt Chart



Figure 3.4 Third Part of Gantt Chart

CHAPTER 4

PROJECT SPECIFICATION

4.1 Introduction

In this chapter, the functional and non-functional requirements of this project were determined based on the finding on the result of the interview and questionnaire conducted. The use case diagram and use case description were developed in the following sections to demonstrate the activities that can be performed by the users on the system.

4.2 Facts Findings

4.2.1 Questionnaire

The questionnaire consisted of 10 closed-ended and open-ended questions was prepared and sent out to public through Facebook and WhatsApp. As the result, a total of 30 responses were collected. Most of the respondents are between 18 to 24 years old. All the questions and responses were attached to Appendix A and the significant findings are discussed below.



Figure 4.1 Platform Used for Online Shopping

Based on Figure 4.1, more than half of the respondents (56.7%) are usually use mobile application to shop online. Therefore, it is necessary for Bargain Basement to develop a mobile application in order to expand the customers reach. Based on your experience, what are your biggest challenges when shopping online second-hand marketplace?

30 responses

I am not sure if the product is in a good condition a not Not sure whether the item is in good condition as stated by seller Cant find the things i want price no sure the quality The condition of the item. Uncertain of the product's quality dont like the layout. it make me hard to shop. Unable to gauge the exact conditions of second-hand items Scammer everywhere Negotiate price unsure Hard to find my fav piece having to trust the seller Scared to be scam Knowing the quality of the product N/A Find the trustworthy seller Unable to assess the quality quality of the product and the credibility of the sellers The website is very confusing Not sure if the quality is well-kept Worry about the real condition about the products That the quality of the item will be worse than in the picture the quality fear of authenticity and being scammed authenticity how to ensure the quality of the item encountering scammers

Figure 4.2 Challenges Encountered When Shopping Online Second-Hand Marketplace

Based on Figure 4.2, the challenges encountered by respondents are summarized and listed in below table.

 Table 4.1
 Challenges Encountered When Shopping Online Second-Hand

Marketplace

Challenges Encountered	Number	of
	Respondents	
Unable to gauge the exact conditions of the items	14 (46.7%)	

Hard to trust the seller	8 (26.7%)
Hard to find the wanted item	2 (6.7%)
Poor interface design of the websites.	2 (6.7%)
Price negotiation	2 (6.7%)
No issue	2 (6.7%)

Based on Table 4.1, 14 respondents (46.7%) think that they are unable to gauge the exact conditions of the items when shopping the online secondhand marketplaces. To solve this issue, the online shop should provide options for customers to choose whether they want to ship the items or pick-up the item in the physical stores so they can check the quality of the items before completing the transaction. Besides, 8 respondents (26.7%) think that they are hard to trust the seller and fear of being scammed by the seller from online second-hand marketplaces. Therefore, it is important for the online shop to have the rating and review function to help customers to build confidence when they see the positive comments and feedback from the other customers.



Figure 4.3 Experience of Shopping at Online Charity Shops

Based on Figure 4.3, most of the respondents (93.3%) do not have the experience of shopping at online charity shops. Majority of the respondents

(73.3%) do not know any online charity thrift shops in Malaysia. It shows that the awareness level of the online charity projects among public in Malaysia is very low.



Figure 4.4 Features Suggested to Be Included in the Mobile App

Based on Figure 4.4, the features suggested by respondents to be included in the mobile app are summarized and listed in the table below.

Features Suggested	Number of
	Respondents
User-friendly interface	6 (20%)
Filtering and categories of items	4 (13.3%)
Rating and review	3 (10%)
Check the product physically	2 (6.7%)
Secure for payment	2 (6.7%)
Bargain with sellers	1 (3.3%)
Chat with sellers	1 (3.3%)
Search by picture	1 (3.3%)
Search items	1 (3.3%)
Reservation	1 (3.3%)
Not relevant	8 (26.7%)

 Table 4.2
 Features Suggested to Be Included in the Mobile App

Based on Table 4.2, 6 respondents (20%) are expecting the mobile application to have a user-friendly interface and ease to use. 4 respondents (13.3%) think that filtering and categories of items can help them better to find the item they want from the online shop. Besides, 3 respondents (10%) suggest the mobile application to have rating and review function to verify the reputation of the online shop. Furthermore, 2 respondents (6.7%) hope that they can check the product physically to ensure the quality of the pre-loved items and another 2 respondents (6.7%) look for a secured payment method in the mobile application. There are 5 individuals also suggest different features such as bargaining with sellers (3.3%), chat with sellers (3.3%), search items (3.3%), search items by picture (3.3%), and reservation of item (3.3%). However, there are 8 respondents (26.7%) do not have any idea on it and some of these respondents provide suggestions which are not relevant.



Figure 4.5 Degree of Agreement on the Positive Impact of Bargaining Feature on Online Charity Shop Shopping Intention

Based on Figure 4.5, all the 30 respondents agree that the bargaining feature will attract them to shop at the online charity shop. By implementing a bargaining feature in the mobile app, customers will have chances to purchase items from the shop at a lower price, which may be their motivation to shop at the online charity shop.

4.2.2 Interview

The interview was conducted with a staff of Bargain Basement on Google Meet. Bargain Basement received the donations from public mainly at the drop-off bins provided. However, they do not have a centralized inventory system to record all the items in the stores. They are currently using a free stock-recording mobile application as their inventory system, but the inventory mobile app is only used to record of the products that are been kept in the storeroom. All the products that are selling on both physical and online shop will not be recorded in the inventory mobile app. This will cause them lost of track on how many items are in their stores without having a proper inventory management system.

In addition, the inventory system of the Bargain Basement website does not support a batch upload function that allow the staffs to upload a batch of products onto the online shop at once. The staffs are required to manually register the products one by one, which is inefficient and time consuming when there is a batch of products waiting to be uploaded.

From the interview, the product batch uploading is necessary to be implemented in the system so the staffs can import all product records into the system by uploading Excel files.

4.3 Functional Requirements

4.3.1 Mobile Application

- 1. The user shall be able to register a new account using his/her name, email, and password.
- The user shall be able to login to his/her account using email and password.
- 3. The user shall be able to view and update his/her profile details.
- 4. The user shall be able to reset his/her account password.
- 5. The user shall be able to search for products by using product name.
- 6. The user shall be able to filter products by product categories and price range.
- 7. The user shall be able to view products and product details.
- 8. The user shall be able to share products through social media.
- 9. The user shall be able to add products to his/her shopping cart.
- 10. The user shall be able to view products in his/her shopping cart.

- 11. The user shall be able to update the quantity of products in his/her shopping cart.
- 12. The user shall be able to remove products from his/her shopping cart.
- 13. The user shall be able to add products to his/her favourite list.
- 14. The user shall be able to view products in his/her favourite list.
- 15. The user shall be able to remove products from his/her favourite list.
- 16. The user shall be able to make an offer on products.
- 17. The user shall be able to view offers in his/her offer list.
- The user shall be able to update his/her offers (cancel / accept / counteroffer).
- 19. The user shall be able to add the accepted offer product to his/her shopping cart.
- 20. The user shall be able to create new order by checking out his/her shopping cart.
- 21. The user shall be able to choose a delivery method for his/her orders when checking out (standard shipping / self pick up).
- 22. The user shall be able to choose a delivery address from his/her address book if the delivery method is standard shipping.
- 23. The user shall be able to view orders in his/her order list.
- 24. The user shall be able to rate and review his/her completed orders.
- 25. The user shall be able to contact seller by sending text messages.
- 26. The user shall be able to create a new address.
- 27. The user shall be able to view addresses in his/her address list.
- 28. The user shall be able to update his/her addresses.
- 29. The user shall be able to delete his/her addresses.

4.3.2 Web Application

- 1. The admin shall be able to register a new admin account using his/her name, email, and password.
- 2. The admin shall be able to login to his/her admin account using email and password.
- 3. The admin shall be able to reset his/her admin account password.
- 4. The admin shall be able to add a new product into the system.

- 5. The admin shall be able to view products and product details.
- 6. The admin shall be able to update the detail of a product.
- 7. The admin shall be able to delete a product.
- The admin shall be able to import products data into the system using Excel files (in .xlsx or .csv format).
- 9. The admin shall be able to enable and disable the make offer feature for a product.
- 10. The admin shall be able to enable and disable the ability of shipping for a product.
- 11. The admin shall be able to view the offers made by customers.
- 12. The admin shall be able to update the offers made by customers (accept / reject / counteroffer).
- 13. The admin shall be able to view the orders created by customers.
- 14. The admin shall be able to receive a notification email when there is a new order created.
- 15. The admin shall be able to update the status of an order.
- 16. The admin shall be able to view sales reports (daily, monthly, yearly, custom date range) generated by the system.
- 17. The admin shall be able to view inventory reports generated by the system.
- The admin shall be able to view customers information in the customer list.
- 19. The admin shall be able to response to customers' enquiries by sending text messages or images.
- 20. The admin shall be able to view the reviews and ratings submitted by customers in the review list.

4.4 Non-Functional Requirements

- 1. The mobile application shall allow users to use it without the need for training.
- 2. The system shall be accessible whenever and wherever users have access to internet.

- 3. The system shall be able to validate users' input and show error message when there is an invalid input detected.
- 4. The system shall be able to prevent any unauthorized personnel to access the web application.



Figure 4.6 Use Case Diagram

4.6 Use Case Description

Table 4.3Use Case – Login Account

Use Case Name: Login Account	ID: 1	Importance Level: High			
Primary Actor: Admin, Customer	Use Case T	ype: Detail, Essential			
Stakeholders:	I				
Customer – already registered an acco	ount wants to	use the mobile app.			
Admin – wants to use the web app to	manage the c	online shop.			
Brief Description: "Login Account"	' use case o	describe how admin and			
customer login to the system.					
Trigger: Admin or customer wants to	log in to his/	her account			
Relationships:					
Association: Customer, Adm	in				
Include: -					
Extend: -					
Generalization: -					
Normal Flow of Events:					
1. User enters the login page of the system.					
2. User enters the email and password.					
3. User clicks the "Login" button.					
4. System validates the email and	4. System validates the email and password.				
5. System redirects user to home page of the system.					
Sub Flows: -					
Alternate / Exceptional Flows:					
4.1 Email and password is not valid					
4.1.1 System displays "Login	n failed. User	not found." message.			

	-			
Use Case Name: Register Account	ID: 2	Importance Level: High		
Primary Actor: Admin, Customer	Use Case T	ype: Detail, Essential		
Stakeholders:	l			
Customer – wants to create an account	t for the mob	ile app to make purchase.		
Admin - wants to create an account	for the web	app to manage the online		
shop.				
Brief Description: "Register Accourt	nt" use case	describe how admin and		
customer create a new account.				
Trigger: Admin or customer wants to	create a new	account		
Relationships:				
Association: Customer, Adm	nin			
Include: -				
Extend: Login Account				
Generalization: -				
Normal Flow of Events:				
1. User enters the login page of t	he system.			
2. User clicks the "Register a new account" button.				
3. User enters information such as name, email address, contact number,				
and password.				
4. User clicks the "Register" button.				
5. System validates the information and creates an account for user.				
6. System redirects user to login	page.			
Sub Flows: -				
Alternate / Exceptional Flows:				
5.1 Email have been used by another user				
5.1.1 System displays "Your email has been used by someone.				
Please try again with another em	ail." message	2.		

 Table 4.4
 Use Case – Register Account

Use Case Name: View Products	ID: 3	Importance Level: High		
Primary Actor: Admin, Customer	Use Case T	ype: Detail, Essential		
Stakeholders:				
Customer - wants to view all product	s listed.			
Admin – wants to view all products in	n the inventor	y.		
Brief Description: "View Products"	' use case o	lescribe how admin and		
customer view all products.				
Trigger: Admin or customer wants to	view all proc	lucts.		
Relationships:				
Association: Customer, Adm	nin			
Include: -				
Extend: -				
Generalization: -				
Normal Flow of Events:				
Customer				
1. Customer enters the home page	ge of the mob	ile app.		
2. System displays all products in a list with basic information such as				
product image, product name, and product price shown for each				
product.				
3. User can view products from	a specific ca	tegory by clicking on the		
category label.				
4. System displays all products	from the spec	ific category in a list with		
basic information such as pro	duct image, p	roduct name, and product		
price shown for each product.				
Admin				
1. Admin enters the home page of	of the web ap	p.		
2. Admin clicks the "Products" l	abel on the si	de navigation bar.		
3. System displays all products	in a list with	basic information such as		

Table 4.5Use Case – View Products

3. System displays all products in a list with basic information such as product image, product name, product price, product category, and product stock shown for each product.

Sub Flows: -

Alternate / Exceptional Flows: -

Table 4.6Use Case	– View Produ	ict Details			
Use Case Name: View Product	ID: 4	Importance Level: High			
Details					
Primary Actor: Admin, Customer	Use Case Ty	ype: Detail, Essential			
Stakeholders:					
Customer – wants to view details of a	a particular pro	oduct.			
Admin – wants to view details of a pa	articular produ	ict.			
Brief Description: "View Product De	tails" use case	e describe how admin and			
customer view details of a particular	product.				
Trigger: Admin or customer wants to	view details	of a particular product.			
Relationships:					
Association: Customer, Admin					
Include: View Products					
Extend: -					
Generalization: -					
Normal Flow of Events:					
Customer					
1. Perform use case "View Produ	ucts" for Cust	omer.			
2. Customer clicks on a particula	ar product from	m the product list.			
3. System redirect customer to	product deta	il page of the particular			
product.					
1 Crustom displays and dust imag		and another design and design			

4. System displays product images, product name, product price, product category, product description of the particular product in the product detail page.

Admin

- 1. Perform use case "View Products" for Admin.
- 2. Admin clicks the "View" button on a particular product from the product list.

System redirect display to product detail page of the particular product.
 System displays images, name, description, category, price, stock, weight, length, width, height, offerable, shippable, preloved tag, and location of the particular product in the product detail page.
 Sub Flows: -

Alternate / Exceptional Flows: -

		ise – Scaren I	Toddet
Use Ca	ase Name: Search Product	ID: 5	Importance Level: High
Prima	ry Actor: Admin, Customer	Use Case T	ype: Detail, Essential
Stakeh	olders:		
Admir	n – wants to search for a particu	lar product.	
Custor	ner – wants to search for a part	icular produc	t.
Brief	Description: "Search Product	" use case o	lescribe how admin and
custon	ner search for a particular produ	ıct.	
Trigge	er: Admin or customer wants to	search for a p	particular product.
Relatio	onships:		
	Association: Customer, Adm	nin	
	Include: View Products		
	Extend: -		
	Generalization: -		
Norma	al Flow of Events:		
Custor	ner		
1.	Perform use case "View Produ	ucts" for Cust	comer.
2.	Customer enters the specific k	keyword on th	e search bar and click the
	"Search" icon.		
3.	System displays all products r	elated to the l	keyword in a list.
4.	Customer can filter and sort th	e search resu	lts by clicking the "Filter"
	icon.		
5.	Customer chooses the filter ar	nd sort criteria	1.

Table 4.7Use Case – Search Product

6. System displays the filtered and sorted product list.

Admin

- 1. Perform use case "View Products" for Admin.
- 2. Admin enters the specific keyword on the search bar and click the "Search" icon.
- 3. System displays all products related to the keyword in a list.

Sub Flows: -

Alternate / Exceptional Flows: -

Table 4.8	Use Case -	- Add Product	to Shopping Cart
-----------	------------	---------------	------------------

Use Case Name: Add Product to	ID: 6 Importance Level: Hig				
Shopping Cart					
Primary Actor: Customer	Use Case Type: Detail, Essential				
Stakeholders:					
Customer – wants to add a particular pro	oduct to shopping cart.				
Brief Description: "Add Product to Sho	opping Cart" use case describe ho				
customer add a particular product to sho	opping cart.				
Trigger: Customer wants to add a particu	ular product to his/her shopping ca				
Relationships:					
Association: Customer					
Include: View Product Details					
Extend: -					
Generalization: -					
Normal Flow of Events:					
1. Perform use case "View Product Details" for Customer.					
2. Customer clicks the "Add to Cart" button in the product detail page.					
3. System adds the particular produ	3. System adds the particular product to customer's shopping cart and				
displays a success message.					
Sub Flows: -					
Alternate / Exceptional Flows:					
3.1 The product is already in customer's shopping cart					

3.1.1 System displays "This product is already in your shopping cart" message.

Use Case Name: Add Product to	ID: 7	Importance Level: High	
Favourite List			
Primary Actor: Customer	Use Cas	e Type: Detail, Essential	
Stakeholders:		J F · · · · · · · , _ · · · · · · · · ·	
Statemonders.	1		
Customer – wants to add a particular pro		vourite list.	
Brief Description: "Add Product to Fav	ourite Lis	st" use case describe how	
customer add a particular product to favo	ourite list.		
Trigger: Customer wants to add a particu	lar produc	ct to his/her favourite list.	
Relationships:			
Association: Customer			
Include: View Product Details			
Extend: -			
Generalization: -			
Normal Flow of Events:			
1. Perform use case "View Products" for Customer.			
2. Customer clicks the "Favourite" icon in the product detail page.			
3. System adds the particular product to customer's favourite list and			
displays a success message.			
Sub Flows: -			
Alternate / Exceptional Flows:			
3.1 The product is already in customer's favourite list			
3.1.1 System removes the product from customer's favourite list.			
3.1.2 System displays "Produ	act remov	ved from favourite list"	
message.			
č			

Table 4.9Use Case – Add Product to Favourite List

Use Case Name: Manage Shopping Cart	ID: 8	Importance Level: High
Primary Actor: Customer Use Case Type: Detail, Essential		
Stakeholders:		
Customer – wants to view and update pro	oducts in s	shopping cart
Brief Description: "Manage Shopping Ca	art" use ca	se describe how customer
views and updates products in shopping of	cart.	
Trigger: Customer wants to view and upo	late produ	ects in shopping cart.
Relationships:		
Association: Customer		
Include: -		
Extend: -		
Generalization: -		
Normal Flow of Events:		
1. Customer enters the home page o	f the mob	ile app.
2. Customer clicks the "Shopping C	art" icon i	n the home page.
3. System redirects customer to shopping cart page.		
4. System displays all products in customer's shopping cart in the		
shopping cart page.		
5. Customer can update the quantity of a product in the cart (S-1) and		
remove a product from the cart (S-2).		
Sub Flows:		
S-1: Update Product Quantity in Shopping Cart		
1. Customer clicks the "Plus" or "Minus" button of a product in		
shopping cart.		
2. System updates the quantity of th	e product	in shopping cart.
S-2: Remove Product from Shopping Cart		
1. Customer clicks the "Remove" icon of a product in shopping cart.		
2. System removes the product from the shopping cart.		
Alternate / Exceptional Flows: -		

Table 4.10 Use Case – Manage Shopping Cart

Primary Actor: Customer Use Case Type: Detail, Essential Stakeholders: Customer – wants to view and update favourite products Brief Description: "Manage Favourite List" use case describe how customer view and update favourite products. Trigger: Customer wants to view and update favourite products Relationships: Association: Customer Include: - Extend: - Generalization: - Normal Flow of Events:		
Stakeholders: Customer – wants to view and update favourite products Brief Description: "Manage Favourite List" use case describe how customer view and update favourite products. Trigger: Customer wants to view and update favourite products Relationships: Association: Customer Include: - Extend: - Generalization: - Normal Flow of Events:		
Customer – wants to view and update favourite products Brief Description: "Manage Favourite List" use case describe how customer view and update favourite products. Trigger: Customer wants to view and update favourite products Relationships: Association: Customer Include: - Extend: - Generalization: - Normal Flow of Events:		
Brief Description: "Manage Favourite List" use case describe how customer view and update favourite products. Trigger: Customer wants to view and update favourite products Relationships: Association: Customer Include: - Extend: - Generalization: - Normal Flow of Events:		
view and update favourite products. Trigger: Customer wants to view and update favourite products Relationships: Association: Customer Include: - Extend: - Generalization: - Normal Flow of Events:		
Trigger: Customer wants to view and update favourite products Relationships: Association: Customer Include: - Extend: - Generalization: - Normal Flow of Events:		
Relationships: Association: Customer Include: - Extend: - Generalization: - Normal Flow of Events:		
Association: Customer Include: - Extend: - Generalization: - Normal Flow of Events:		
Include: - Extend: - Generalization: - Normal Flow of Events:		
Extend: - Generalization: - Normal Flow of Events:		
Generalization: - Normal Flow of Events:		
Normal Flow of Events:		
1. Perform use case "View Product Details" for Customer.		
2. Customer clicks the "Favourite" icon in the home page.		
3. System redirects customer to favourite list page.		
4. System displays all favourite products in a list.		
5. Customer can remove a product from the favourite list (S-1).		
Sub Flows:		
S-1: Remove Product from Favourite List		
1. Customer clicks on a particular product from the favourite list.		
2. System redirect customer to product detail page of the particular		
favourite product.		
3. Customer clicks the "Favourite" icon in the product detail page.		
4. System removes the product from the favourite list.		

Table 4.11 Use Case – Manage Favourite List

Use Case Name: Make Offer	ID: 10	Importance Level: High
Primary Actor: Customer	Use Cas	e Type: Detail, Essential
Stakeholders:		
Customer – wants to make offer for a par	rticular pr	oduct
Brief Description: "Make Offer" use case describe how customer makes offer		
for a particular product		
Trigger: Customer wants to make offer for	or a partic	ular product
Relationships:		
Association: Customer		
Include: View Product Details		
Extend: -		
Generalization: -		
Normal Flow of Events:		
1. Perform use case "View Product Details" for Customer.		
2. Customer clicks the "Make Offer" button in the product detail page.		
3. System pops out a window for customer to enter the offer amount.		
4. Customer enters an offer amount and clicks the "Confirm" button.		
5. System saves the new offer in database and adds to the customer's		
offer list.		
Sub Flows: -		
Alternate / Exceptional Flows:		
3.1 Customer already make an offer for the product before		
3.1.1 System displays "You ha	ave alread	ly made an offer for this
product before. Please check your make offer list." message.		
5.1 Customer enters invalid offer price		
5.1.1 System displays "Please enter a valid offer price." message.		

Table 4.12 Use Case – Make Offer

Use Ca	ase Name: Manage Offers	ID: 11	Importance Level: High	
Primar	Primary Actor: Admin, Customer Use Case Type: Detail, Essential			
Stakeh	olders:			
Custor	ner – wants to view and update the	eir offers 1	nade	
Admir	n – wants to view and response the	offers ma	de by customers	
Brief Description: "Manage Offers" use case describe how customer view and				
update their offers made and describe how admin view and response the offers				
made l	by customers.			
Trigge	r: Customer wants to view and u	pdate the	ir offers made and admin	
wants	to view and response the offers ma	ide by cus	tomers	
Relation	onships:			
	Association: Customer, Admin			
	Include: -			
	Extend: -			
	Generalization: -			
Norma	ll Flow of Events:			
Customer				
1.	1. Customer enters the home page of the mobile app.			
2. Customer clicks the "Offer" label on the bottom navigation bar in the				
home page.				
3. System displays all offers made by customer in a list.				
4. Customer can cancel an ongoing offer by clicking the "Cancel"				
button; accept a counteroffer from seller by clicking the "Accept"				
button; make a new counteroffer to seller by clicking the "Update				
offer" button; add the accepted offer product to the shopping cart by				
clicking the "Add to Cart" button.				
Admin				
1.	1. Admin enters the home page of the web app.			
2.	Admin clicks the "Offers" label o	on the side	navigation bar.	
3.	System displays all offers made b	y all cust	omers in a list.	
4.	4. Admin can response to an offer by clicking the "Counteroffer" button,			

Table 4.13 Use Case – Manage Offers

"Accept" button or "Reject" button.

Sub Flows: -

Alternate / Exceptional Flows: -

Table 4.14 Use Case – Checkout

Use Case Name: Checkout	ID: 12	Importance Level: High	
Primary Actor: Customer	Use Case Type: Detail, Essential		
Stakeholders:			
Customer – wants to checkout his/her shopping cart			
Brief Description: "Checkout" use case describes how customer checkout			
his/her shopping cart			
Trigger: Customer wants to checkout his	her shop	ping cart	
Relationships:			
Association: Customer			
Include: Manage Shopping Cart			
Extend: -			
Generalization: -			
Normal Flow of Events:			
1. Perform use case "Manage Shopp	1. Perform use case "Manage Shopping Cart".		
2. Customer clicks the "Checkout" b	outton in t	he shopping cart page.	
3. System redirect customer to the checkout page.			
4. Customer can choose the delivery option whether he/she wants to pick			
up in the physical stores or requests for a standard shipping.			
5. System calculates and shows the total amount need to pay by			
customer.			
6. Customer proceeds to make payment by clicking the 'Place Order'			
button.			
Sub Flows: -			
Alternate / Exceptional Flows:			
4.1 Customer selects standard shipping as the delivery method			
4.1.1 Customer chooses a delivery address from his/her address book			

6.1 There is an unavailable item in customer's shopping cart

6.1.1 System displays "One of the products is unavailable now. Please update your cart." message.

Use Case Name: Manage Profile	ID: 13	Importance Level: High
Primary Actor: Customer	Use Case Type: Detail, Essential	
Stakeholders:		
Customer – wants to view and update his	/her user]	profile
Brief Description: "Manage Profile" use case describes how customer views		
and updates his/her user profile		
Trigger: Customer wants to view and upo	late his/he	er user profile
Relationships:		
Association: Customer		
Include: -		
Extend: -		
Generalization: -		
Normal Flow of Events:		
1. Customer enters the home page o	f the mobi	ile app.
2. Customer clicks the "Profile" label on the bottom navigation bar in		
the home page.		
3. System redirects customer to the user profile page.		
4. Customer clicks the "Edit Profile"	" label in	the user profile page.
5. System shows the profile details of customer such as name, email		
address, and contact number in the user profile page.		
6. Customer enters the new information in the text field of a particular		
detail and clicks the "Save" button.		
7. System updates the changed customer profile.		
Sub Flows: -		
Alternate / Exceptional Flows:		
7.1 Customer enters invalid information for the profile details.		
7.1.1 System displays "Invalid input, please try again." message.		

Table 4.15 Use Case – Manage Profile

Use Case Name: Add New Product II	D: 14	Importance Level: High	
Primary Actor: Admin U	Use Case Type: Detail, Essential		
Stakeholders:			
Admin – wants to add new product into the	invento	bry of the system.	
Brief Description: "Add New Product" use	e case d	lescribes how admin adds	
new product into the inventory of the system.			
Trigger: Admin wants to add new product in	nto the	inventory of the system.	
Relationships:			
Association: Admin			
Include: -			
Extend: -			
Generalization: -			
Normal Flow of Events:			
1. Admin enters the home page of the v	web ap	р.	
2. Admin clicks the "Products" label on the side navigation bar in the			
home page.			
3. Admin clicks the "Add New Product" button.			
4. Admin enters the details of the produ	4. Admin enters the details of the product and clicks the "Save" button.		
5. System stores the information of the new product into the database.			
Sub Flows: -			
Alternate / Exceptional Flows:			
3.1 Alternative option to add new products			
3.1.1 Admin clicks the "Import Products" button.			
3.1.2 Admin uploads an Excel file (.csv) that contains the organized			
products data.			
3.1.3 System reads the Excel file and import all the products in the			
Excel file into the database.			
5.1 Admin enters invalid information for the	e produ	ct details.	
5.1.1 System displays "Invalid input, please try again." message.			

Table 4.16 Use Case – Add New Product

Use Case Name: Edit Product	D: 15	Importance Level: High	
Primary Actor: Admin U	Jse Cas	e Type: Detail, Essential	
Stakeholders:			
Admin – wants to edit a particular product.			
Brief Description: "Edit Product" use case describes how admin edits a			
particular product.			
Trigger: Admin wants to edit a particular pr	roduct.		
Relationships:			
Association: Admin			
Include: View Products			
Extend: -			
Generalization: -			
Normal Flow of Events:			
1. Perform use case "View Product Details" for Admin.			
2. Admin clicks the "Edit" button on the detail page of the product.			
3. Admin enters the new information in the text field of a particular detail			
and clicks the "Save" button.			
4. System updates the changed produc	t details	s to the database.	
Sub Flows: -			
Alternate / Exceptional Flows:			
4.1 Admin enters invalid information for the product details.			
4.1.1 System displays "Invalid input, please try again." message.			

Table 4.17 Use Case – Edit Product
Use Case Name: Delete Product	ID: 16	Importance Level: High	
Primary Actor: Admin	Admin Use Case Type: Detail, Essential		
Stakeholders:			
Admin – wants to delete a particular pro-	duct.		
Brief Description: "Delete Product" use	case desc	ribes how admin deletes a	
particular product.			
Trigger: Admin wants to delete a particu	lar produc	et.	
Relationships:			
Association: Admin			
Include: View Products			
Extend: -			
Generalization: -			
Normal Flow of Events:			
1. Perform use case "View Products" for Admin.			
2. Admin clicks the "Delete" button	on the ro	w of a particular product.	
3. System prompts admin to confirm the delete action.			
4. Admin clicks the "Confirm" button.			
5. System deletes the particular product from the database.			
Sub Flows: -			
Alternate / Exceptional Flows: -			

Table 4.18 Use Case – Delete Product

Use Ca	ase Name: Manage Orders	ID: 17	Importance Level: High
Primar	y Actor: Admin, Customer	Use Cas	e Type: Detail, Essential
Stakeh	olders:	1	
Custon	ner – wants to view his/her orders	created	
Admin	- wants to view and update order	s created l	by customers
Brief I	Description: "Manage Orders" use	e case des	cribe how customer view
his/her	orders created and describe how ad	dmin view	and update orders created
by cust	tomers.		
Trigge	r: Customer wants to view their ord	lers create	d and admin wants to view
and up	date orders created by customers.		
Relatio	onships:		
	Association: Customer, Admin		
	Include: -		
	Extend: -		
	Generalization: -		
Norma	l Flow of Events:		
Custon	ner		
1.	Customer enters the home page o	f the mob	ile app.
2.	Customer clicks the "Profile" lab	pel on the	bottom navigation bar in
	the home page.		
3.	3. System redirects customer to the user profile page.		
4.	Customer clicks the "Orders" labe	el in the u	ser profile page.
5.	5. System displays all orders created by customer with its status in a list.		
6.	6. Customer clicks on an order from the list		
7.	System redirect customer to order	detail pa	ge of the particular order.
Admin			
8.	Admin enters the home page of the	ne web ap	р.
9. Admin clicks the "Orders" label on the side navigation bar.			
10.	10. System displays all orders by all customers in a list.		
11. Admin can update status of a particular order by clicking the "Update			
	Status" button.		

Table 4.19 Use Case – Manage Orders

12. Admin clicks the "Update" button after updating the order status.

13. System updates the new status for the order to the database.

Sub Flows: -

Alternate / Exceptional Flows: -

radie 4.20 Use Case – Rating and Review			
Use Case Name: Rating and Review	ID: 18	Importance Level: High	
Primary Actor: Customer Use Case Type: Detail, Essentia		Type: Detail, Essential	
Stakeholders:			
Customer – wants to rate and review on l	nis/her purc	chase.	
Brief Description: "Rating and Review"	' use case	describes how customer	
rates and reviews on his/her purchase.			
Trigger: Customer wants to rate and revi	ew on his/h	er purchase.	
Relationships:			
Association: Customer			
Include: Manage Orders			
Extend: -			
Generalization: -			
Normal Flow of Events:			
1. Perform use case "Manage Orders".			
2. Customer clicks "Rate and Review" button on a completed order from			
the order list.			
3. System redirect customer to the rate and review page.			
4. Customer gives the rating and fill	4. Customer gives the rating and fills in the review.		
5. Customer clicks the "Submit" button.			
6. System saves the rating and review to the database.			
Sub Flows: -			
Alternate / Exceptional Flows:			
6.1 Customer already submitted a review on the order before			
6.1.1 System displays "You have reviewed this order before."			
message.			

Table 4.20 Use Case – Rating and Review

Use Case Name: View Sales Reports	ID: 19	Importance Level: High	
Primary Actor: Admin	Use Case Type: Detail, Essential		
Stakeholders:			
Admin - wants to view sales reports (c	daily, mor	nthly, yearly, custom date	
range) of the online shop.			
Brief Description: "View Sales Reports"	use case of	describes how admin view	
sales reports (daily, monthly, yearly, cus	tom date r	ange) of the online shop.	
Trigger: Admin wants to view sales repo	orts (daily	, monthly, yearly, custom	
date range) of the online shop.			
Relationships:			
Association: Admin			
Include: -			
Extend: -			
Generalization: -			
Normal Flow of Events:			
1. Admin enters the home page of the	he web ap	р.	
2. Admin clicks the "Sales Report"	label on th	ne side navigation bar.	
3. Admin chooses whether he/she w	ants to vi	ew daily, monthly, yearly,	
or custom date range sales report	by clickin	g the respective label.	
4. System displays the detailed information of the sales report.			
Sub Flows: -			
Alternate / Exceptional Flows: -			

Table 4.21 Use Case - View Sales Reports

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t

Use Case Name: View Inventory	ID: 20 Importance Level: High	
Reports		
Primary Actor: Admin	Use Case Type: Detail, Essential	
Stakeholders:	L	
Admin – wants to view inventory reports	s (summary, product upload history,	
performance report) of the online shop.		
Brief Description: "View Inventory Rep	orts" use case describes how admin	
view inventory reports (summary, pro-	oduct upload history, performance	
report) of the online shop.		
Trigger: Admin wants to view inventory	y reports (summary, product upload	
history, performance report) of the online	e shop.	
Relationships:		
Association: Admin		
Include: -		
Extend: -		
Generalization: -		
Normal Flow of Events:		
1. Admin enters the home page of the web app.		
2. Admin clicks the "Inventory Report" label on the side navigation bar.		
3. Admin chooses whether he/she wants to view summary, product		
upload history, performance report by clicking the respective label.		
4. System displays the detailed information of the inventory report.		
Sub Flows: -		
Alternate / Exceptional Flows: -		

Use C	ase Name: Contact Seller	ID: 21	Importance Level: High
Prima	Primary Actor: Customer, Admin Use Case Type: Detail, Essential		
Stakeh	olders:		
Custor	ner – wants to contact seller from t	the mobile	e app.
Admir	n – wants to respond to customer in	quiries.	
Brief I	Description: "Contact Seller" use ca	ase describ	bes how customer contacts
seller	from the mobile app and how admi	n respond	s to customer inquiries.
Trigge	er: Customer wants to contact sell	er from tl	ne mobile app and admin
wants	to respond to customer inquiries.		
Relation	onships:		
	Association: Customer, Admin		
	Include: -		
	Extend: -		
	Generalization: -		
Norma	al Flow of Events:		
Custor	ner		
1.	Customer enters the home page of	f the mobi	ile app.
2.	2. Customer clicks the "Profile" label on the bottom navigation bar in		
	the home page.		
3.	3. System redirects customer to the user profile page.		
4.	. Customer clicks the "Contact Us" label in the user profile page.		
5.	System displays all the chat recor	ds betwee	en customer and seller in a
	chat box.		
6.	Customer enters a text message an	nd click th	ne "Send" button.
7.	System saves the text message to	the data	base and updates the chat
box.			
Admin			
1.	Admin enters the home page of the	ne web app	p.
2.	Admin clicks the "Customer Serva	ice" label	on the side navigation bar.
3.	Admin clicks on a customer name	e from the	list.
4.	System displays all the chat recor	ds betwee	en customer and seller in a
	chat box.		

Table 4.23 Use Case – Contact Seller

5. Admin enters a text message and clicks the "Send" button.

6. System saves the message to the database and updates the chat box.

Sub Flows:

Admin

5.1 Admin can choose to send images to customer

5.1.1 Admin clicks the "Paper clip" icon.

5.1.2 Admin selects an image file from local storage and clicks the "Send" button.

5.1.3 System uploads the image to the database updates the chat box.

Alternate / Exceptional Flows: -

Table 4.24 Use Ca	se – Social Media Sharing
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Use Case Name: Social Media Sharing	ID: 22	Importance Level: High	
Primary Actor: Customer	Use Case Type: Detail, Essential		
Stakeholders:			
Customer – wants to share a product thro	ough socia	ıl media.	
Brief Description: "Social Media Sharin	g" use cas	se describes how customer	
share a product through social media.			
Trigger: Customer wants to share a prod	uct throug	h social media.	
Relationships:			
Association: Customer			
Include: View Product Details			
Extend: -			
Generalization: -			
Normal Flow of Events:			
1. Perform use case "View Product Details" for Customer.			
2. Customer clicks the "Share" icon in the product detail page.			
3. Customer selects one of the social media apps installed in the mobile			
phone.			
4. System opens the social media a	pp and pa	ste the product image and	
details on the app.			
Sub Flows: -			
Alternate / Exceptional Flows: -			

Use Case Name: Reset Password	ID: 23	Importance Level: High	
Primary Actor: Admin, Customer Use Case Type: Detail, Essential			
Stakeholders:			
Admin – wants to reset his/her account p	assword.		
Customer – wants to reset his/her accourt	nt passwor	d.	
Brief Description: "Reset Password" u	ise case d	escribes how admin and	
customer reset their account password.			
Trigger: Admin or customer wants to res	et his/her	account password/	
Relationships:			
Association: Customer, Admin			
Include: -			
Extend: -			
Generalization: -			
Normal Flow of Events:			
1. User enters the login page of the	system.		
2. User clicks the "Forgot password	" label.		
3. User enters his/her account en	nail addre	ss and clicks the "Send	
password reset link" button.			
4. System validates the email addre	ss and sen	ds a password reset link to	
the email address.			
5. User opens the email and clicks the "Reset Password" button in the			
email.			
6. User enters the new password a	6. User enters the new password and confirm password and clicks the		
"Reset Password" button in the password reset page.			
7. System validates the new password and update user account with the			
new password in the database.			
8. System displays "Password updated successfully." message			
Sub Flows: -			
Alternate / Exceptional Flows:			
4.1 User enters invalid email address.			
4.1.1 System displays "Please enter a valid email address." message.			

Table 4.25 Use Case – Reset Password

7.1 User enters invalid password.

7.1.1 System displays "Please enter a valid password." message.

Table 4.26 Use Case – Add New Address			
Use Case Name: Add New Address	ID: 24 Importance Level: High		
Primary Actor: Customer Use Case Type: Detail, Essential			
Stakeholders:			
Customer – wants to add new address int	to his/her address book		
Brief Description: "Add New Address" u	use case describes how customer add		
new address into his/her address book.			
Trigger: Customer wants to add new add	ress into his/her address book.		
Relationships:			
Association: Customer			
Include: -			
Extend: -			
Generalization: -			
Normal Flow of Events:			
1. Customer enters the home page of the mobile app.			
2. Customer clicks the "Profile" label on the bottom navigation bar in			
the home page.			
3. System redirects customer to the user profile page.			
4. Customer clicks the "My addresses" label in the user profile page.			
5. Customer clicks the "Add new add	dress" button in the address list page.		
6. Customer enters the details of	the address and clicks the "Save"		
button.			
7. System stores the information of the new address into the database.			
Sub Flows: -			
Alternate / Exceptional Flows:			
6.1 Admin enters invalid information for the product details.			
6.1.1 System displays "Invalid input, please try again." message.			

Use Ca	ase Name: View Addresses	ID: 25	Importance Level: High
Prima	rimary Actor: Customer Use Case Type: Detail, Essential		
Stakeh	olders:		
Custor	ner – wants to view all address	es created.	
Brief I	Description: "View Addresses"	use case des	cribe how customer views
all add	resses created.		
Trigge	r: Customer wants to view all a	ddresses crea	nted.
Relatio	onships:		
	Association: Customer		
	Include: -		
	Extend: -		
	Generalization: -		
Norma	al Flow of Events:		
Customer			
1.	Customer enters the home page	ge of the mob	ile app.
2.	2. Customer clicks the "Profile" label on the bottom navigation bar in		
	the home page.		
3.	3. System redirects customer to the user profile page.		
4.	. Customer clicks the "My addresses" label in the user profile page.		
5.	. System displays all customer's address in a list.		
6.	. Customer clicks one address from the list.		
7. System displays the detail information of the address.			
Sub Flows: -			
Alternate / Exceptional Flows: -			

Table 4.27 Use Case – View Addresses

Use Case Name: Edit Address	ID: 26	Importance Level: High	
Primary Actor: Customer	Use Case T	ype: Detail, Essential	
Stakeholders:			
Customer – wants to edit a particular	address.		
Brief Description: "Edit Addresses"	use case desc	ribe how customer edits a	
particular address.			
Trigger: Customer wants to edit a pa	rticular addres	SS.	
Relationships:			
Association: Customer			
Include: View Addresses			
Extend: -			
Generalization: -			
Normal Flow of Events:			
1. Perform use case "View Add	resses" for Cu	stomer.	
2. Customer clicks the "Edit" by	utton on the ac	ldress detail page.	
3. Customer enters the new info	ormation in th	e text field of a particular	
detail and clicks the "Save" b	outton.		
4. System updates the changed	address details	s to the database.	
Sub Flows: -			
Alternate / Exceptional Flows:			
3.1 Customer enters invalid information for the product details.			
3.1.1 System displays "Inva	lid input, plea	se try again." message.	

Table 4.28 Use Case – Edit Address

Use Case Name: Delete Address	ID: 27	Importance Level: High
Primary Actor: Customer Use Case Type: Detail, Essentia		
Stakeholders:	-	
Customer – wants to delete a particular a	ddress.	
Brief Description: "Delete Address" use	case descr	ibes how customer deletes
a particular address.		
Trigger: Customer wants to delete a parti	icular add	ress.
Relationships:		
Association: Customer		
Include: View Addresses		
Extend: -		
Generalization: -		
Normal Flow of Events:		
1. Perform use case "View Address	es" for Cu	stomer.
2. Customer clicks the "Delete" but	ton on the	address detail page.
3. System deletes the particular add	ress from	the database.
Sub Flows: -		
Alternate / Exceptional Flows: -		

Table 4.29 Use Case – Delete Address

Use Case Name: View Customers	ID: 28	Importance Level: High
Primary Actor: Admin	Use Cas	e Type: Detail, Essential
Stakeholders:		
Admin – wants to view all customers infe	ormation.	
Brief Description: "View Customers" use	e case des	cribes how admin view all
customers information.		
Trigger: Admin wants to view all custom	ers inforn	nation.
Relationships:		
Association: Admin		
Include: -		
Extend: -		
Generalization: -		
Normal Flow of Events:		
1. Admin enters the home page of the	ne web ap	р.
2. Admin clicks the "Customers" lal	bel on the	side navigation bar.
3. System displays all the customers	s informat	ion in a list.
Sub Flows: -		
Alternate / Exceptional Flows: -		

Table 4.30 Use Case – View Customers

Use Case Name: View Reviews	ID: 29	Importance Level: High
Primary Actor: Admin	Use Cas	e Type: Detail, Essential
Stakeholders:		
Admin – wants to view all reviews from	customers	S.
Brief Description: "View Reviews" use	case desci	ribes how admin views all
reviews from customers.		
Trigger: Admin wants to view all review	s from cu	stomers.
Relationships:		
Association: Admin		
Include: -		
Extend: -		
Generalization: -		
Normal Flow of Events:		
1. Admin enters the home page of the	he web ap	р.
2. Admin clicks the "Reviews" labe	l on the si	de navigation bar.
3. System displays all the reviews re	ecord in a	list.
Sub Flows: -		
Alternate / Exceptional Flows: -		

Table 4.31 Use Case – View Reviews

Use Case Name: Export Product	ID: 30	Importance Level: High			
Primary Actor: Admin	Use Case	e Type: Detail, Essential			
Stakeholders:	Stakeholders:				
Admin – wants to export all products dat	ta to an Ex	cel file.			
Brief Description: "Export Product" use	case desci	ribes how admin export all			
products data to an Excel file.					
Trigger: Admin wants to export all produ	ucts data to	o an Excel file			
Relationships:					
Association: Admin					
Include: -					
Extend: -					
Generalization: -					
Normal Flow of Events:					
1. Admin enters the home page of the	he web ap	р.			
2. Admin clicks the "Products" lab	el on the	side navigation bar in the			
home page.					
3. Admin clicks the "Export" button	1.				
4. Admin clicks the "OK" button fo	or the conf	irmation message.			
5. System exports all the products data to an Excel file.					
Sub Flows: -					
Alternate / Exceptional Flows: -					

Table 4.32 Use Case – Export Product

CHAPTER 5

SYSTEM DESIGN

5.1 Introduction

In this chapter, the system architecture design was discussed by using a system architecture diagram. Next, the database design was explained by using the relational entity diagram as well as the data dictionary. Lastly, the activity diagrams were used to illustrate the flow of control for the system.

5.2 System Architecture Design

The online store system adopts a three-tier application architecture, which consisting of presentation layer, application layer, and data layer. The presentation layer consists of all the user interfaces that the user will interact with. The application layer is used to process the business logic and data transfer between the presentation layer and the data layer. The data layer is used to store data and control read and write access to the database.



Figure 5.1 System Architecture Design

In this project, React Native which is a JavaScript framework is used for the development of the front-end native mobile application, while the frontend for the web application used HTML and Bootstrap framework. The web application can communicate directly with the back-end server, which is Laravel through Laravel internal routing. The mobile application needs to go through Laravel APIs by sending HTTP requests in order to access the system. Lastly, this project uses MySQL to manage the database and connect with Laravel server for data processing.

5.3.1 Entity Relationship Diagram



Figure 5.2 Entity Relationship Diagram

5.3.2 Data Dictionary

Attribute	Description	Data Type	PK/FK	NULL
id	Unique identifier for all registered users	int	РК	
email	Email address of the registered user	varchar		
password	Account login password of the registered user	varchar		
firstname	First name of the registered user	varchar		
lastname	Last name of the registered user	varchar		
phone_no	Phone number of the registered user	varchar		\checkmark
is_admin	Indicator to check if the registered user is an admin	tinyint		
created_at	Timestamp when the user account was first created	timestamp		\checkmark
updated_at	Timestamp of the latest update to the user account	timestamp		\checkmark

Table 5.1Data Dictionary – "users" Entity

Table 5.2Data Dictionary – "users" Entity

Attribute	Description	Data Type	PK/FK	NULL
id	Unique identifier for all users' favourite products	int	РК	

user_id	User who creates the favourite product	int	FK	
product_id	Product of the favourite product	int	FK	
created_at	Timestamp when the favourite product was first created	timestamp		\checkmark
updated_at	Timestamp of the latest update to the favourite product	timestamp		\checkmark

Table 5.3Data Dictionary – "addresses" Entity

Attribute	Description	Data Type	PK/FK	NULL
id	Unique identifier for all users' addresses	int	РК	
user_id	User who creates the address	int	FK	
address_line1	First line of the user's address	varchar		
address_line2	Second line of the user's address	varchar		\checkmark
city	City of the user's address	varchar		
state	State of the user's address	varchar		
postcode	Postcode of the user's address	varchar		
contact_name	Contact name of the user's address	varchar		
contact_phone	Contact phone of the user's address	varchar		
created_at	Timestamp when the user's address was first created	timestamp		\checkmark

updated_at	Timestamp of the latest update to the user's address	timestamp	\checkmark

Attribute	Description	Data Type	PK/FK	NULL
id	Unique identifier for all product categories	int	РК	
parent_id	Parent category of the product category	int		\checkmark
title	Title of the product category	varchar		
created_at	Timestamp when the product category was first created	timestamp		\checkmark
updated_at	Timestamp of the latest update to the product category	timestamp		\checkmark

Table 5.4Data Dictionary – "categories" Entity

 Table 5.5
 Data Dictionary – "chat_messages" Entity

Attribute	Description	Data Type	PK/FK	NULL
id	Unique identifier for all chat messages	int	РК	
user_id	User (admin / user) who sends the chat message	int	FK	
receiver	User (admin / user) who receives the chat message	int	FK	
message	Content of the chat message	text		\checkmark
image	Image of the chat message	varchar		\checkmark

is_seen	Indicator to check if the chat message is seen by the receiver	tinyint	
created_at	Timestamp when the product category was first created	timestamp	\checkmark
updated_at	Timestamp of the latest update to the product category	timestamp	\checkmark

Table 5.6 Data Dictionary – "offers" Entity

Attribute	Description	Data Type	PK/FK	NULL
id	Unique identifier for all offers	int	РК	
user_id	User who makes the offer	int	FK	
product_id	Product of the offer made	int	FK	
offer_price	Price that offered by the user	decimal		
seller_offer	Price that offered by the seller (admin)	decimal		
final_offer_price	Final offer price of the offer	decimal		
last_offer	Indicator to check who is the last person that updated the offer. (seller/customer)	enum		
status	Status of the offer made. (pending/cancelled/accepted/rejected/used/expired)	enum		
created_at	Timestamp when the offer was first created	timestamp		\checkmark
updated_at	Timestamp of the latest update to the offer	timestamp		\checkmark

Attribute	Description	Data	PK/FK	NULL
		Туре		
id	Unique identifier for all orders	int	РК	
user_id	User who creates the order	int	FK	
total	Total amount that the user needs to pay for the order	decimal		
status	Status of the order created.	enum		
	(pending/processing/shipped/completed/cancelled/refunded)			
delivery	Delivery method choose by the user for the order created. (shipping/pickup)	enum		
order_address_line1	First line of the order delivery address	varchar		\checkmark
order_address_line2	Second line of the order delivery address	varchar		\checkmark
order_city	City of the order delivery address	varchar		\checkmark
order_state	State of the order delivery address	varchar		\checkmark
order_postcode	Postcode of the order delivery address	varchar		\checkmark
order_contact_name	Contact name of the order delivery address	varchar		\checkmark
order_contact_phone	Contact phone of the order delivery address	varchar		\checkmark

created_at	Timestamp when the order was first created	timestamp	\checkmark
updated_at	Timestamp of the latest update to the order	timestamp	\checkmark

Table 5.8	Data Dictionary -	- "order_	_items"	Entity
-----------	-------------------	-----------	---------	--------

Attribute	Description	Data Type	PK/FK	NULL
id	Unique identifier for all order items	int	РК	
order_id	Order that the order item belongs to	int	FK	
product_id	Product of the order item	int	FK	
unit_price	Unit price of the product of the order item	decimal		
is_offer	Indicator to check of the order item is an offer	tinyint		
quantity	Quantity of the product of the order item	int		
created_at	Timestamp when the order item was first created	timestamp		\checkmark
updated_at	Timestamp of the latest update to the order item	timestamp		\checkmark

 Table 5.9
 Data Dictionary – "order_reviews" Entity

Attribute	Description	Data Type	PK/FK	NULL
id	Unique identifier for all order reviews	int	РК	

order_id	Order that the order review belongs to	int	FK	
user_id	User who creates the order review	int	FK	
comment	Comments provided by the user in the order review	text		\checkmark
product_quality_rating	1 to 5 stars rating on the product quality of the order	int		
shipping_handling_rating	1 to 5 stars rating on the shipping and handling of the order	int		
seller_service_rating	1 to 5 stars rating on the seller's service of the order	int		
created_at	Timestamp when the order review was first created	timestamp		\checkmark
updated_at	Timestamp of the latest update to the order review	timestamp		\checkmark

Table 5.10 Data Dictionary – "password_resets" Entity

Attribute	Description	Data Type	PK/FK	NULL
email	Email of the user account that request for password reset	varchar		
token	System auto generated token that used for verification during password reset	varchar		
created_at	Timestamp when the password reset request was first created	timestamp		\checkmark

Table 5.11 Data Dictionary – "personal_access_tokens" Entity

Attribute	Description	Data	PK/FK	NULL
		Туре		
id	Unique identifier for all personal access tokens	int	PK	
tokenable_type	Type of data models that the user belongs to	varchar		
tokenable_id	User who will be granted with the access token	int	FK	
name	Name of the personal access token	varchar		
token	System auto generated token that used for API authentication	int		
abilities	Scopes or limitations of actions that the authenticated user can perform via the APIs	text		\checkmark
last_used_at	1 to 5 stars rating on the seller's service of the order	timestamp		\checkmark
created_at	Timestamp when the order review was first created	timestamp		\checkmark
updated_at	Timestamp of the latest update to the order review	timestamp		\checkmark

Table 5.12 Data Dictionary – "products" Entity

Attribute	Description	Data	PK/FK	NULL
		Туре		
id	Unique identifier for all products	int	РК	

name	Name of the product	varchar		
description	Description of the product	text		\checkmark
category_id	Category that the product belongs to	int	FK	
price	Price of the product	decimal		\checkmark
image	Cover image of the product	varchar		\checkmark
images	All images of the product	text		\checkmark
quantity	Quantity of the product	int		\checkmark
weight	Weight of the product	decimal		\checkmark
length	Length of the product	decimal		\checkmark
width	Width of the product	decimal		\checkmark
height	Height of the product	decimal		\checkmark
can_offer	Indicator to check if the product can be offered by users	tinyint		
can_ship	Indicator to check if the product can be ship by sellers	tinyint		
preloved_tag	Indicator to check whether the product is a preloved product, or it is a brand-new product	tinyint		
location	Location of the product	enum		\checkmark
views	Number of views by users of the product	int		\checkmark

created_by	User (admin) who creates the product	int	FK	
created_at	Timestamp when the order review was first created	timestamp		\checkmark
updated_at	Timestamp of the latest update to the order review	timestamp		\checkmark

5.4 Activity Diagram

5.4.1 "Register" Activity Diagram



Figure 5.3 Activity Diagram - Register



5.4.2 "Login" Activity Diagram

Figure 5.4 Activity Diagram - Login



5.4.3 "Manage Profile" Activity Diagram

Figure 5.5 Activity Diagram - Manage Profile



5.4.4 "Reset Password" Activity Diagram

Figure 5.6 Activity Diagram - Reset Password



5.4.5 "View Products" Activity Diagram

Figure 5.7 Activity Diagram - View Products



5.4.6 "Search Product" Activity Diagram

Figure 5.8 Activity Diagram - Search Product



5.4.7 "View Product" Activity Diagram

Figure 5.9 Activity Diagram - View Product



5.4.8 "Social Media Sharing" Activity Diagram

Figure 5.10 Activity Diagram - Social Media Sharing


5.4.9 "Add Product to Shopping Cart" Activity Diagram

Figure 5.11 Activity Diagram - Add Product to Shopping Cart



5.4.10 "Manage Shopping Cart" Activity Diagram

Figure 5.12 Activity Diagram - Manage Shopping Cart



5.4.11 "Add Product to Favourite" Activity Diagram

Figure 5.13 Activity Diagram - Add Product to Favourite



5.4.12 "Manage Favourite List" Activity Diagram

Figure 5.14 Activity Diagram - Manage Favourite List



5.4.13 "Make Offer" Activity Diagram

Figure 5.15 Activity Diagram - Make Offer



5.4.14 "Manage Offer (Customer)" Activity Diagram

Figure 5.16 Activity Diagram - Manage Offer (Customer)



Figure 5.17 Activity Diagram - Checkout



5.4.16 "Manage Order (Customer)" Activity Diagram

Figure 5.18 Activity Diagram - Manage Order (Customer)



5.4.17 "Review and Rating" Activity Diagram

Figure 5.19 Activity Diagram - Review and Rating



5.4.18 "Contact Seller" Activity Diagram

Figure 5.20 Activity Diagram - Contact Seller



5.4.19 "Add New Address" Activity Diagram

Figure 5.21 Activity Diagram – Add New Address



5.4.20 "View Address" Activity Diagram

Figure 5.22 Activity Diagram – View Address



5.4.21 "Update Address" Activity Diagram

Figure 5.23 Activity Diagram – Update Address



5.4.22 "Delete Address" Activity Diagram

Figure 5.24 Activity Diagram – Delete Address



5.4.23 "Add New Product" Activity Diagram

Figure 5.25 Activity Diagram - Add New Product



5.4.24 "Update Product" Activity Diagram

Figure 5.26 Activity Diagram - Update Product



5.4.25 "Delete Product" Activity Diagram

Figure 5.27 Activity Diagram - Delete Product



5.4.26 "Export Product" Activity Diagram

Figure 5.28 Activity Diagram – Export Product



5.4.27 "Manage Offer (Admin)" Activity Diagram

Figure 5.29 Activity Diagram - Manage Offer (Admin)



5.4.28 "Manage Order (Admin)" Activity Diagram

Figure 5.30 Activity Diagram - Manage Order (Admin)



5.4.29 "View Sales Report" Activity Diagram

Figure 5.31 Activity Diagram - View Sales Report



5.4.30 "View Inventory Report" Activity Diagram

Figure 5.32 Activity Diagram - View Inventory Report



5.4.31 "View Customers" Activity Diagram

Figure 5.33 Activity Diagram - View Customers



5.4.32 "Customer Service" Activity Diagram

Figure 5.34 Activity Diagram - Customer Service



5.4.33 "View Reviews" Activity Diagram

Figure 5.35 Activity Diagram - View Reviews

CHAPTER 6

SYSTEM IMPLEMENTATION

6.1 Introduction

In this chapter, the modules and functionalities of the system for users with different roles were discussed. The implementation of the mobile app as well as the web app were demonstrated with images. Lastly, all the API endpoints used in the system were listed in a table, including the path, description, parameters, and requirements for user authentication tokens for each API.

6.2 Functionalities of the System

There are 2 types of users involved in this online shop system, which are the customer who uses the mobile app for purchasing items, and the admin who uses the web app for managing the online shop. The following table describes the modules and functionalities provided by the system that are accessible for different types of users.

Role	Module	Functionalities
Customer	Customer account	- Register and login customer
		account
		- View and update customer profile
		- Reset password
	Product	- View, search, and filter products
		- Share product to social media
	Shopping cart	- Add product to cart
		- View, update, and delete cart items
	Favourite	- Add product to favourite
		- View and delete favourite product
	Offer	- Make offer
		- View and update offer
	Order	- Create and view order

Table 6.1 Roles, Modules, and Functionalities

		- Review and rate order
	Contact seller	- Contact with seller
	Address	- Create, view, update, and delete
		address
Admin	Admin account	- Register and login admin account
		- Reset password
	Product	- Create, view, update, and delete
	management	product
		- Import product data with Excel files
		(.csv)
		- Export product data to an Excel file
	Offer management	- View and update offer
	Order management	- View and update order
	Reporting	- View sales report
		- View inventory report
	Customer	- View customer
	management	- Contact with customer
	Review	- View review
	management	

6.3 Modules for Customer (Mobile Application)

6.3.1 Customer Account Module

For the first time users (customer) of the mobile app, they need to register a new account with their first name, last name, email, and password. Duplicate email registration is not allowed in this system, which means that when users enter an email that is already registered in the system, the registration will be failed, and an error message will be displayed. Other than that, the password for an account must be same or longer than 8 characters. After users enter all the information and click on the "Create account" button, the system will validate all the inputs. Upon success registration, users will be redirect to the home page of the mobile app without needing to login manually.

bargai bas	ement egistration
First Name	Last Name
Email	
Password	
Confirm Password	
Create	account
Already have an	account? Log in

Figure 6.1 Account Registration Page

After users log out from the system, they need to enter the email and password of their registered account and click on the "Login" button to re-login to the system. If the credential is matches, the login is successful, and users will be redirect to the home page of the mobile app.

bargain
Account Login
Email Address
example@gmail.com
Password
A *****
Login
Forgot your password?
Don't have an account? Sign up

Figure 6.2 Login Page

If users forget their account password, they can click on the "Forgot your password" label at the login page. Users can enter their registered email at the password reset page and click on the "Send Password Reset Link" button. The system will send an email for the password reset process to users' email addresses.



Figure 6.3 Password Reset Page

After users login to the system, they can click on the profile button at the bottom navigation bar to view their profile details.

Profile

Hello, 1	⁻ hian.		
🖭 Qiwe	e Thian		
🗹 qiwe	e@gmail.com	1	
My Orders			>
My Favourit	es		>
My Address	es		>
Edit Profile			>
Contact Us			>
Logout			>
Home	G Offer	Cart	Profile

Figure 6.4 Profile Page

Users can update their profile details by clicking on the "Edit Profile" label at the profile page and they will be redirect to the profile details page as shown in Figure 6.5. Users can update their details such as first name, last name, and phone number at the profile details page and click on the "Save Profile" button. The updated profile can be shown in Figure 6.6.

← Edit Profile	
Profile Details	
Email Address	qiwee@gmail.com
First Name *	Qiwee
Last Name *	Thian
Phone Number *	0123456789
Save Profile	1

Figure 6.5 Profile Details Page

Profi	le			
He	llo, Tł	nian.		
1 1 1	Qiwee 01234 qiwee@	Thian 56789 @gmail.co	m	
My O	rders			>
My Fa	avourites	5		>
My A	ddresses	6		>
Edit F	Profile			>
Conta	act Us			>
Logo	ut			>
Home		S Offer	Cart	Profile

Figure 6.6 Profile Page After Update

6.3.2 Product Module

At the home page of the mobile app, the products will be displayed in card format with the product image, name, and price as shown in Figure 6.7.



Figure 6.7 Home Page

Users can search for products by entering the product name in the search bar. The system will display all the matches products to users as shown in Figure 6.8.



Figure 6.8 Product Search Results

Users can search for products from a specific category as shown in Figure 6.9, and filter and sort the product search results as shown in Figure 6.10.

X Product Categories
All
Women
> Accessories
> Apparel
> Tops
> Footwear
Baby & Maternity
> Accessories
> Nursing & Feeding
Book & Stationery
> Children's
> Fiction
> Non-fiction
Design & Craft
Electronic
> Accessories
Apply

Figure 6.9 Search Product by Categories

• •	Filter and Sort
Soi	t by
D	efault
L	atest
P	rice - Low to High
P	rice - High to Low
Mini R	mum (Optional): M 0
Max	imum (Optional):
R	ΜΩ

Figure 6.10 Filter and Sort Search Results

Users can click on a product from the product list to view the details of the product as shown in Figure 6.11.



Figure 6.11 Product Details Page

Users can click the "Share" button at the product details page to share a product through social media. The system will show the list of social media apps installed on users' mobile devices as shown in Figure 6.12.



Figure 6.12 Social Media Sharing

After users select one of the social media, the system will redirect users to the social media app and paste the information of the product on the social media as shown in Figure 6.13.



Figure 6.13 Social Media Sharing Result

6.3.3 Shopping Cart Module

Users can add a product to their shopping cart by clicking on the "Add to cart" button at the product details page. Users can view their shopping cart by clicking on the "Cart" button at the bottom navigation bar or at the product details page. In the shopping cart page, the system will display all the cart items with the product image, name, price, and quantity in a list as shown in Figure 6.14.



Figure 6.14 Shopping Cart Page

Users can update the quantity of the cart items by clicking the "-" or "+" buttons. When users add the quantity to maximum, the system will pop out a message to notify users as shown in Figure 6.15. Also, users can remove an item from their shopping cart by clicking on the "Trash bin" button.
	Brown Flower-Design Vase RM40.00 - 3 +
	RM120.00
Ô	IKEA Ung Drill Mirror RM50.00
.00.	RM50.00 📋

Figure 6.15 Update Shopping Cart

6.3.4 Favourite Module

Users can add any products to their favourite list by clicking on the favourite button at the bottom of the product details page. The system will pop out a message to notify users as shown in Figure 6.16.



Figure 6.16 Add to Favourite List

Users can view their favourite list by clicking on the "Favourite" button at the home page. The system will display all the users' favourite products in a list as shown in Figure 6.17.



Figure 6.17 Favourite List Page

To remove a product from favourite list, users can click again the "Favourite" button at the product details page and the system will notify users when the product is removed from their favourite list as shown in Figure 6.18.



Figure 6.18 Remove from Favourite List

6.3.5 Offer Module

Users can make an offer on a product by clicking the "Make offer" button at the bottom of the product details page. The system will prompt users to enter an offer price as shown in Figure 6.19. After users enter the offer price and click on the "Make Offer" button, the system will send the offer request to the admin for approval and the offer request will be saved in the users' offer list.



Figure 6.19 Make an Offer

Users can view their offer list by clicking on the "Offer" button at the bottom navigation bar. The system will display all offers made by users in a list as shown in Figure 6.20.



Figure 6.20 Offer List

The status of an offer includes "pending", "accepted", "rejected", "cancelled", "used", and "expired". Users can cancel an offer with status "pending" by clicking on the "Cancel" button. After the admin accepted users' offer from the admin panel, the status of the offer will be changed from "pending" to "accepted". Users can now add the accepted offer product with the offer price to their shopping cart.



Figure 6.21 Add Offer Product to Cart

After users add the offer product to their cart, the status of the offer item in the offer list will be updated to "used" as shown in Figure 6.22 and users cannot perform any action on the offer item with status "used".



Figure 6.22 Offer Item After Added to Cart

If users received a counteroffer from the admin, users can choose whether they want to accept the offer or make another counteroffer against it.



Figure 6.23 Counteroffer by Admin

If users want to accept the offer, they can click on the "Accept" button and the status of the offer item will be updated to "accepted" and users now can add the offer product to their cart.



Figure 6.24 Accept the Counteroffer

If users want to make another counteroffer, they can click on the "Update Offer" button and submit a new offer price to the system. The system will update the offer with the latest offer price and send it to admin for approval.



Figure 6.25 Make a New Counteroffer

6.3.6 Order Module

Users can create a new order by clicking on the "Check out" button at the shopping cart page. The system will redirect users to the checkout page with all checkout details displayed as shown in Figure 6.26.



Figure 6.26 Checkout Page

In the checkout page, users can choose the delivery method for their new order by selecting either "Self Pick Up" or "Standard Shipping". The system will validate if all the products in the order are available for shipping. If there is a product in the order is not available for shipping, users can only choose the "Self Pick Up" as the delivery method. If users select "Standard Shipping" as the delivery method, they need to select an address from their address book as the delivery address.

← Checkout	← Select Your Address
Delivery Method	Thian Qiwee 0123456789
Self Pick-Up	7, Jalan Merah, Taman Merah Kajang, Selangor, 43000
Standard Shipping	
Delivery Address Select Address > Thian Qiwee 0123456789 7, Jalan Merah, Taman Merah Kajang, Selangor, 43000	
Order Product(s)	
Brown Flower-Design Vase x3 RM40.00	
IKEA Ung Drill Mirror x1 RM40.00	+ Add New Address
x1 RM40.00	+ Add New Address

Figure 6.27 Select Delivery Address for "Standard Shipping"

When users click on the "Place Order" button, the system will validate the availability of all products in the order. If there is a product in the order is not available, the checkout process will be failed, and the system will display a pop out message to notify users as shown in Figure 6.28.



Figure 6.28 Order Product Not Available

Upon successful checkout, a new order will be created by the system and a notification email will be sent to all the admins that registered in the system.



Figure 6.29 New Order Notification Email

Users can view all their order records by clicking on the "My Orders" label at the profile page. The system will display all the users' orders in a list as shown in Figure 6.30.



Figure 6.30 Order List Page

Users can click on an order from the order list to view the order details as shown in Figure 6.31.



Figure 6.31 Order Details Page

After an order is completed, users can review the order by clicking on the "Review" button at the bottom of the order details page.



Figure 6.32 Order Details Page of a Completed Order

Users can rate the order from 1 to 5 stars based on three categories which are the product quality, shipping and handling, and seller's service. Users can also write a short review at the bottom text box. After users complete the review and rating, they can click on the "Submit" button and the system will save the review in the database.

← Order Details (+60) 12-299 8390 B3-10, IOI City Mall, 62502, Putrajaya.
Bargain Basement @ IOI Mall Puchong (+60) 11-1135 3378 EB2-01, IOI Mall, 47100, Puchong, Selangor.
** Please refer to the product description to collect your items in corresponding location.
Rate Your Order
Product Quality
Shipping and Handling 🚖 🚖 🚖 🏠
Seller's Service $\bigstar \bigstar \bigstar \bigstar$
Good
Submit

Figure 6.33 Rate and Review Order

The system will display the reviews submitted by all users at the bottom of the home page as shown in Figure 6.34.

bargain b asement										
Q Search			•							
Pensonic 1.5L (Maker PCM-192 RM80.00	Coffee 2	Philips 1.5L Viv Collection Chop RM150.00	'a oper H							
	View more	e products								
Ou	r Custon	ner Reviews								
Chen Wan a day ago	Low									
Product Quality		***	**							
Shipping and Ha	andling									
fast and good.										
Home	G Offer	Cart	Profile							

Figure 6.34 Customer Reviews

6.3.7 Contact Seller Module

The system allows users to contact with the seller by clicking the "Contact Us" label at the profile page or clicking the "Chat" icon at the product details page. Users can send text messages to the seller for any enquiries at the chat box.



Figure 6.35 Contact Seller Page

The system will show the number of unread messages at the profile page to notify users so they will be alerted in the first place.

Profile

Hello, Thian.

<u>.</u> =	Qiwee '	Thian											
فر	01234	56789											
\square	qiwee@	qiwee@gmail.com											
My O	rders			>									
My Fa	avourites			>									
My A	My Addresses												
Edit F	Profile			>									
Conta	act Us 💈			>									
Logo	ut			>									
		9											
Home	9	Utter	Cart	Profile									

Figure 6.36 Display Number of Unread Messages

6.3.8 Address Module

Users can view their addresses by clicking on the "My Addresses" label at the profile page. The system will display all the users' addresses in a list as shown in Figure 6.37.



Figure 6.37 Address List Page

Users can click on the "Add New Address" button at the address list page to create a new address. The system will redirect users to the create address page as shown in Figure 6.38. Users are required to enter all the necessary information in the text fields at the create address page. After users enter all the address details, they can click on the "Save Address" button and the system will create a new address in the database and save to users' address list.

← (Create Address	5
Contact		
Full Name	*	Full Name
Phone Nu	mber *	Phone Number
Address		
Address L	ine 1 *	Address Line 1
Address L	ine 2	Address Line 2
City *		City
State *		State
Postcode	*	Postcode
	Save Ado	Iress
Home	(S) Offer	Cart Profile

Figure 6.38 Create Address Page

Users can update their addresses by clicking on an address from their address list. The system will redirect users to the address details page as shown in Figure 6.39. Users can now edit the details of the address and click on the "Save Address" button at the address details page. The system will update the address with the new details in the database. Other than that, users can also delete their addresses by clicking on the "Delete Address" button at the address details page.

🗲 Edit /	Address							
Contact								
Full Name *	Thian Qiwee							
Phone Number	• 0187345342							
Address								
Address Line 1	2, Jalan SL 4							
Address Line 2	Taman Sungai Long							
City *	Kajang							
State *	Selangor							
Postcode *	43000							
	Delete Address							
	Cours Addresse							
Home	Offer Cart Profile							

Figure 6.39 Address Details Page

6.4 Modules for Admin (Web Application)

6.4.1 Admin Account Module

6.4.1.1 Account Registration and Login

For the admins who does not have an admin account, they need to register a new admin account using their first name, last name, email, and password. Duplicate email registration is not allowed in this system, which means that when admins enter an email that is already registered in the system, the registration will be failed, and an error message will be displayed. Other than that, the password for an account must be same or longer than 8 characters. After admins enter all the information and click on the "Register" button, the system will validate all the inputs. Upon success registration, admins will be redirect to the home page of the web app without needing to login manually.

barga ba	ain Admin Panel		Login Regis	ter
	Register			
	First Name			
	Last Name			
	Email Address			
	Password			
	Confirm Password			
		Register		

Figure 6.40 Account Registration Page

For the admins who already registered an admin account, they can login to the web app by entering the email and password at the login page and click on the "Login" button. If the email and password entered are matched, the login is successful, and admins will be redirect to the home page of the web app.

bargain basemen	Admin Panel		Login Register
Login			
	Email Address		
	Password		
		Login Forgot Your Password?	

Figure 6.41 Login Page

If admins forget their account password, they can click on the "Forgot Your Password" label at the login page. Admins can enter their registered email at the password reset page and click on the "Send Password Reset Link" button. The system will send an email for the password reset process to admins' email addresses.

BargainBasem	ent		Login	Register
	Reset Password			
	Email Address			
		Send Password Reset Link		

Figure 6.42 Password Reset Page

6.4.2 Product Management Module

Admins can view the list of products by clicking on the "Products" label at the side navigation bar. The system will display all the products in a list as shown in Figure 6.43.

basement Admin Panel								Qiwee -						
Products Offers Orders	Mar	hage Prod	ucts	Saareb						2	Add New Pro	educt Ir	nport	Export
Sales Report	36	on contra												
Inventory Report	D	Image	Name	Category	Price (RM)	Quantity	Weight (kg)	Length (cm)	(cm)	Height (cm)	Offerable	Shippable	Actions	
Customers Customer Service Reviews	386	a	Philips 1.5L Viva Collection Chopper HR1398	Kitchen > Kitchen Appliances	150.00	1	6.00				Yes	Yes	View	Delete
	385		Pensonic 1.5L Coffee Maker PCM-192	Kitchen > Kitchen Appliances	80.00	1	6.00				Yes	Yes	View	Delete
	384	0	Tonze 1.6L Double Boiler DDZ-16A	Kitchen > Kitchen Appliances	150.00	1	6.00				Yes	Yes	View	Delete
	383	Ô	IKEA Ung Drill Mirror	Home & Living > Home Decor	50.00	0	50.00				Yes	Yes	View	Delete
	382		White Vase with Red Flower Design	Home & Living > Home Decor	90.00	1	50.00				Yes	Yes	View	Delete
	381		Off-White Vase with Brown Flower Lining Design	Home & Living > Home Decor	80.00	1	50.00				Yes	Yes	View	Delete

Figure 6.43 Product List Page

Admins can search products by entering the product name at the search bar and click on the "Search" button. The system will display a list of products which the name match with the keyword entered.

bargain to basement	Admin Panel											Qi	wee 👻	
Products Offers Orders	Manage Products Add									Add New Product Import Export				
Sales Report Inventory Report	ID	Image	Name	Category	Price (RM)	Quantity	Weight (kg)	Length (cm)	Width (cm)	Height (cm)	Offerable	Shippable	Actions	
Customers Customer Service Reviews	231	P	Pink Cotton Round Neck Short Sleeve T- Shirt	Women > Tops	20.00	6	0.20				Yes	Yes	View	Delete
	230	Ť	Blue Cotton Round Neck Short Sleeve T- Shirt	Women > Tops	20.00	0	0.20	-		-	Yes	Yes	View	Delete
	229	*	White Cotton Round Neck Short Sleeve Reindeer Design T-Shirt	Women > Tops	20.00	1	0.20	-	-	-	Yes	Yes	View	Delete
	228	9	Grey Cotton Round Neck Short Sleeve T- Shirt	Women > Apparel	20.00	0	0.20	-	-	-	Yes	Yes	View	Delete

Figure 6.44 Search Products by Name

Admins can create a new product by clicking on the "Add New Product" at the product list page. Admins are required to enter all the necessary information for the product creation. After admins enter all the product details, they can click on the "Save" button and the system will create a new product in the database.

bargain basement	Admin Panel	Qiwee 👻
Products	Add Product Back	
Offers		
Orders	Name*	
Sales Report		
Inventory Report	Description*	
Customers		
Customer Service		
Reviews	li di la constanza di la consta	
	Category*	
	Select Category	
	Price*	
	Quantity*	
	Weight (kg)	
	Length (cm)	
	Width (cm)	
	Height (cm)	

Figure 6.45 Create Product Page - 1

Products	
Offers	Width (cm)
Orders	
Sales Report	Height (cm)
Inventory Report	
Customers	Offerable
Customer Service	
Reviews	Shippable
	Preloved Tag
	Location
	Select Location
	Images Preview
	Upload Images*
	Choose Files No file chosen
	Save

When admins want to view the details of a product, they can click on the "View" button at the product list page. The system will redirect admins to the product details page and display the details of the particular product.

bargain basement	Admin Panel	Qiwee 💌
Products	Product Detail	Edit Back
Offers		
Orders	Name	
Sales Report	Philips 1.5L Viva Collection Chopper HR1398	
Inventory Report	Description	
Customers	Original price: RM259.00(You save: RM109.00(42%)!)	*
Customer Service	Condition: Like new condition, works fine, comes with box Weight: 2.6kg	
	Dimension (L*W*H)/cm: 23*19*29.8	
Reviews	Description:	
	Item includes: Chopper motor, plastic bowl, chopper blades.	
	• 1.5L capacity	
	Simple press-down to operate	
	Chops meat, nuts, vegetable and herbs.	
	Can process anything from frozen shakes to hot soups.	•
	Category	
	Kitchen > Kitchen Appliances	
	Price (RM)	
	150.00	
	Quantity	
	1	
	Weight (kg)	
	6.00	
	Length (cm)	





Figure 6.48 Product Details Page – 2

Admins can click on the "Edit" button at the product details page if they want to edit the product. All the fields will become editable once admins click on the "Edit" button. After edit the information of the product, admins can click on the "Save" button at the bottom of the product details page. The system will validate all the inputs and then update the product with the new details in the database.



Figure 6.49 Edit Product

Admins can also delete a particular product from the product list by clicking on the "Delete" button. The system will show a confirmation message to make sure if the admins want to continue the action. If admins click on the "OK" button, the system will proceed to delete the product from the database.

Products Offers Orders			Doll I 127.0.0.1 Great (Spec Editic (Lore	: 8000 says delete this proc	luct?		ОК	Cancel						
Sales Report Inventory Report Customers	330	荷香	Claytan White Vase with Lotus Motif	Home & Living > Home Decor	160.00	1	50.00	-	-	-	Yes	Yes	View	Delete
Customer Service Reviews	329	t ₁ TEN STEPS AHEAD THE CLOSES	a	Women	1.00	1	1.00	1.00	1.00	1.00	Yes	Yes	View	Delete
	328		Philips 1.5L Viva Collection Chopper HR1398	Kitchen > Kitchen Appliances	150.00	1	6.00	-	-	-	Yes	Yes	View	Delete

Figure 6.50 Delete Product

In addition to adding products one by one, admins can import Excel files for product batch upload. Admin can click on the "Import" button at the product list page, and the system will show a pop out window to prompt admins to upload an Excel file as shown in Figure 6.51. The Excel file must be in a proper format and Figure 6.52 shows the template of the Excel file. After admins upload an Excel file and click on the "Import" button, the system will start reading the Excel file and create new products to the database. A message will be displayed to notify admins when the import process is complete.



Figure 6.51 Import Product

4	A	В	с	D	E	F	G	н	1	J	к	L
1	Name	Published	Short description	Stock	Weight (kg)	Length (cm)	Width (cm)	Height (cm)	Regular price	Categories	Tags	Images
2	Claytan White Vase with Lotus Motif	1	cul>\n Condition: Good condition/li>\n Weight: Weight: Conditions<di>Conditions</di>ConditionsConditionsConditionsConditionsConditionsConditionsConditionsConditionsConditionsConditionsConditionsConditionsConditionsConditionsConditionsConditionsConditionsConditionsConditionsConditionsConditionsConditionsConditionsConditionsConditionsConditionsConditionsConditionsConditionsConditionsConditions	1	50				160	Home & Living > Home Decor		https://www.bargainbasement. com.mt/wp- content/uploads/2022/03/Clayt an-White-Vase-with-Lotus- Motif-1.jpg. https://www.bargainbasement. com.mt/wp- content/uploads/2022/03/Clayt an-White-Vase-with-Lotus- Motif-4.jpg. https://www.bargainbasement. com.mt/wp- content/uploads/2022/03/Clayt an-White-Vase-with-Lotus- Motif-4.jpg. https://www.bargainbasement. com.mt/wp- content/uploads/2022/03/Clayt an-White-Vase-with-Lotus- Motif-4.jpg.
			Item in good condition, it comes with box and description card card price: cstrong>366.00/RM1,500									com.my/wp- content/uploads/2022/03/LIULI- Luscious-Glass-Artwork-Crystal- Baby-Doll-Figurine-A-Great- With Consult of dites Least

Figure 6.52 Template of the Excel File for Product Import

Admins can also export the product data in the system into an Excel file by clicking on the "Export" button at the product list page. The system will show

a confirmation message to make sure if the admins want to continue the action. If admins click on the "OK" button, the system will proceed to export the product data. Once the process is complete, the Excel file will be downloaded to the admins' device.



Figure 6.53 Export Product

6.4.3 Offer Management Module

Admins can view the list of offers by clicking on the "Offers" label at the side navigation bar. The system will display all the offers in a list as shown in Figure 6.54.

bargain basement	Admin	Panel								C)iwee ▼	
Products	Ma	nage Offe	rs									
Offers												
Orders	ID	Product		Customer	Created	Statue	Original Price	Offered	Seller	Actions		
Sales Report				Customer	011	Status	r nee	The	oner	Actions		
Inventory Report	31		Women's Necklace	Qiwee Thian	2022-09- 06	Pending	RM 15.00	RM 7.00 (46.67%)	RM 0.00	Counter	Accept	Reject
Customers		(\mathbf{v})			11:24:35			(10.07.70)				
Customer Service												
Reviews	30		Women's Bracelet	Qiwee Thian	2022-09- 06 11:24:25	Pending	RM 15.00	RM 7.00 (46.67%)	RM 0.00	Counter Offer	Accept	Reject
	29	and the second se	Leaning into God When Life Is Pushing You Away (Robert A. Schuller & William M. Kruidenier)- Hard Cover	Qiwee Thian	2022-09- 06 11:24:08	Pending	RM 20.00	RM 13.00 (65.00%)	RM 0.00	Counter Offer	Accept	Reject
	28	11.2 6.3	Not the Last Goodbye: On Life, Death, Healing, and Cancer (David Servan- Schreiber)	Qiwee Thian	2022-09- 06 11:23:57	Pending	RM 20.00	RM 10.00 (50.00%)	RM 0.00	Counter Offer	Accept	Reject
	27		Off-White Vase with Brown Flower Lining Design	Qiwee Thian	2022-09- 06 09:54:47	Cancelled	RM 80.00	RM 70.00 (87.50%)	RM 75.00	Counter Offer	Accept	Reject
	26		Atmosphere Black and White Striped V-neck Long Sleeve Blouse	Qiwee Thian	2022-09- 06 09:52:28	Pending	RM 30.00	RM 26.00 (86.67%)	RM 27.00	Counter Offer	Accept	Reject

Figure 6.54 Offer List Page

Admins can choose to accept or reject the offer by clicking on the "Accept" and "Reject" button. The system will update the offer status to "accepted" or "rejected" based on admins' action.

Products	Of	fer Updated Succe	ssfully									
Offers Orders	Ma	nage Offe	rs									
Inventory Report					Created		Original	Offered	Seller			
	ID	Product		Customer	On	Status	Price	Price	Offer	Actions		_
	31		Women's Necklace	Qiwee Thian	2022-09- 06 11:24:35	Pending	RM 15.00	RM 7.00 (46.67%)	RM 0.00	Counter Offer	Accept	Reject
	30		Women's Bracelet	Qiwee Thian	2022-09- 06 11:24:25	Pending	RM 15.00	RM 7.00 (46.67%)	RM 0.00	Counter Offer	Accept	Reject
	29	Har-	Leaning into God When Life Is Pushing You Away (Robert A. Schuller & William M. Kruidenier)- Hard Cover	Qiwee Thian	2022-09- 06 11:24:08	Accepted	RM 20.00	RM 13.00 (65.00%)	RM 0.00	Counter Offer	Accept	Reject
	28	10 2 5 3	Not the Last Goodbye: On Life, Death, Healing, and Cancer (David Servan- Schreiber)	Qiwee Thian	2022-09- 06 11:23:57	Rejected	RM 20.00	RM 10.00 (50.00%)	RM 0.00	Counter Offer	Accept	Reject
	27		Off-White Vase with Brown Flower Lining Design	Qiwee Thian	2022-09- 06 09:54:47	Cancelled	RM 80.00	RM 70.00 (87.50%)	RM 75.00	Counter Offer	Accept	Reject

Figure 6.55 Offer List After Update

Other than that, admins can also make a counteroffer to an offer by clicking on the "Counteroffer" button of an offer with "pending" status. The system will display a pop out window to prompt admins to enter a counteroffer price as shown in Figure 6.56. After admins enter a counteroffer price and click on the "Confirm" button, the system will update the offer with the new counteroffer price in the database.

bargain basement	Admir	n Panel								(Qiwee 👻	
Products Offers	Ma	nage Offe	rs									
Orders Sales Report	ID	Product		Customer	Created On	Status	Original Price	Offered Price	Seller Offer	Actions		
Inventory Report Customers Customer Service	31		Women's Necklace	Qiwee Thian	2022-09- 06 11:24:35	Pending	RM 15.00	RM 7.00 (46.67%)	RM 0.00	Counter Offer	Accept	Reject
Reviews	30	amon at 1 1 for some	Women's Bracelet Make a counter offe	Qiwee	2022-09-	Pending	RM	RM 7.00 (46.67%)	RM 0.00	Counter Offer	Accept	Reject
	29		Counter Offer Price (RM) Le. Is 10 (Rc W- Ha	:		Close	¢	RM 13.00 (65.00%)	RM 0.00	Counter Offer	Accept	Reject
	28	and the second second	No Life, Death, Healing, and Cancer (David Servan- Schreiber)	Thian	06 11:23:57		20.00	RM 10.00 (50.00%)	RM 0.00	Counter Offer	Accept	Reject
	27		Off-White Vase with Brown Flower Lining Design	Qiwee Thian	2022-09- 06 09:54:47	Cancelled	RM 80.00	RM 70.00 (87.50%)	RM 75.00	Counter Offer	Accept	Reject

Figure 6.56 Make a Counteroffer

6.4.4 Order Management Module

Admins can view the list of orders by clicking on the "Orders" label at the side navigation bar. The system will display all the orders in a list as shown in Figure 6.57.

bargain	Admin P	Panel			Qiw	vee 🔻
Products Offers	Man	age Orders				
Orders	ID	Customer	Created At	Status	Total Amount	Actions
Sales Report	10	Qiwee Thian	2022-09-06 10:36:21	Processing	RM 25.00	View
Inventory Report	9	Qiwee Thian	2022-09-06 10:32:16	Completed	RM 80.00	View
Customers	8	Chuan Yi Teo	2022-09-05 12:47:06	Shipped	RM 995.00	View
Reviews	7	Lim See Khuan	2022-09-05 10:15:14	Shipped	RM 160.00	View
	6	Chong Jun Tian	2022-09-05 09:15:49	Refunded	RM 12.00	View
	5	Chang Yew Wen	2022-09-05 08:35:31	Completed	RM 200.00	View
	4	Chen Wan Low	2022-09-05 07:40:13	Shipped	RM 20.00	View
	3	John Wong	2022-09-02 19:01:08	Processing	RM 20.00	View
	2	John Wong	2022-09-02 18:49:19	Completed	RM 34.00	View
	1	Qiwee Thian	2022-09-02 14:28:49	Shipped	RM 45.00	View

Figure 6.57 Order List Page

Admins can view the details of an order by clicking the "View" button at the order list page. The system will redirect admins to the order details page and display the details of the order.

bargain basement	Admin Panel				Qiwee 🔻
Products Offers	Order Details #7			U	pdate Status Back
Orders	Created at: 2022-09-05 10:	:15:14			
Sales Report	Customer: Lim See Khuan (s Current status: Shipped	seekhuan2123@gmail.com)			
Inventory Report	Delivery Method: Standard	Shipping			
Customers	Shipping Address				
Customer Service	Sky				
Reviews	0175243896				
110410443	1, lorong Machange Bubok 4 Bukit Mertaiam, Penang, 140	4 , Taman Machang Bubok 100			
	Dakie Meregani, Fenang, 140				
	Product		Unit Price	Quantity	Amount
	e	White Vase with Red Flower Design	RM 90.00	1	RM 90.00
	Ö	Brown Flower-Design Vase	RM 40.00	1	RM 40.00
	Ŵ	Brown Flower-Design Vase	RM 30.00	1	RM 30.00
				Total Amount:	RM 160.00

If admins want to update the status of the order, they can click on the "Update Status" button at the order details page. A pop out window will be displayed to prompt admins to choose a new order status as shown in Figure 6.59. After admins select the new status from the dropdown list and click on the "Update" button, the system will update the order with the new status in the database.

-20					
bargain basement	Admin Panel				Qiwee 👻
Products Offers	Order Details #7				Update Status Back
Orders	Created at: 2022-09-05 10:	15:14			
Sales Report	Customer: Lim See Khuan (s Current status: Shipped	eekhuan2123@gmail.com)			
Inventory Report	Delivery Method: Standard S	Shipping			
Customers	Shipping Address				
Customer Service	Sky				
Reviews	0175243896				
	Bukit Mertajam, Penang, 14	Update Order Status	×		
	Product	Order Status		Quantity	Amount
	-	Shipped	~	1	RM 90.00
		Pending Payment		-	
		Shipped			
		Completed			
	25.	Refunded	00	1	RM 40.00
		Brown Flower-Design Vase	BM 30.00	1	RM 30.00
				-	
				Total Amount:	RM 160.00

Figure 6.59 Update Order Status

6.4.5 Reporting Module

Admins can view the sales report by clicking on the "Sales Report" label at the side navigation bar. Admins are allowed to choose the date range for the sales report such as "this year", "last month", "this month", "last 7 days", or admins can custom the date range by themselves.

bargain basement	Admin Panel				Qiwee 👻
Products Offers Orders	Sales Report Year Last month This month	Last 7 days Custom			
Sales Report Inventory Report Customers Customer Service Reviews	Start Date: 01/07/2022 End Da Date range: 2022-07-01 to 2022-09-30 Summary	te: 30/09/2022 🗐 Confirm			
	Total sales amount RM314.00 Performance	Number of orders 3	Nu 6	mber of products sold	
	Categories - Item sold				
	Category			Item sold	Net sales
	Women > Apparel			1	RM20.00
	Women > Tops			1	RM14.00
	Home & Living > Home Decor			4	RM280.00
	Outlets - Item sold				
	Outlet		Item so	ld	Net sales
	Location Not Set		1		RM40.00
	IOI Mall, Puchong		з		RM240.00
	IOI City Mall, Putrajaya		2		RM34.00

Figure 6.60 Sales Report

Admins can view the inventory report by clicking on the "Inventory Report" label at the side navigation bar. At the inventory summary page, the system will display the number of products in stock, number of products out of stock, the list of stock by categories, and the list of products out of stock.

bargain basement	Admin Panel		Qiwee 👻	1 1	
Products	Inventory Report		r [
Offers					
Orders	Dashboard Upload history Performance			Rej	
Sales Report				ick	
Inventory Report	Summary			ntc	
Customers				nu	
Customer Service	Number of products Products out of stock				
Reviews	379 14				
	Stock by categories				
	Category		Stock		
	Category				
	Women > Accessories		184		
	Book & Stationery > Non-fiction		176		
	Home & Living > Home Decor		45		
	Kitchen > Kitchen Appliances				
	29				
	11				
	7				
	7				
	Kitchen > Kitchenware		5		

Figure 6.61 Inventory Report – Summary – 1

Products	Book & Stationery 1				
Offers	Toy 8	Toy & Entertainment > Games 1			
Orders					
Sales Report					
Inventory Report	Produ	ucts out of st	ock		
Customers	ID	Image	Name	Category	
Customer Service Reviews	228	9	Grey Cotton Round Neck Short Sleeve T-Shirt	Women > Apparel	
	230	Ť	Blue Cotton Round Neck Short Sleeve T-Shirt	Women > Tops	
	242	1 designed and the second seco	Topshop White Round Neck Sleeveless Lace Top	Women > Tops	
	290	As if Principle We available to the second	The As If Principle: The Radically New Approach to Changing Your Life (Richard Wiseman)- Hard Cover	Book & Stationery > Non- fiction	
	314		White Vase with Red Flower Design	Home & Living > Home Decor	

Figure 6.62 Inventory Report – Summary – 2

At the upload history page, the system will display the products upload history that shows all products in the system, with the name of the admin who uploaded the product, and the date and time when the product was uploaded.

bargain basement	Admin Panel		Qivve	-
Products Offers	Inventory	Report		
Orders	Dashboard	Upload history	Performance	
Sales Report				
Inventory Report	Products up	oload history		
Customers				
Customer Service	Uploaded at	Product		Uploaded by
Reviews	2022-09-05 12:58:59	荷香	Claytan White Vase with Lotus Motif	CY Teo
	2022-09-05 12:58:59	Ś	Brown Flower-Design Vase	CY Teo
	2022-09-05 12:58:59		Off-White Vase with Brown Flower Lining Design	CY Teo
	2022-09-05 12:58:59		White Vase with Red Flower Design	CY Teo
	2022-09-05 12:58:59	Ô	IKEA Ung Dnill Mirror	CY Teo

Figure 6.63 Inventory Report – Upload History

At the performance page, the system will display the top product categories based on the number of sales, as well as the top products based on the number of views by customers.

bargain	Admin Panel				Qiwee 👻	
Products Offers Orders	Dashboard Upload history Performance					
Sales Report	Top categories					
Lustomer S Customer Service Reviews	Women > Apparel 1 sold (16.7%) Top products		Women > Tops 1 sold (16.7%)	Home & Living > Home Decor 4 sold (66.7%)		
	Products - Num Product	nber of views by cu	stomers		Number of views	
	Ŵ	Brown Flower-Design Vase			10	
	1	Grey Cotton Round Neck Short Sleeve T-Shirt			9	
	市	Claytan White Vase	with Lotus Motif		9	

Figure 6.64 Inventory Report – Performance

6.4.6 Customer Management Module

Admins can view the list of customers by clicking on the "Customers" label at the side navigation bar. The system will display all the customers information in a list as shown in Figure 6.65.

bargain basement	ر Admin Panel					Qiwee 🔻	
Products Offers	Manage Customers						
Orders	ID	Name	Email	Registered On	Phone	Orders	Total Spend
Sales Report	16	Qiwee Thian	qiwee@gmail.com	2022-09-06 08:04:20	0123456789	2	RM 105.00
Inventory Report	14	Chuan Yi Teo	chuanyi77@gmail.com	2022-09-05 12:31:04	0132899985	1	RM 995.00
Customers	13	Lim See Khuan	seekhuan2123@gmail.com	2022-09-05 09:57:32	0175243896	1	RM 160.00
Customer Service	11	Chong Jun Tian	j.tian@1utar.my	2022-09-05 09:04:45	012-2470473	1	RM 12.00
Reviews	9	Chang Yew Wen	yewwenchang@hotmail.com	2022-09-05 08:19:10	999	1	RM 200.00
	7	Chen Wan Low	low.ch.wan@gmail.com	2022-09-05 07:18:38	0195592638	1	RM 20.00
	6	John Wong	john123@gmail.com	2022-09-02 17:50:54	0123456789	2	RM 54.00
	5	qwe qwe	qwe@gmail.com	2022-09-02 12:35:09	-	0	RM 0.00
	4	Qiwee Thian	thisisjojo2000@gmail.com	2022-09-02 12:26:52		1	RM 45.00

Figure 6.65 Customer List Page

Admins can check if there are any enquiries from customers by clicking on the "Customer Service" label at the side navigation bar. A list of previously contacted customers will be displayed. If there is an unread message sent by a customer, the system will display a small label beside the customer's name to alert the admins.

bargain basemen	Admin Panel		Qiwee 🔻
Products Offers	Customer Service		
Orders	Customers	Select a customer to see the chat	
Sales Report	Qiwee Thian	Click on a customer to see the messages	
Inventory Report	John Wong		
Customers	Chen Wan Low		
Customer Service	Chang Yew Wen		
Reviews	Chong Jun Tian		
	Lim See Khuan		
	Chuan Yi Teo		
	Qiwee Thian 2		

Figure 6.66 Customer Service Page

Admins can open the chat box by clicking on a customer name from the list. The system will display all the chat history with the customer in the chat box. Admins can reply to the customer by entering a text message in the text box and click on the "Send" button. Other than sending a text message, admins can also send an image by clicking on the "Paperclip" icon and upload an image from the device. The system will send the message to the customer after admins click on the "Send" button.



Figure 6.67 Send Message to Customer
6.4.7 Review Management Module

Admins can view the list of reviews by clicking on the "Reviews" label at the side navigation bar. The system will display all the reviews information in a list as shown in Figure 6.68. Admins can view the order details of the review by clicking on the "View Order" button

baggain Admin Panel							Qiwee 🔻			
Products Offers	Products Manage Reviews									
Orders					Ratings (1 - 5 sta	Ratings (1 - 5 stars)				
Sales Report	ID	Customer	Order ID	Created At	Product Quality	Shipping Handling	Seller Service	Comment	Actions	
Inventory Report	6	Chuan Yi Teo	8	2022-09-05 12:48:17	4	4	5	adfasdf	View Order	
	5	Lim See Khuan	7	2022-09-05 10:17:28	5	5	2	product quality is good	View Order	
Customer Service Reviews	4	Chong Jun Tian	6	2022-09-05 09:16:57	1	1	1	why so late	View Order	
	3	Chang Yew Wen	5	2022-09-05 08:36:47	5	5	5	Good!	View Order	
	2	Chen Wan Low	4	2022-09-05 07:41:52	5	5	5	fast and good.	View Order	
	1	John Wong	2	2022-09-02 19:05:03	5	5	5	Very good!	View Order	

Figure 6.68 Review List Page

6.5 API List

All the API endpoints used in this project are listed in the below table with the path of the API endpoint, description, parameters, and also if the endpoint required a user authentication token generated by Laravel Authentication.

No.	Endpoint	Description	Parameters	Authentication
				Token Needed
1	POST	Create a new	Email,	No
	/api/register	customer	password, first	
		account	name, last name,	
			device name	
2	POST	Validate a	Email,	No
	/api/login	customer	password,	
		account	device name	
3	POST	Send a reset	Email	No
		password		

Table 6.2 API Endpoints

	/api/user-reset-	email to		
	password-email	customer		
4	PUT	Update a	User id, first	Yes
	/api/users/:	customer	name, last name,	
	userId	profile	phone number	
5	GET	Retrieve all	Page number,	No
	/api/products	product	search, category,	
		records	minimum price,	
			maximum price,	
			sort by	
6	GET	Retrieve a	Product id	No
	/api/products/:	product		
	productId	record		
7	GET	Retrieve all	Parent category	No
	/api/categories	product		
		category		
		records		
8	GET	Retrieve a	Category id	No
	/api/categories/:	product		
	categoryId	category		
		record		
9	GET	Retrieve all	User id	Yes
	/api/offers	offer records		
		for a customer		
10	POST	Create an	User id, product	Yes
	/api/offers	offer record	id, offer price	
		for a customer		
11	PUT	Update an	Offer id, user id,	Yes
	/api/offers/:	offer record	new status, new	
	offerId	for a customer	offer price	
12	POST	Retrieve all	Cart items	Yes
	/api/get-cart-	cart items for		
	items	a customer		

13	GET	Retrieve all	User id	Yes
	/api/orders	order records		
		for a customer		
14	GET	Retrieve an	Order id	Yes
	/api/orders/:	order record		
	orderId	for a customer		
15	POST	Create an	User id, order	Yes
	/api/orders	order record	items, delivery,	
		for a customer	order address	
16	GET	Retrieve all	User id	Yes
	/api/favourites	favourite		
		products for a		
		customer		
17	POST	Create or	User id, product	Yes
	/api/favourites	delete a	id	
		favourite		
		product for a		
		customer		
18	GET	Retrieve all	User id	Yes
	/api/addresses	addresses for		
		a customer		
19	GET	Retrieve an	Address id	Yes
	/api/addresses/:	address for a		
	addressId	customer		
20	POST	Create an	User id, address	Yes
	/api/addresses	address for a	line 1, address	
		customer	line 2, city, state,	
			postcode,	
			contact name,	
			contact phone	
21	PUT	Update an	Address id, user	Yes
	/api/addresses/:	address for a	id, address line	
	addressId	customer	1, address line 2,	

			city, state,	
			postcode,	
			contact name,	
			contact phone	
22	DELETE	Delete an	Address id	Yes
	/api/addresses/:	address for a		
	addressId	customer		
23	GET	Retrieve all		No
	/api/reviews	review		
		records		
24	POST	Create a	Order id, user id,	No
	/api/reviews	review record	product quality	
		for a customer	rating, shipping	
			handling rating,	
			seller service	
			rating, comment	
25	GET	Retrieve all	User id	Yes
	/api/messages	message		
		record for a		
		customer		
26	POST	Create a	User id, receiver,	Yes
	/api/messages	message	message	
		record for a		
		customer		
27	GET	Retrieve the	User id	Yes
	/api/get-unseen-	number of		
	message-count	unseen		
		messages for a		
		customer		

CHAPTER 7

SYSTEM TESTING

7.1 Introduction

After the system implementation, several software testing mechanisms were carried out to ensure the quality of the final system developed. There are 4 types of testing performed and discussed in this chapter, which are unit testing, integration testing, user acceptance testing, and usability testing. 12 users were selected and participated to perform the user acceptance testing as well as the usability testing.

7.2 Unit Testing

A total of 42 unit test cases were executed, covering all 15 modules of the system.

7.2.1 Unit Test Cases Listing

Roles	Project Module	Test Case ID	Test Case Title	Status
Customer	Customer account	CustomerAcc-1	Customer Register Account	Pass
		CustomerAcc-2	Customer Login Account	Pass
		CustomerAcc-3	Customer Update Profile	Pass
		CustomerAcc-4	Customer Reset Password	Pass
	Product	Product-1	Customer View Product	Pass
	Product-2 Social Media Sharing		Social Media Sharing	Pass
	Shopping cart	ShoppingCart-1 Add Product to Cart		Pass
		ShoppingCart-2	View Cart Item	Pass
		ShoppingCart-3	Update Cart Item Quantity	Pass
		ShoppingCart-4	Remove Item from Cart	Pass
	Favourite	Favourite-1	Add Product to Favourite	Pass
		Favourite-2	View Favourite Product	Pass
		Favourite-3	Remove Product from Favourite	Pass

 Table 7.1
 Unit Test Cases Listing for each Project Module

	Offer	Offer-1	Make New Offer	Pass	
		Offer-2	Customer View Offer	Pass	
		Offer-3	Customer Update Offer	Pass	
	Order	Order-1	Create New Order	Pass	
		Order-2	View Order	Pass	
		Order-3	Review and Rating	Pass	
	Contact seller	act seller ContactSeller-1 Contact with Seller			
	Address	Address-1	View Address	Pass	
		Address-2	Create Address	Pass	
		Address-3	Update Address	Pass	
		Address-4	Delete Address	Pass	
Admin	Admin account	AdminAcc-1	Admin Register Account	Pass	
		AdminAcc-2	Admin Login Account	Pass	
		AdminAcc-3	Admin Reset Password	Pass	
	Product management	ProductMgt-1	Create Single Product	Pass	
		ProductMgt-2	Admin View Product	Pass	
		ProductMgt-3	Update Product	Pass	

	ProductMgt-4	Delete Product	Pass
	ProductMgt-5	Import Product with Excel File	Pass
	ProductMgt-6	Export Product to Excel File	Pass
Offer management	OfferMgt-1	Admin View Offer	Pass
	OfferMgt-2	Admin Update Offer	Pass
Order management	OrderMgt-1	Admin View Order	Pass
	OrderMgt-2	Admin Update Order	Pass
Reporting	Reporting-1	View Sales Report	Pass
	Reporting-2	View Inventory Report	Pass
Customer management	CustomerMgt-1	View Customer	Pass
	CustomerMgt-2	Customer Service	Pass
Review management	ReviewMgt-1	Admin View Review	Pass

7.2.2 Unit Test Cases

7.2.2.1 Customer Account Module

 Table 7.2
 Unit Test Case - Customer Register Account

Test	Case ID		CustomerAcc-1		Module Name	Customer Account		
Test	Case Title		Customer Register A	Test Priority	High			
Pre-o	conditions		N/A		1	_		
No.	Test	Case	Test Steps	Test Data	Expected Result		Actual Result	Status
	Summary	7						
1.	Register		1. Enter all the	First name:	Registration is s	successful	Registration is successful	Pass
	customer		required	"Qi Wee"	and user is redi	rected to	and user is redirected to	
	account	with	information at the		home page.		home page.	
	valid	name,	account registration	Last name:				
	email,	and	page.	"Thian"				
	password.							
			2. Click "Create	Email:				
			account" button	"qwthian@gmail.com"				
				Password:				
				"123456789"				
				Confirm password:				

			"123456789"			
2.	Register	1. Enter all the	First name:	Registration failed and error	Registration failed and	Pass
	customer	required	"Qi Wee"	message "The email must	error message "The	
	account with	information but		be a valid email address" is	email must be a valid	
	valid name and	with an invalid	Last name:	displayed.	email address." is	
	password but	email at the account	"Thian"		displayed.	
	invalid email.	registration page.				
			Email:			
		2. Click "Create	"qwthian"			
		account" button.				
			Password:			
			"123456789"			
			Confirm password:			
			"123456789"			
1						

3.	Register	1. Enter all the	First name:	Registration failed and error	Registration failed and	Pass
	customer	required	"Qi Wee"	message "The email has	error message "The	
	account with	information but		already been taken" is	email has already been	
	valid name,	with an email which	Last name:	displayed.	taken" is displayed.	
	email, and	has already been	"Thian"			
	password but the	registered in the				
	email has	system.	Email:			
	already been		"qwthian@gmail.com"			
	registered in the	2. Click "Create				
	system.	account" button.	Password:			
			"123456789"			
			Confirm password:			
			"123456789"			
4.	Register	1. Enter a valid	First name:	Registration failed and error	Registration failed and	Pass
	customer	name and email but	"Qi Wee"	message "The password	error message "The	
	account with	password is empty.				

valid email but				Last name:	field	is	required"	is	password	field	is	
invalid name or	2.	Click	"Create	"Thian"	displa	yed.			required" is	displayed	1.	
password.	acco	ount" bi	utton									
				Email:								
				"qwthian@gmail.com"								
				Password:								
				· · · · ·								
				Confirm password:								

Table 7.3Unit Test Case - Customer Login Account

Test Case ID	CustomerAcc-2	Module Name	Customer Account
Test Case Title	Customer Login Account	Test Priority	High
Pre-conditions	1. Customer has already registered an account		

No.	Test Case	Test Steps	Test Data	Expected Result	Actual Result	Status
	Summary					
1.	Login customer	1. Enter valid email	Email:	Login is successful and user	Login is successful and	Pass
	account with	and password.	"qwthian@gmail.com"	is redirected to home page.	user is redirected to	
	valid email and				home page.	
	password.	2. Click "Login"	Password:			
		button.	"123456789"			
2.	Login customer	1. Enter valid email	Email:	Login failed and error	Login failed and error	Pass
	account with	and incorrect	"qwthian@gmail.com"	message "Incorrect	message "Incorrect	
	valid email but	password.		password" is displayed.	password" is displayed.	
	incorrect		Password:			
	password.	2. Click "Login"	"987654321"			
		button.				
3.	Login customer	1. Enter invalid	Email:	Login failed and error	Login failed and error	Pass
	account with	email and	"user00@gmail.com"	message "The selected	message "The selected	
	invalid email and	password.		email is invalid" is	email is invalid" is	
	password.		Password:	displayed.	displayed.	

	2. Click "Login"	"123456789"		
	button			

Table 7.4Unit Test Case - Customer Update Profile

Test	Case ID	CustomerAcc-3		Module Name	Custome	Customer Account		
Test	Case Title	Customer Update Pro	file	Test Priority	High			
Pre-c	conditions	1. Customer has alrea	dy registered an accourt	nt				
No.	Test Case	Test Steps	Test Data	Expected Result		Actual Result		Status
	Summary							
1.	Update customer	1. Enter valid name	First name:	Profile updated su	uccessfully	Profile	updated	Pass
	profile with valid	and phone number.	"Qi Wee"	and message	"Profile	successfully and	message	
	name and phone			updated success	fully" is	"Profile	updated	
	number.	2. Click "Save	Last name:	displayed.		successfully"	is	
		profile" button	"Thian"			displayed.		
			Phone number:					
			"0123456789"					

2.	Update customer	1. Enter valid name	First name:	Profile update failed and	Profile update failed and	Pass
	profile with	but phone number is	"Qi Wee"	error message "Please enter	error message "Please	
	invalid name or	empty.		all the necessary	enter all the necessary	
	phone number.		Last name:	information" is displayed.	information" is displayed.	
		2. Click "Save	"Thian"			
		profile" button				
			Phone number:			
			· · · · ·			

 Table 7.5
 Unit Test Case - Customer Reset Password

Test Case ID CustomerAcc-4			Module Name	Custome	Customer Account			
Test Case Title Customer Reset Password			Test Priority	High				
Pre-conditions			1. Customer has alread	ady registered an account				
No.	Test	Case	Test Steps	Test Data	Expected Result		Actual Result	Status
	Summary							

1.	Reset customer	1. Click "Forgot	Email:	Send reset password email	Send reset password	Pass
	password with	password" label in	"qwthian@gmail.com"	successfully and message	email successfully and	
	valid email	login page.		"A password reset link has	message "A password	
	(Forget			been sent to your email	reset link has been sent to	
	password).	2. Enter valid email.		address" is displayed.	your email address" is	
					displayed.	
		3. Click 'Send				
		Password Reset				
		Link' button.				
2.	Reset customer	1. Click "Forgot	Email:	Send reset password email	Send reset password	Pass
	password with	password" label in	"user00@gmail.com"	failed and message "Invalid	email failed and message	
	invalid email	login page.		email, user does not exist"	"Invalid email, user does	
	(Forget			is displayed.	not exist" is displayed.	
	password).	2. Enter invalid				
		email.				

	3. Click 'Send		
	Password Reset		
	Link' button.		

7.2.2.2 Product Module

Test	Test Case ID Product-1			Module Name	Product		
Test Case Title Customer View Product			Test Priority	High			
Pre-conditions 1. Customer has logged in to his/her accourt							
No.	Test Case	Test Steps	Test Data	Expected Result		Actual Result	Status
	Summary						
1.	View products	1. Click "Home"		A list of proc	ducts is	A list of products with	Pass
		icon in the bottom		displayed with image	ge, name,	image, name and price is	
		navigation bar.		and price.		displayed.	

Table 7.6Unit Test Case - Customer View Product

Search products	1. Click "Home"	Keyword:	A list of products which	A list of products which	Pass
by name	icon in the bottom	"vase"	contains "vase" in the	contains "vase" in the	
	navigation bar.		product name is displayed.	product name is	
				displayed.	
	2. Enter keyword in				
	search bar.				
	3. Press "Enter".				
Search products	1. Click "Home"	Keyword:	A list of products is	A list of products is	Pass
by name with	icon in the bottom	····	displayed with image, name,	displayed with image,	
empty value	navigation bar.		and price.	name, and price.	
	2. Click search bar.				
	3. Press "Enter".				
	Diffees Enter (
	Search products by name Search products by name with empty value	Search products1. Click "Home" icon in the bottom navigation bar.by nameicon in the bottom navigation bar.2. Enter keyword in search bar.3. Press "Enter".Search products1. Click "Home" icon in the bottom navigation bar.by name with empty value2. Click search bar.2. Click search bar.3. Press "Enter".	Search products by name1. Click "Home" icon in the bottom navigation bar.Keyword: "vase"2. Enter keyword in search bar.2. Enter keyword in search bar."3. Press "Enter".3. Press "Enter".Search products by name with empty value1. Click "Home" icon in the bottom navigation bar.Keyword: ""2. Click search bar. 3. Press "Enter".3. Press "Enter".	Search products1. Click "Home"Keyword: "vase"A list of products which contains "vase" in the product name is displayed.by name. Enter keyword in search bar Enter keyword in search bar Enter keyword in search bar Enter keyword in search bar.3. Press "Enter" Click "Home"Keyword: ""A list of products is displayed with image, name, and price.Search products1. Click "Home"Keyword: ""A list of products is displayed with image, name, and price.Search products2. Click search bar	Search products1. Click "Home"Keyword: "vase"A list of products which contains "vase" in the product name is displayed.A list of products which contains "vase" in the product name is displayed.by name2. Enter keyword in search bar.2. Enter keyword in search bar.A list of products is displayed.A list of products which contains "vase" in the product name is displayed.Search products1. Click "Home" icon in the bottom navigation bar.Keyword:A list of products is displayed with image, name, and price.Search products1. Click search barA list of products is displayed with image, name, and price.Search products2. Click search barJ. Press "Enter"

4.	Filter products	1. Click "Home"	Category:	A list of products from	A list of products from	Pass
	by category	icon in the bottom	"Women"	"Women" category is	"Women" category is	
		navigation bar.		displayed.	displayed.	
		2. Click				
		"Hamburger" icon.				
		3. Click one of the				
		product categories				
		from the list.				
5.	Sort product	1. Click "Filter"	Sort by:	Products from the list are	Products from the list are	Pass
	searching result	button.	"Price – Low to	sorted from lowest price to	sorted from lowest price	
			High"	highest price.	to highest price.	
		2. Click one of the				
		sorting methods				
		from the options.				

		3. Click "Apply"				
		button.				
6.	Filter product	1. Click "Filter"	Minimum price:	Products from the list are	Products from the list are	Pass
	searching result	button.	20	filtered with minimum price	filtered with minimum	
	by price range			RM20 and maximum price	price RM20 and	
		2. Enter minimum	Maximum price:	RM100.	maximum price RM100.	
		price and maximum	100			
		price to filter.				
		3. Click "Apply"				
		button.				
7.	View product	1. Click one of the	Product ID:	User is redirected to the	User is redirected to the	Pass
	details	products from the	8	product details page and the	product details page and	
		list.		detailed information of	the detailed information	
				product ID 8 is displayed.	of product ID 8 is	
					displayed.	

			í

Test	Case ID	Product-2		Module Name	Product		
Test	Case Title	Social Media Sharing		Test Priority	High		
Pre-c	onditions	1. Custome	r has	logged	in	to his/her	account
		2. Customer is in proc	luct details page				
No.	Test Case	Test Steps	Test Data	Expected Result		Actual Result	Status
	Summary						
1.	Share product to	1. Click "Share"		User is redirected	d to the	User is redirected to	the Pass
	social media	icon in the product		social media app	and the	social media app and	d the
		details page.		product image an	nd details	product image and de	etails
				has been pasted in	n the text	has been pasted in the	etext
		2. Select one of the		box.		box.	
		social media					
		applications from					
		the list.					

 Table 7.7
 Unit Test Case - Social Media Sharing

7.2.2.3 Shopping Cart Module

Test	Case ID	ShoppingCart-1		Module Name	Shopping	g Cart		
Test	Case Title	Add Product to Cart		Test Priority	High			
Pre-c	onditions	1. Custome	r has	logged	in	to	his/her	account
		2. Customer is in proc	Customer is in product details page					
No.	Test Case	Test Steps	Test Data	Expected Result		Actual Resu	ılt	Status
	Summary							
1.	Add a product to	1. Click "Add to		Add to cart successfully and		Add to cart	successfully	Pass
	shopping cart	cart" button.		message "Item added to cart		and message	"Item added	
				successfully" is dis	splayed.	to cart suc	cessfully" is	
						displayed.		
2.	Add a product	1. Click "Add to		Add to cart failed	and error	Add to car	t failed and	Pass
	that has already	cart" button.		message "The	item is	error messag	ge "The item	

Table 7.8	Unit Test Case	- Add Product to	Cart
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in the cart to	already in your cart"	s is already in your cart" is	
shopping cart	displayed.	displayed.	

Table 7.9 Unit Test Case - View Cart Item

Test	Case ID	ShoppingCart-2		Module Name Shopping Cart				
Test	Case Title	View Cart Item		Test Priority	High			
Pre-c	onditions	1. Custome	r has	logged	in to his/her		his/her	account
		2. Customer has adde	Customer has added at least one product to his/her shopping cart					
No.	Test Case	Test Steps	Test Data	Expected Result		Actual Resu	ılt	Status
	Summary							
1.	View item in	1. Click "Cart" icon		User is redire	cted to	User is re	edirected to	Pass
	shopping cart	at the bottom		shopping cart page	e and all	shopping car	t page and all	
		navigation bar.		items in user's shop	ping cart	items in use	er's shopping	
				is shown in a list.		cart is shown	n in a list.	

Table 7.10 Unit Test Case - Update Cart Item Quantity

Test Case ID	ShoppingCart-3	Module Name	Shopping Cart
Test Case Title	Update Cart Item Quantity	Test Priority	High

Pre-c	onditions	1. Custome	er has	logged	in	to his	s/her	account
		2. Customer has adde	d at least one product t	o his/her shopping o	cart			
		3. Customer is in sho	pping cart page					
No.	Test Case	Test Steps	Test Data	Expected Result		Actual Result		Status
	Summary							
1.	Add cart item	1. Click "Plus" icon		The quantity of th	e cart item	The quantity of	the cart	Pass
	quantity	beside the quantity		is added by one su	accessful.	item is added	by one	
		of the cart item.				successful.		
2.	Add cart item	1. Click "Plus" icon		Add cart item qua	ntity failed	Add cart item	quantity	Pass
	quantity that has	beside the quantity		and error mess	age "You	failed and error	message	
	exceeded the	of the cart item.		have reached	maximum	"You have	reached	
	product stock			quantity" is displa	yed.	maximum quar	ntity" is	
	number					displayed.		
3.	Minus cart item	1. Click "Minus"		The quantity of th	e cart item	The quantity of	the cart	Pass
	quantity	icon beside the		is reduced by one	successful.	item is reduced	by one	
						successful.		

		quantity of the cart			
		item.			
4.	Minus cart item	1. Click "Minus"	The quantity of the cart item	The quantity of the cart	Pass
	quantity that has	icon beside the	remained as one.	item remained as one.	
	reached	quantity of the cart			
	minimum	item.			
	quantity which is				
	one.				

Table 7.11 Unit Test Case - Remove Item from Cart

Test	Case ID		ShoppingCart-4		Module Name	Shopping	Shopping Cart		
Test	Case Title		Remove Item from C	art	Test Priority	High			
Pre-conditions			1. Custome	er has	logged	in	to	his/her	account
			2. Customer has adde	d at least one product t	o his/her shopping o	cart			
			3. Customer is in sho	pping cart page					
No.	Test	Case	Test Steps	Test Data	Expected Result		Actual R	esult	Status
	Summary	,							

1.	Remove a cart	1. Click "Trash bin"	The cart item is removed	The cart item is removed	Pass
	item from	icon at the cart item	from shopping cart	from shopping cart	
	shopping cart	row.	successfully.	successfully.	

7.2.2.4 Favourite Module

Test	Case ID		Favourite-1		Module Name	e Favourite			
Test	Case Title		Add Product to Favou	ırite	Test Priority	High			
Pre-c	conditions		1. Customer has logge	ed in to his/her account					
2.			2. Customer is in proc	2. Customer is in product details page					
			3. The product is not customer's favourite product						
No.	Test	Case	Test Steps	Test Data	Expected Result	Actual Result		Status	
	Summary								
1.	Add a pro	duct to	1. Click "Favourite"		The product is	added to	The product is added to	Pass	
	favourite		icon at the bottom of	con at the bottom of		urite list customer's favourite list			
			product details page.		successfully and	message	successfully and message		

Table 7.12 Unit Test Case - Add Product to Favourite

		"Added to favourite list" is	"Added to favourite list"	
		displayed.	is displayed.	

Table 7.13 Unit Test Case - View Favourite Product

Test	Case ID	Favourite-2		Module Name	Favourite	2		
Test	Case Title	View Favourite Produ	ıct	Test Priority	High			
Pre-c	conditions	1. Customer has logge	ed in to his/her account					
		2. Customer has added at least one product to his/her favourite list						
		3. Customer is in home page						
No.	Test Case	Test Steps	Test Data	Expected Result		Actual Result	Status	
	Summary							
1.	View product in	1. Click "Favourite"		User is redired	cted to	User is redirected to	Pass	
	favourite list	icon at the home		favourite list page	and all	favourite list page and all		
		page.		user's favourite pro	ducts are	user's favourite products		
				shown in a list.		are shown in a list.		

2.	View favourite	1. Click one of the	User is redirected to product	User is redirected to	Pass
	product details	favourite products	details page and the detailed	product details page and	
		from the list	information of the favourite	the detailed information	
			product is displayed.	of the favourite product is	
				displayed.	

Table 7.14 Unit Test Case - Remove Product from Favourite

Test	Case ID		Favourite-3		Module Name	Favourite	2			
Test	Test Case Title Remove Product from Favourite				Test Priority	High				
Pre-conditions			1. Customer has logge	1. Customer has logged in to his/her account						
2. Customer is in favourit				ourite list page						
No.	Test	Case	Test Steps	Test Data	Expected Result		Actual Result	Status		
	Summary									
1.	Remove	а	1. Click one of the		The product is remo	oved from	The product is removed	Pass		
	product	from	favourite products		customer's favou	rite list	from customer's favourite			
	favourite li	st	from the list		successfully and	message	list successfully and			
					"Removed from	favourite	message "Removed from			
					list" is displayed.					

2. Click "Favourite"		favourite	list"	is	
icon at the bottom of		displayed.			
product details page.					

7.2.2.5 Offer Module

Test	Case ID	Offer-1		Module Name	Offer			
Test	Case Title	Make New Offer		Test Priority	High			
Pre-c	onditions	 Customer has logge Customer is in proc 	 Customer has logged in to his/her account Customer is in product details page 					
No.	Test Case	Cest Case Test Steps Test Data Expected Result A		Actual Result		Status		
	Summary							
1.	Make a new offer	1. Click "Make	Offer price:	A new offer is	created	A new offer	is created	Pass
	on a product with	offer" button at the	50	successfully and message		successfully an	nd message	
	valid offer price	product details page.		"Make offer succes	ssfully" is	"Make	offer	
				displayed.				

Table 7.15 Unit Test Case - Make New Offer

		2. Enter a valid offer			successfully" is	
		price.			displayed.	
		3. Click "Make				
		offer" button.				
2.	Make a new offer	1. Click "Make	Offer price:	Create new offer failed and	Create new offer failed	Pass
	on a product with	offer" button at the	0	error message "Please enter	and error message	
	invalid offer	product details page.		a valid offer price" is	"Please enter a valid offer	
	price			displayed.	price" is displayed.	
		2. Enter an invalid				
		offer price.				
		3. Click "Make				
		offer" button.				

3.	Make a new offer	1. Click "Make	Offer price:	Create new offer failed and	Create new offer failed	Pass
	on a product	offer" button at the	50	error message "You have	and error message "You	
	which customer	product details page.		already made an offer on this	have already made an	
	already made			item. Please check your offer	offer on this item. Please	
	offer on it.	2. Enter a valid offer		list" is displayed.	check your offer list" is	
		price.			displayed.	
		3. Click "Make				
		offer" button.				

Table 7.16 Unit Test Case - Customer View Offer

Test Case ID			Offer-2		Module Name	Offer			
Test Case Title			Customer View Offer		Test Priority	High			
Pre-conditions			1. Customer has logge	. Customer has logged in to his/her account					
			2. Customer has made	e at least one offer					
No.	Test	Case	Test Steps	Test Data	Expected Result		Actual Result	Status	
	Summary								

1.	View offer in	1. Click "Offer"	Customer is redirected to	Customer is redirected to Pass
	offer list	icon at the bottom	offer list page and all offers	offer list page and all
		navigation bar.	made by customer is	offers made by customer
			displayed in a list.	is displayed in a list.

Table 7.17 Unit Test Case - Customer Update Offer

Test	Case ID	Offer-3		Module Name	Offer			
Test	Case Title	Customer Update Off	er	Test Priority	High			
Pre-c	onditions	1. Customer has logg	ed in to his/her account					
		2. Customer has made at least one offer						
3. Customer is i			er list page					
No.	Test Case	Test Steps	Test Data	Expected Result		Actual Result	Status	
	Summary							
1.	Cancel an	1. Click "Cancel"		The ongoing o	offer is	The ongoing offer is	Pass	
	ongoing offer	button at an ongoing		cancelled successf	fully, and	cancelled successfully,		
	which status is	offer item which		the offer status is u	pdated to	and the offer status is		
	"Pending"	status is "Pending"		"Cancelled".		updated to "Cancelled".		

2.	Make a	1. Click "Update	New offer price:	The offer is updated with the	The offer is updated with	Pass
	counteroffer to	offer" button at an	55	customer's latest offer price	the customer's latest offer	
	seller's offer	ongoing offer item		RM55.	price RM55.	
	with valid new	which status is				
	offer price	"Pending".				
		2. Enter a valid new				
		offer price.				
		3. Click "Update				
		offer" button.				
3.	Make a	1. Click "Update	New offer price:	The offer update is failed and	The offer update is failed	Pass
	counteroffer to	offer" button at an	0	error message "Please enter	and error message	
	seller's offer with	ongoing offer item		a valid offer price" is	"Please enter a valid offer	
	invalid new offer	which status is		displayed.	price" is displayed.	
	price	"Pending".				
1		1				1

		2. Enter an invalid			
		3. Click "Update offer" button.			
4.	Accept an offer	1. Click "Accept"	The ongoing offer is	The ongoing offer is	Pass
	from seller	button at an ongoing	accepted by customer	accepted by customer	
		offer item which	successfully, and the offer	successfully, and the offer	
		status is "Pending".	status is updated to	status is updated to	
			"Accepted".	"Accepted".	
5.	Add an accepted	1. Click "Add to	The offer product is added to	The offer product is	Pass
	offer product to	cart" button at an	customer's shopping cart	added to customer's	
	shopping cart	accepted offer item	successfully and message	shopping cart	
		which status is	"Item added to cart	successfully and message	
		"Accepted".	successfully" is displayed.	"Item added to cart	
			The offer status is updated to	successfully" is	
			"Used".	displayed. The offer	

				status is updated to	
				"Used".	
6.	Add an accepted	1. Click "Add to	The offer product is failed to	The offer product is failed	Pass
	offer product to	cart" button at an	add to customer's shopping	to add to customer's	
	shopping cart but	accepted offer item	cart and error message "The	shopping cart and error	
	the product is	which status is	item is already in your cart"	message "The item is	
	already in the	"Accepted".	is displayed.	already in your cart" is	
	cart			displayed.	

7.2.2.6 Order Module

Test Case ID	Order-1	Module Name	Order		
Test Case Title	Create New Order	Test Priority	High		
Pre-conditions	1. Customer has logged in to his/her account				
	2. Customer has added at least one product to his/her shopping cart				

Table 7.18 Unit Test Case - Create New Order

No.	Test Case	Test Steps	Test Data	Expected Result	Actual Result	Status
	Summary					
1.	Check out	1. Click "Cart" icon		Customer is redirected to	Customer is redirected to	Pass
	shopping cart	at the bottom		checkout page and the	checkout page and the	
	which all cart	navigation bar.		checkout details is	checkout details is	
	items are			displayed.	displayed.	
	available	2. Click "Check out"				
		button.				
2.	Check out	1. Click "Cart" icon		Check out failed and error	Check out failed and error	Pass
	shopping cart	at the bottom		message "Please remove the	message "Please remove	
	which there is an	navigation bar.		unavailable item(s) before	the unavailable item(s)	
	unavailable item			checking out" is displayed.	before checking out" is	
		2. Click "Check out"			displayed.	
		button.				
Place order with	1. Select "Self-pick-	Order created successfully	Order created	Pass		
-------------------	------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------		
"Self-pick-up" as	up" from delivery	and message "Order created	successfully and message			
delivery method	method options at	successfully" is displayed.	"Order created			
	checkout page.	Customer is redirected to	successfully" is			
		order list page. A	displayed. Customer is			
	2. Click "Place	notification email is sent to	redirected to order list			
	order" button.	all admins.	page. A notification email			
			is sent to all admins.			
Place order with	1. Select "Standard	Order created successfully	Order created	Pass		
"Standard	shipping" from	and message "Order created	successfully and message			
shipping" as	delivery method	successfully" is displayed.	"Order created			
delivery method	options at checkout	Customer is redirected to	successfully" is			
	page.	order list page. A	displayed. Customer is			
		notification email is sent to	redirected to order list			
	2. Click "Select	all admins.	page. A notification email			
	address" label.		is sent to all admins.			
	Place order with "Self-pick-up" as delivery method Place order with "Standard shipping" as delivery method	Place order with1. Select "Self-pick- up" from delivery method options at checkout page.2. Click "Place order" button.Place order with1. Select "Standard shipping" from delivery methodStandard options at checkout page.2. Click "Select address" label.	Place order with "Self-pick-up" as delivery method1. Select "Self-pick- up" from delivery method options at checkout page.Order created successfully and message "Order created successfully" is displayed. Customer is redirected to order list page. A notification email is sent to all admins.Place order with shipping" as delivery method1. Select "Standard delivery methodOrder created successfully and message "Order created successfully" is displayed. Customer is redirected to all admins.Place order with shipping" as delivery method delivery method1. Select "Standard delivery method options at checkout page.Order created successfully and message "Order created successfully" is displayed. Customer is redirected to order list page. A notification email is sent to all admins.2. Click "Select address" label.2. Click "Select all admins.	Place order with "Self-pick-up" as delivery method1. Select "Self-pick- pick-up" as method options at checkout page.Order created successfully successfully" is displayed.Order successfully" is displayed. Order created successfully" is order list page. A all admins.Order created successfully" is order list page. A all admins.Place order with shipping" from shipping" as delivery method1. Select "Standard shipping" from options at checkout page.Order created successfully order created successfullyOrder created successfully" is order list page. A all admins.Place order with shipping" from shipping" as belivery method1. Select "Standard options at checkout page.Order created successfully order created successfully" is displayed.Order created successfullyOrder order with shipping" from shipping" as adleivery method1. Select "Standard options at checkout page.Order created successfully successfully" is displayed.Order created successfully" is displayed.Order rest list page.2. Click "Select address" label.Order list page. A notification email is sent to all admins.		

		3. Select one address			
		from the list.			
		4. Click "Place			
		order" button			
5.	Place order with	1. Select "Standard	Create order failed and error	Create order failed and	Pass
	"Standard	shipping" from	message "Please select your	error message "Please	
	shipping" as	delivery method	delivery address" is	select your delivery	
	delivery method	options at checkout	displayed.	address" is displayed.	
	but no delivery	page.			
	address is				
	selected	2. Click "Place			
		order" button			
6.	Place order but	1. Select "Self-pick-	Create order failed and error	Create order failed and	Pass
	there is an	up" from delivery	message "One of the	error message "One of the	
	unavailable item		products is unavailable now.	products is unavailable	

	method options at	Please update your cart." is	now. Please update your	
	checkout page.	displayed.	cart." is displayed.	
	2. Click "Place			
	order" button.			

Table 7.19 Unit Test Case - View Order

Test	Case ID	Order-2		Module Name	Order			
Test	Case Title	View Order		Test Priority	High			
Pre-c	conditions	1. Customer has logge	ed in to his/her account					
		2. Customer has at least one order						
No.	Test Case	Test Steps	Test Data	Expected Result		Actual Result	Status	
	Summary							
1.	View order in	1. Click "Profile"		Customer is redir	rected to	Customer is redirected to	Pass	
	order list	icon at the bottom		order list page and	all orders	order list page and all		
		navigation bar.		created by cust	omer is	orders created by		
				displayed in a list.		customer is displayed in a		
						list.		

		2. Click "My orders" label at profile page.			
2.	View order	1. Click one of the	Customer is redirected to	Customer is redirected to	Pass
	details	orders from order	order details page and the	order details page and the	
		list	detail of the order is	detail of the order is	
			displayed.	displayed.	

Table 7.20 Unit Test Case - Review and Rating

Test	Case ID		Order-3		Module Name	Order		
Test	Case Title		Review and Rating		Test Priority	High		
Pre-conditions 1. Customer has logged in to his/her account								
			2. Customer has at lea	2. Customer has at least one order				
3. Ci			3. Customer is in orde	er list page				
No.	Test	Case	Test Steps	Test Data	Expected Result		Actual Result	Status
	Summary							

1.	Review and rate	1. Click one of the	Product qual	ity	Review is	S	submitted	Review	is	submitted	Pass
	on a completed	orders from order	rating:		successfully a	and	message	successfu	illy a	nd message	
	order	list which status is	5		"Review order	r succ	cessfully"	"Review		order	
		"Completed".			is displayed.			successfu	ılly"	is	
			Shipping a	nd				displayed	1.		
		2. Click "Review"	handling rating:								
		button at the bottom	5								
		of order details									
		page.	Seller's servi	ce							
			rating:								
		3. Click "Star" icons	5								
		to rate order based									
		on different	Comment:								
		categories.	"Good purcha	se							
			experience!"								
		4. Enter review									
		comment.									

		5. Click "Submit"				
		button.				
2.	Review and rate	1. Click one of the	Product quality	Review and rating failed and	Review and rating failed	Pass
	on the same order	orders from order	rating:	error message "You have	and error message "You	
		list which customer	5	already reviewed this order	have already reviewed	
		has submitted		before" is displayed.	this order before" is	
		review before.	Shipping and		displayed.	
			handling rating:			
		2. Click "Review"	5			
		button at the bottom				
		of order details	Seller's service			
		page.	rating:			
			5			
		3. Click "Star" icons				
		to rate order based	Comment:			
		on different	"Good purchase			
		categories.	experience!"			

	4. Enter review comment.		
	5. Click "Submit" button.		

7.2.2.7 Contact Seller Module

Table 7.21 Unit Test Case - Contact with Seller

Test	Case ID		ContactSeller-1		Module Name	Contact Seller		
Test	Case Title		Contact with Seller	Test PriorityHigh				
Pre-conditions			1. Customer has logge	ed in to his/her account				
No.	Test	Case	Test Steps	Test Data	Expected Result		Actual Result	Status
	Summary							

1.	Open chat room	1. Click "Chat" icon		Customer is redirected to	Customer is redirected to	Pass
	from product	at the product details		contact us page with the chat	contact us page with the	
	details page	page.		history displayed in the chat	chat history displayed in	
				room and the name of	the chat room and the	
				product is pasted in the text	name of product is pasted	
				box.	in the text box.	
2.	Open chat room	1. Click "Profile"		Customer is redirected to	Customer is redirected to	Pass
	from profile page	icon at the bottom		contact us page with the chat	contact us page with the	
		navigation bar.		history displayed in the chat	chat history displayed in	
				room.	the chat room.	
		2. Click "Contact				
		us" label at profile				
		page.				
3.	Send a valid text	1. Enter a valid text	Text message:	Text message is sent to seller	Text message is sent to	Pass
	message to seller	message in text box.	"Hi there"	successfully and the chat	seller successfully and the	
				room is updated with the	chat room is updated with	
				new message.	the new message.	

		2. Click "Send" button.				
4.	Send an invalid text message to seller	 Enter an invalid text message in text box. Click "Send" button. 	Text message:	Text message is not sent to seller and error message "Please type a message" is displayed.	Text message is not sent to seller and error message "Please type a message" is displayed.	Pass

7.2.2.8 Address Module

Table 7.22 Unit Test Case - View Address

Test Case ID	Address-1	Module Name	Address				
Test Case Title	View Address	Test Priority	High				
Pre-conditions	1. Customer has logged in to his/her account						
	2. Customer has created at least one address						

No.	Test Case	Test Steps	Test Data	Expected Result	Actual Result	Status
	Summary					
1.	View address	1. Click "Profile"		Customer is redirected to	Customer is redirected to	Pass
		icon at the bottom		address list page and all	address list page and all	
		navigation bar.		addresses created by	addresses created by	
				customer is displayed in a	customer is displayed in a	
		2. Click "My		list.	list.	
		addresses" label at				
		profile page.				
2.	View address	1. Click one of the		Customer is redirected to	Customer is redirected to	Pass
	details	addresses from the		address details page and the	address details page and	
		list		detail of the address is	the detail of the address is	
				displayed.	displayed.	

Table 7.23 Unit Test Case - Create Address

Test Case ID	Address-2	Module Name	Address

Test	Case Title	Create Address	eate Address		High	ligh		
Pre-c	conditions	1. Customer has logg	ed in to his/her account	t				
		2. Customer is in add	ress list page					
No.	Test Case	Test Steps	Test Data	Expected Result		Actual Result	Status	
	Summary							
1.	Create a new	1. Click "Add new	Full name:	New address is	created	New address is created	Pass	
	address with	address" button at	"Thian Qi Wee"	successfully and	message	successfully and message		
	valid inputs	the bottom of		"Address	created	"Address created		
		address list.	Phone number:	successfully" is c	displayed.	successfully" is		
			"0123456789"	Customer is redired	cted back	displayed. Customer is		
		2. Enter all the		to address list page		redirected back to address		
		required	Address line 1:			list page.		
		information.	"10, Jalan Merah"					
		3. Click "Save	Address line 2:					
		address" button	"Taman Merah"					
			City:					

			"Kajang"			
			State:			
			"Selangor"			
			Postcode:			
			"40000"			
2.	Create a new	1. Click "Add new	Full name:	Address is not created and	Address is not created and	Pass
	address with	address" button at	"Thian Qi Wee"	error message "Please enter	error message "Please	
	invalid inputs	the bottom of		all the necessary	enter all the necessary	
	(empty value)	address list.	Phone number:	information" is displayed.	information" is displayed.	
		2. Enter all the				
		required	Address line 1:			
		information but	"10, Jalan Merah"			
		phone number is				
		empty.	Address line 2:			

		"Taman Merah"		
	3. Click "Save			
	address" button	City:		
		"Kajang"		
		State:		
		"Selangor"		
		Postcode:		
		"40000"		

Table 7.24 Unit Test Case - Update Address

Test Case ID	Address-3	Module Name	Address				
Test Case Title	Update Address	Test Priority	High				
Pre-conditions	1. Customer has logged in to his/her account						
	2. Customer has created at least one address						
	3. Customer is in address list page						

No.	Test	Case	Test Steps	Test Data	Expected Result	Actual Result	Status
	Summar	y					
1.	Update	an	1. Click one of the	New phone number:	The address is updated with	The address is updated	Pass
	address	detail	addresses from the	"987654321"	the new phone number and	with the new phone	
	with valid	l input	address list.		message "Address updated	number and message	
					successfully" is displayed.	"Address updated	
			2. Enter new value			successfully" is	
			for the detail of the			displayed.	
			address. (For				
			example: phone				
			number)				
			3. Click "Save				
			address" button.				
2.	Update	an	1. Click one of the	New phone number:	The address is not updated	The address is not	Pass
	address	detail	addresses from the	cc>>	and error message "Please	updated and error	
			address list.			message "Please enter all	

with	invalid		enter	all	the	necessary	the	necessary	
input		2. Remove the	inform	ation'	" is di	splayed.	information"	' is displayed.	
		existing phone							
		number from the							
		text box.							
		3. Click "Save							
		address" button.							

Table 7.25 Unit Test Case - Delete Address

Test Case ID			Address-4		Module Name	Address				
Test	Case Title		Delete Address		Test Priority	Priority High				
Pre-conditions 1. Customer has logged in to his/her account										
			2. Customer has creat	2. Customer has created at least one address						
			3. Customer is in add	ress list page						
No. Test Case		Case	Test Steps	Test Data	Expected Result		Actual Result	Status		
	Summary									

1.	Delete an address	1. Click one of the	The address is deleted	The address is deleted	Pass
		addresses from the	successfully and message	successfully and message	
		address list.	"Address deleted	"Address deleted	
			successfully" is displayed.	successfully" is	
		2. Click "Delete		displayed.	
		address" button.			

7.2.2.9 Admin Account Module

Table 7.26 Unit Test Case - Admin Register Account

Test Case ID			AdminAcc-1		Module Name	Admin Account			
Test Case Title			Admin Register Account		Test Priority	High			
Pre-conditions			N/A	i/A					
No. Test Case Summary		Test Steps	Test Data	Expected Result		Actual Result	Status		

-								
I	1.	Register	admin	1. Enter all the	First name:	Registration is successful	Registration is successful	Pass
		account	with	required	"Qi Wee"	and admin is redirected to	and admin is redirected	
		valid	name,	information at the		home page.	to home page.	
		email,	and	account registration	Last name:			
		password.		page.	"Thian"			
				2. Click "Register"	Email:			
				button	"admin@gmail.com"			
					Password:			
					"123456789"			
					Confirm password:			
					"123456789"			
ľ	2.	Register	admin	1. Enter all the	First name:	Registration failed and error	Registration failed and	Pass
		account	with	required	"Qi Wee"	message "The email must	error message "The	
		valid nan	ne and	information but			email must be a valid	
	1			1		1		

	password but	with an invalid	Last name:	be a valid email address" is	email address." is	
	invalid email.	email at the account	"Thian"	displayed.	displayed.	
		registration page.				
			Email:			
		2. Click "Register"	"admin"			
		button.				
			Password:			
			"123456789"			
			Confirm password:			
			"123456789"			
3.	Register admin	1. Enter all the	First name:	Registration failed and error	Registration failed and	Pass
	account with	required	"Qi Wee"	message "The email has	error message "The	
	valid name,	information but		already been taken" is	email has already been	
	email, and	with an email which	Last name:	displayed.	taken" is displayed.	
	password but the	has already been	"Thian"			
	email has					

	already been	registered in the	Email:			
	registered in the	system.	"admin@gmail.com"			
	system.					
		2. Click "Register"	Password:			
		button.	"123456789"			
			Confirm password:			
			"123456789"			
4.	Register admin	1. Enter a valid	First name:	Registration failed and error	Registration failed and	Pass
	account with	name and email but	"Qi Wee"	message "Please fill in this	error message "Please fill	
	valid email but	password is empty.		field" is displayed.	in this field" is displayed.	
	invalid name or		Last name:			
	password.	2. Click "Register"	"Thian"			
		button				
			Email:			
			"admin@gmail.com"			

	Password:		
	Confirm password:		

Table 7.27 Unit Test Case - Admin Login Account

Test	Test Case ID AdminAcc-2				Module Name	Admin Account				
Test	Case Title		Admin Login Accourt	Admin Login Account		High				
Pre-conditions			1. Admin has register	. Admin has registered an admin account						
No.	Test	Case	Test Steps	Test Data	Expected Result		Actual Result	Status		
	Summar	y								
1.	Login	admin	1. Enter valid email	Email:	Login is successful	and user	Login is successful and	Pass		
	account	with	and password.	"admin@gmail.com"	is redirected to hom	ne page.	user is redirected to			
	valid email and						home page.			
	password		2. Click "Login"	Password:						
			button.	"123456789"						

2.	Login admin	1. Enter valid email	Email:	Login failed and error	Login failed and error	Pass
	account with	and incorrect	"admin@gmail.com"	message "Email address	message "Email address	
	valid email but	password.		and password are wrong" is	and password are wrong"	
	incorrect		Password:	displayed.	is displayed.	
	password.	2. Click "Login"	"987654321"			
		button.				
3.	Login admin	1. Enter invalid	Email:	Login failed and error	Login failed and error	Pass
	account with	email and	"admin00@gmail.com"	message "Email address	message "Email address	
	invalid email and	password.		and password are wrong" is	and password are wrong"	
	password.		Password:	displayed.	is displayed.	
		2. Click "Login"	"123456789"			
		button				

Table 7.28 Unit Test Case - Admin Reset Password

Test Case ID	AdminAcc-3	Module Name	Admin Account
Test Case Title	Admin Reset Password	Test Priority	High
Pre-conditions	1. Admin has registered an admin account		

No.	Test Case	Test Steps	Test Data	Expected Result	Actual Result	Status
	Summary					
1.	Reset admin	1. Click "Forgot	Email:	Send reset password email	Send reset password	Pass
	password with	password" label in	"admin@gmail.com"	successfully and message	email successfully and	
	valid email	login page.		"We have emailed your	message "We have	
	(Forget			password reset link" is	emailed your password	
	password).	2. Enter valid email.		displayed.	reset link!" is displayed.	
		3. Click 'Send				
		Password Reset				
		Link' button.				
2.	Reset admin	1. Click "Forgot	Email:	Send reset password email	Send reset password	Pass
	password with	password" label in	"admin00@gmail.com"	failed and message "We	email failed and message	
	invalid email	login page.		can't find a user with that	"We can't find a user	
	(Forget			email address" is displayed.	with that email address"	
	password).	2. Enter invalid			is displayed.	
		email.				

	3. Click 'Send		
	Password Reset		
	Link' button.		

7.2.2.10 Product Management Module

Test	Test Case ID ProductMgt-1				Module Name	Product Management			
Test	Test Case TitleCreate Single Product			t	Test Priority	High			
Pre-conditions 1. Admin has logged			1. Admin has logged	in to his/her account		•			
No.	Test Case Test Steps Test		Test Data	Expected Result		Actual Result		Status	
	Summary	,							
1.	Add new	single	1. Click "Product"	Name:	Product added suc	cessfully	Product	added	Pass
	product	with	label at navigation	"Book"	and message "Produ	uct added	successfully	and	
	valid input	t	bar.		successfully" is disp	played.	message "Product	added	
				Description:					

Table 7.29 Unit Test Case - Create Single Product

	2. Click "Add new	"This is a book"	successfully" is	
	product" button.		displayed.	
		Category:		
	3. Enter all the	"Book & Stationery"		
	necessary			
	information.	Price:		
		20.00		
	4. Click "Save"			
	button.	Quantity:		
		1		
		Weight(kg):		
		0.2		
		Length(cm):		
		20		
		Width(cm):		

	20		
	II 1 (())		
	Height(cm):		
	20		
	Offer able:		
	Oner able.		
	true		
	Shippable:		
	true		
	Preloved tag:		
	true		
	Location:		
	"IOI Mall, Puchong"		
	In a cost		
	Images:		

			(Three image files in			
			jpg format)			
2.	Add new single	1. Click "Product"	Name:	Product added failed and	Product added failed and	Pass
	product with	label at navigation	"Book"	error messages "The price	error messages "The	
	invalid input	bar.		field is required" and "The	price field is required"	
			Description:	quantity field is required"	and "The quantity field is	
		2. Click "Add new	"This is a book"	are displayed.	required" are displayed.	
		product" button.				
			Category:			
		3. Enter all the	"Book & Stationery"			
		necessary				
		information but	Price:			
		some required				
		fields are empty.				
		(For example: price	Quantity:			
		and quantity)				

	4. Click "Save"	Location:
	button.	"IOI Mall, Puchong"
		Images:
		(Three image files in
		jpg format)

Table 7.30 Unit Test Case - Admin View Product

Test Case ID ProductMgt-2 Module Name Product Management							
Test Case Title Admin View Product			Test Priority	High			
Pre-conditions 1. Admin has logged in to his/her account							
2. Admin has created at least one product							
No.	Test Case	Test Steps	Test Data	Expected Result		Actual Result	Status
	Summary						
1.	View products	1. Click "Product"		A list of proc	lucts is	A list of products is	Pass
		label at navigation		displayed.		displayed.	
		bar.					

2.	Search products	1. Click "Product"	Keyword:	All products with "vase" in	All products with "vase"	Pass
	by name	label at navigation	"vase"	the product name are	in the product name are	
		bar.		displayed.	displayed.	
		2. Enter product				
		name as keyword in				
		search bar.				
		3. Click "Enter"				
		button.				
3.	View product	1. Click "Product"		Admin is redirected to	Admin is redirected to	Pass
	details	label at navigation		product details page and the	product details page and	
		bar.		product detail is displayed.	the product detail is	
					displayed.	
					1	

	2. Click "View"		
1	button of a product		
1	from the list.		

Table 7.31 Unit Test Case - Update Product

Test Case ID ProductMgt-3				Module Name Product Management			
Test Case Title Update Product				Test Priority	High		
Pre-conditions 1. Admin has logged in to his/her acco		in to his/her account		•			
2. Admin is in product details page							
No.	Test Case	Test Steps	Test Data	Expected Result		Actual Result	Status
	Summary						
1.	Update a product	1. Click "Edit"	New price:	The product is updated	ated with	The product is updated	Pass
	with valid input	button at product	85	the latest price and	message	with the latest price and	
		details page		"Product	updated	message "Product	
				successfully" is disp	played.	updated successfully" is	
		2. Enter new value				displayed.	
		for the detail of the					

		product. (For				
		example: price)				
		3. Click "Save"				
		button.				
2.	Update a product	1. Click "Edit"	New price:	The product is not updated	The product is not	Pass
	with invalid	button at product	"abc"	and error message "The	updated and error	
	input	details page		price must be a number" is	message "The price must	
				displayed.	be a number" is	
		2. Enter an invalid			displayed.	
		value for the detail				
		of the product. (For				
		example: price)				
		3. Click "Save"				
		button.				

Test	Case ID	ProductMgt-4		Module Name	Product	luct Management			
Test	Case Title	Delete Product		Test Priority	High				
Pre-c	onditions	1. Admin has logged	1. Admin has logged in to his/her account						
		2. Admin has created	at least one product						
No.	Test Case	Test Steps	Test Data	Expected Result		Actual Result	Status		
	Summary								
1.	Delete a product	1. Click "Delete" of		The product is del	eted and	The product is deleted	Pass		
		a product from the		message "Product	deleted	and message "Product			
		list.		successfully" is disp	played.	deleted successfully" is			
						displayed.			
		2. Click "OK" for							
		the confirmation							
		message.							

Table 7.32 Unit Test Case - Delete Product

Test	Case ID	ProductMgt-5	ProductMgt-5		Product Management			
Test	Case Title	Import Product with	Excel File	Test Priority	High			
Pre-o	conditions	1. Admin has logged	in to his/her account		I			
No.	Test Case	Test Steps	Test Data	Expected Result		Actual Result	1	Status
	Summary							
1.	Import product	1. Click "Product"	Excel file that contains	Products are impo	rted and	Products are im	ported	Pass
	data from an	label at navigation	formatted product data.	message "Produc	ets are	and message "Pr	oducts	
	Excel file	bar.		imported successf	ully" is	are im	ported	
				displayed.		successfully"	is	
		2. Click "Import"				displayed.		
		button.						
		3. Click "Choose						
		file" button and						
		upload an excel file.						

 Table 7.33 Unit Test Case - Import Product with Excel File

		4. Click "Import"				
		button.				
2.	Import product	1. Click "Product"	Excel file that contains	Products are imported with	Products are imported	Pass
	data from an	label at navigation	formatted product data	the invalid product data	with the invalid product	
	Excel file that	bar.	but there are some	filtered and message	data filtered and message	
	contains invalid		product data is invalid	"Products are imported	"Products are imported	
	values	2. Click "Import"	value. (For example:	successfully" is displayed.	successfully" is	
		button.	Published not equal to		displayed.	
			1 and Stock less than 1)			
		3. Click "Choose				
		file" button and				
		upload an excel file.				
		4. Click "Import"				
		button.				

Test Case ID		ProductMgt-6		Module Na	me 1	Product Management				
Test Case Title		Export Product to Ex	cel File	Test Priorit	ty 1	High				
Pre-conditions		1. Admin has logged in to his/her account								
		2. Admin has created at least one product								
No.	Test Case	Test Steps	Test Data	Expected R	lesult		Actu	al Result		Status
	Summary									
1.	Export product	1. Click "Product"		All product	data is ex	xported	All	product	data is	Pass
	data to an Excel	label at navigation		to an Ex	xcel file	e and	expo	rted to an H	Excel file	
	file	bar.		downloaded	successf	ully.	and	dov	vnloaded	
							succe	essfully.		
		2. Click "Export"								
		button.								
		3. Click "OK" for								
		the confirmation								
		message.								

 Table 7.34 Unit Test Case - Export Product to Excel File

1			

7.2.2.11 Offer Management Module

Test	Case ID		OfferMgt-1		Module Name	Offer Ma	nagement		
Test Case Title			Admin View Offer		Test Priority	High			
Pre-conditions		1. Admin has logged in to his/her account							
			2. Customer has made at least one offer						
No.	Test	Case	Test Steps	Test Data	Expected Result		Actual Result	Status	
	Summary								
1.	View offer	'S	1. Click "Offers"		Admin is redirected	d to offer	Admin is redirected to	Pass	
			label at navigation		list page and all offers made		offer list page and all		
			bar.		by customers are displayed		offers made by customers		
					in a list.		are displayed in a list.		

Table 7.35 Unit Test Case - Admin View Offer

Table 7.36 U	Jnit Test Case -	Admin U	Jpdate Offer
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Test	Case ID	OfferMgt-2		Module Name	Offer Ma	inagement			
Test	Case Title	Admin Update Offer		Test Priority	Priority High				
Pre-conditions		1. Admin has logged in to his/her account							
		2. Customer has made at least one offer							
		3. Admin is in offer list page							
No.	Test Case	Test Steps	Test Data	Expected Result		Actual Result	Status		
	Summary								
1.	Accept an	1. Click "Accept"		The ongoing	offer is	The ongoing offer is	Pass		
	ongoing offer	button at an ongoing		accepted by admin	, and the	accepted by admin, and			
	which status is	offer item which		offer status is up	odated to	the offer status is updated			
	"Pending"	status is "Pending".		"Accepted".		to "Accepted".			
		2. Click "OK" for							
		the confirmation							
		message.							
2.	Reject an	1. Click "Reject"		The ongoing offer is rejected	The ongoing offer is	Pass			
----	----------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------	-------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------	------			
	ongoing offer	button at an ongoing		by admin, and the offer	rejected by admin, and				
	which status is	offer item which		status is updated to	the offer status is updated				
	"Pending"	status is "Pending".		"Rejected".	to "Rejected".				
		2. Click "OK" for							
		the confirmation							
		message.							
-	3.6.1		~ ~ ~ ~						
3.	Make a	1. Click	Counteroffer price:	The offer is updated with the	The offer is updated with	Pass			
3.	Make a counteroffer to	1.Click"Counteroffer"	Counteroffer price: 45	The offer is updated with the counteroffer price submit by	The offer is updated with the counteroffer price	Pass			
3.	Make a counteroffer to customer's offer	 Click "Counteroffer" button at an ongoing 	45	The offer is updated with the counteroffer price submit by admin and message "Offer	The offer is updated with the counteroffer price submit by admin and	Pass			
3.	Make a counteroffer to customer's offer with a valid	 Click "Counteroffer" button at an ongoing offer item which 	45	The offer is updated with the counteroffer price submit by admin and message "Offer updated successfully" is	The offer is updated with the counteroffer price submit by admin and message "Offer updated	Pass			
3.	Make a counteroffer to customer's offer with a valid counteroffer	1.Click"Counteroffer"button at an ongoingoffer item whichstatus is "Pending".	45	The offer is updated with the counteroffer price submit by admin and message "Offer updated successfully" is displayed.	The offer is updated with the counteroffer price submit by admin and message "Offer updated successfully" is	Pass			
3.	Make a counteroffer to customer's offer with a valid counteroffer price	 Click "Counteroffer" button at an ongoing offer item which status is "Pending". 	45	The offer is updated with the counteroffer price submit by admin and message "Offer updated successfully" is displayed.	The offer is updated with the counteroffer price submit by admin and message "Offer updated successfully" is displayed.	Pass			
3.	Make a counteroffer to customer's offer with a valid counteroffer price	 Click "Counteroffer" button at an ongoing offer item which status is "Pending". Enter a valid 	45	The offer is updated with the counteroffer price submit by admin and message "Offer updated successfully" is displayed.	The offer is updated with the counteroffer price submit by admin and message "Offer updated successfully" is displayed.	Pass			
3.	Make a counteroffer to customer's offer with a valid counteroffer price	 Click "Counteroffer" button at an ongoing offer item which status is "Pending". Enter a valid counteroffer price. 	45	The offer is updated with the counteroffer price submit by admin and message "Offer updated successfully" is displayed.	The offer is updated with the counteroffer price submit by admin and message "Offer updated successfully" is displayed.	Pass			

		3. Click "Confirm"				
		button.				
4.	Make a	1. Click	New offer price:	The offer update is failed and	The offer update is failed	Pass
	counteroffer to	"Counteroffer"	· · · · ·	error message "Please enter	and error message	
	customer's offer	button at an ongoing		a valid offer price" is	"Please enter a valid offer	
	with an invalid	offer item which		displayed.	price" is displayed.	
	counteroffer	status is "Pending".				
	price					
		2. Click "Confirm"				
		button.				

7.2.2.12 Order Management Module

Table 7.37	Unit Test	Case - Admin	View Order
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Test Case ID	OrderMgt-1	Module Name	Order Management
Test Case Title	Admin View Order	Test Priority	High

Pre-conditions		1. Admin has logged	in to his/her account			
		2. Customer has creat	ed at least one order			
No.	Test Case	Test Steps	Test Data	Expected Result	Actual Result	Status
	Summary					
1.	View orders	1. Click "Orders"		Admin is redirected to order	Admin is redirected to	Pass
		label at navigation		list page and all orders	order list page and all	
		bar.		created by customers are	orders created by	
				displayed in a list.	customers are displayed	
					in a list.	
2.	View order	1. Click "Orders"		Admin is redirected to order	Admin is redirected to	Pass
	details	label at navigation		details page and the order	order details page and the	
		bar.		detail is displayed.	order detail is displayed.	
		2. Click "View"				
		button of an order				
		from the list.				

Test	Case ID	OrderMgt-2		Module Name	Order Ma	anagement	
Test	Case Title	Admin Update Order		Test Priority	High		
Pre-o	conditions	ons 1. Admin has logged in to his/her account					
		2. Admin is in order d	letails page				
No.	Test Case	Test Steps	Test Data	Expected Result		Actual Result	Status
	Summary						
1.	Update status of	1. Click "Update	New order status:	The order status is u	pdated to	The order status is	Pass
	an order	status" button.	"Shipped"	"Shipped" and	message	updated to "Shipped" and	
				"Order status	updated	message "Order status	
		2. Select a new		successfully" is dis	played.	updated successfully" is	
		status from the				displayed.	
		dropdown list.					
		3. Click "Update"					
		button.					

Table 7.38 Unit Test Case - Admin Update Order

7.2.2.13 Reporting Module

Test	Case ID	Reporting-1		Module Name	Reporting		
Test	Case Title	View Sales Report		Test Priority High			
Pre-c	conditions	1. Admin has logged	in to his/her account				
No.	Test Case	Test Steps	Test Data	Expected Result		Actual Result	Status
	Summary						
1.	View sales report	1. Click "Sales		The sales report f	from first	The sales report from first	Pass
	of current year	Report" label at		day to last day of the	he current	day to last day of the	
		navigation bar.		year is displayed.		current year is displayed.	
		2. Click "Year" tab					
		at the sales report					
		page.					

Table 7.39 Unit Test Case - View Sales Report

r		1			
2.	View sales report	1. Click "Sales	The sales report from first	The sales report from first	Pass
	of last month	Report" label at	day to last day of last month	day to last day of last	
		navigation bar.	is displayed.	month is displayed.	
		2. Click "Last			
		month" tab at the			
		sales report page.			
3.	View sales report	1. Click "Sales	 The sales report from first	The sales report from first	Pass
	of this month	Report" label at	day to last day of this month	day to last day of this	
		navigation bar.	is displayed.	month is displayed.	
		navigation bar.	is displayed.	month is displayed.	
		navigation bar. 2. Click "This	is displayed.	month is displayed.	
		navigation bar. 2. Click "This month" tab at the	is displayed.	month is displayed.	
		navigation bar.2. Click "This month" tab at the sales report page.	is displayed.	month is displayed.	
		navigation bar.2. Click "This month" tab at the sales report page.	is displayed.	month is displayed.	

4.	View sales report	1. Click "Sales		The sales report of the last 7	The sales report of the last	Pass
	of last 7 days	Report" label at		days is displayed.	7 days is displayed.	
		navigation bar.				
		2. Click "Last 7				
		days" tab at the sales				
		report page.				
5.	View sales report	1. Click "Sales	Start date:	The sales report from	The sales report from	Pass
	by customizing	Report" label at	01/07/2022	01/07/2022 to 15/07/2022 is	01/07/2022 to 15/07/2022	
	the date range	navigation bar.		displayed.	is displayed.	
			End date:			
		2. Click "Custom"	15/07/2022			
		tab at the sales				
		report page.				
		3. Select the start				
		date and end date.				

	4. Click "Confirm" button.		

Table 7.40 Unit Test Case - View Inventory Report

Test	Case ID	Reporting-2		Module Name	Reporting		
Test	Case Title	View Inventory Repo	rt	Test Priority	High		
Pre-c	conditions	1. Admin has logged	in to his/her account				
No.	Test Case	Test Steps	Test Data	Expected Result		Actual Result	Status
	Summary						
1.	View inventory	1. Click "Inventory		The inventory	summary	The inventory summary	Pass
	summary report	Report" label at		report is displayed.		report is displayed.	
		navigation bar.					
		2. Click					
		"Dashboard" tab at					

		the inventory report			
		page.			
2.	View product	1. Click "Inventory	The product upload history	The product upload	Pass
	upload history	Report" label at	is displayed.	history is displayed.	
		navigation bar.			
		2. Click "Upload			
		history" tab at the			
		inventory report			
		page.			
3.	View product	1. Click "Inventory	The product performance	The product performance	Pass
	performance	Report" label at	report is displayed.	report is displayed.	
	report	navigation bar.			
		2. Click			
		"Performance" tab			

	at the inventory		
	report page.		

7.2.2.14 Customer Management Module

Test	Case ID	CustomerMgt-1		Module Name Customer Management				
Test	Case Title	View Customer		Test Priority High				
Pre-conditions 1. Admin has logged in to his/her account 2. Has at least one customer registered an account								
No.	Test Case	Test Steps	Test Data	Expected Result		Actual Resul	lt	Status
	Summary							
1.	View customers	1. Click		Admin is redire	ected to	Admin is r	edirected 1	o Pass
		"Customers" label at		customer list page	e and all	customer list	page and a	11
		navigation bar.		customers data is di	isplayed.	customers	data	is
						displayed.		

Table 7.41 Unit Test Case - View Customer

Test	Case ID		CustomerMgt-2		Module Name	Customer Management		
Test	Case Title		Customer Service		Test Priority	rity High		
Pre-c	conditions		1. Admin has logged	in to his/her account				
No.	Test	Case	Test Steps	Test Data	Expected Result		Actual Result	Status
	Summary							
1.	Reply	to	1. Click "Customer	Text message:	The text message	is sent to	The text message is sent	Pass
	customer's		Service" label at	"Hi there"	customer and the cl	hat box is	to customer and the chat	
	enquiries	with	navigation bar.		updated.		box is updated.	
	valid	text						
	message		2. Click one of the					
			customers from the					
			list.					
			3. Enter text					
			message.					

Table 7.42 Unit Test Case - Customer Service

			4. Click "Send"				
			button.				
2.	Reply	to	1. Click "Customer	Text message:	Error message "Please type a	Error message "Please	Pass
	customer's		Service" label at	· · · · ·	message" is displayed.	type a message" is	
	enquiries	with	navigation bar.			displayed.	
	invalid	text					
	message		2. Click one of the				
			customers from the				
			list.				
			3. Click "Send"				
			button				
3.	Reply	to	1. Click "Customer	An image	The image is sent to	The image is sent to	Pass
	customer's		Service" label at		customer and the chat box is	customer and the chat box	
	enquiries	with	navigation bar.		updated.	is updated.	
	image						

	2. Click one of the		
	customers from the		
	list.		
	3. Click "Paper clip"		
	label.		
	4. Select an image to		
	send.		
	5. Click "Send"		
	button.		

7.2.2.15 Review Management Module

Test Case ID	ReviewMgt-1	Module Name	Review Management

Test Case Title Admin View Review Test Priority High								
Pre-conditions			 Admin has logged Customer has subm 	Admin has logged in to his/her account Customer has submitted at least one review				
No.	Test	Case	Test Steps	Test Data	Expected Result	t	Actual Result	Status
	Summary							
1.	View revie	ews	1. Click "Reviews"		Admin is rec	lirected to	Admin is redirected to	Pass
			label at navigation		review list pag	ge and all	review list page and all	
			bar.		reviews data is d	isplayed.	reviews data is displayed.	

7.2.3 Unit Testing Result

As a result, a total of 42 unit test cases that covered all 15 modules were designed and executed, the system successfully passed all the test cases.

7.3 Integration Testing

The integration testing was executed after all 42 unit test cases has been carried out.

7.3.1 Integration Test Cases

7.3.1.1 Customer Account Module

Test Case	Test Steps	Expected Result	Actual Result	Status
Register new account and	1. User enter login page.	New customer account is	New customer account is	Pass
login using the account.		created, and user can login	created, and user can login	
	2. User click "Sign up"	using the email and	using the email and	
	button.	password.	password.	
	3. User enters all required			
	information.			
	4. User click "Create			
	account" button.			
	5. User click "Logout"			
	button at profile page.			

Table 7.44 Integration Test Case - Customer Account Module

	6. User enter email and			
	password of the newly			
	created account.			
	7. User click "Login"			
	button.			
Update profile details.	1. User click "Profile"	The user profile is updated	The user profile is updated	Pass
	button at the navigation	and shown in profile page.	and shown in profile page.	
	bar.			
	2. User click "Edit Profile"			
	label.			
	3. User enter new phone			
	number and click "Save			
	profile" button.			

7.3.1.2 Product Module

Test Case	Test Steps	Expected Result	Actual Result	Status
Search products by name	1. User enter keyword in	A list of products which	A list of products which	Pass
and category	the search bar at home	the product name is	the product name is	
	page.	matches with the keyword	matches with the keyword	
		and from the selected	and from the selected	
	2. User press "Enter".	category are displayed in a	category are displayed in a	
		list.	list.	
	3. User click the			
	"Category" button.			
	4. User select one of the			
	categories and click			
	"Apply" button.			

 Table 7.45
 Integration Test Case - Product Module

	•	•	•	
Filter and sort the product	1. User click "Filter"	The product searching	The product searching	Pass
searching result	button.	result is filtered by the	result is filtered by the	
		price range and sort by the	price range and sort by the	
	2. User select one of the	selected method.	selected method.	
	sorting methods.			
	3. User enter the price			
	range.			
	4. User click "Apply"			
	button.			
Share product to social	1. User click on a product	The product detail is sent	The product detail is sent	Pass
media	from the product list	to the receiver through the	to the receiver through the	
lincula	from the product list.	to the receiver through the	to the receiver through the	
		social media.	social media.	
	2. User click "Share" icon			
	in the product details page.			

3. User select one of the		
social media applications		
from the list.		
4. User choose the receiver		
and click "Send" button.		

7.3.1.3 Shopping Cart Module

Test Steps	Expected Result	Actual Result	Status
1. User click on a product	The product is shown in	The product is shown in	Pass
from the product list.	the shopping cart.	the shopping cart.	
2. User click "Add to cart"			
button.			
	Test Steps 1. User click on a product from the product list. 2. User click "Add to cart" button.	Test StepsExpected Result1. User click on a productThe product is shown infrom the product list.the shopping cart.2. User click "Add to cart"the shopping cart.button.the shopping cart.	Test StepsExpected ResultActual Result1. User click on a productThe product is shown inThe product is shown infrom the product list.the shopping cart.the shopping cart.2. User click "Add to cart"Image: Click to cart t

 Table 7.46 Integration Test Case - Shopping Cart Module

	3. User click "Cart" icon.			
Update cart item quantity	1. User click "Cart" icon at	The quantity of the cart	The quantity of the cart	Pass
	the navigation bar.	item is added by one.	item is added by one.	
	2. User click the "+" icon			
	of a cart item			
Remove item from cart	1. User click "Cart" icon at	The cart item is removed	The cart item is removed	Pass
	the navigation bar.	from the shopping cart.	from the shopping cart.	
	2. User click "Trash bin"			
	icon of a cart item.			

7.3.1.4 Favourite Module

Test Case	Test Steps	Expected Result	Actual Result	Status
Add a product to favourite	1. User click on a product	The product is added to	The product is added to	Pass
	from the product list.	favourite and is shown in	favourite and is shown in	
		the favourite list.	the favourite list.	
	2. User click "Favourite"			
	icon at the bottom of			
	product details page.			
	3. User click "Back" icon.			
	4. User click "Favourite"			
	icon at the home page.			
Remove a product from	1. User click on a product	The product is removed	The product is removed	Pass
favourite	from the favourite list.	from the favourite list.	from the favourite list.	

 Table 7.47 Integration Test Case - Favourite Module

	2. User click "Favourite"			
	icon at the bottom of			
	product details page.			
	3. User click "Back" icon.			
Domova itom from cart	1 II 1: . 1- "O			D
Remove item from cart	1. User click "Cart" icon at	The cart item is removed	The cart item is removed	Pass
Keniove item from cart	the navigation bar.	from the shopping cart.	from the shopping cart.	Pass

7.3.1.5 Offer Module

Table 7.48 Integration Test Case - Offer Module

Test Case Test Steps	Expected Result	Actual Result	Status
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Make a new offer	1. User click on a product	The new offer is shown in	The new offer is shown in	Pass
	from the product list.	the offer list.	the offer list.	
	2. User click "Make offer"			
	button.			
	3. User enter an offer price			
	and click "Make offer"			
	button.			
	4. User click "Back" icon.			
	5. User click "Offer" icon			
	at the navigation bar			
	at the havigation but.			

Cancel an ongoing offer	1. User click "Offer" icon	The offer status is updated	The offer status is updated	Pass
	at the navigation bar.	to "Cancelled" in the offer	to "Cancelled" in the offer	
		list.	list.	
	2. User click "Cancel"			
	button of an offer item.			
Make a counteroffer to	1. User click "Offer" icon	The offer item is updated	The offer item is updated	Pass
seller's offer	at the navigation bar.	with the latest offer price	with the latest offer price	
		in the offer list.	in the offer list.	
	2. User click "Update			
	offer" button of an offer			
	item.			
	3. User enter a new offer			
	price and click "Update			
	offer" button.			

Accept an offer from seller	1. User click "Offer" icon	The offer status is updated	The offer status is updated	Pass
	at the navigation bar.	to "Accepted" in the offer	to "Accepted" in the offer	
		list.	list.	
	2. User click "Accept"			
	button of an offer item.			
Add an accepted offer	1. User click "Offer" icon	The offer status is updated	The offer status is updated	Pass
product to shopping cart	at the navigation bar.	to "Used" in the offer list.	to "Used" in the offer list.	
		The product is shown in	The product is shown in	
	2. User click "Add to cart"	the shopping cart with the	the shopping cart with the	
	button of an accepted offer	offered price.	offered price.	
	item.			
	3. User click "Cart" icon at			
	the navigation bar.			
	1		1	

7.3.1.6 Order Module

Test Case	Test Steps	Expected Result	Actual Result	Status
Create a new order with	1. User click "Cart" icon at	The order is created and is	The order is created and is	Pass
"Self-pick-up" as delivery	the navigation bar.	shown in the order list.	shown in the order list.	
method		The order details are	The order details are	
	2. User click "Check out"	displayed when user click	displayed when user click	
	button.	on the order from the list.	on the order from the list.	
		A notification email is sent	A notification email is sent	
	3. User select "Self-pick-	to all admins.	to all admins.	
	up" from delivery method			
	options at checkout page.			
	4. User click "Place order"			
	button.			

Table 7.49 Integration Test Case - Order Module

	5. User click the newly			
	created order from the			
	order list.			
Create a new order with	1. User click "Cart" icon at	The order is created and is	The order is created and is	Pass
"Standard shipping" as	the navigation bar.	shown in the order list.	shown in the order list.	
delivery method		The order details are	The order details are	
	2. User click "Check out"	displayed when user click	displayed when user click	
	button.	on the order from the list.	on the order from the list.	
		A notification email is sent	A notification email is sent	
	3. User select "Standard	to all admins.	to all admins.	
	shipping" from delivery			
	method options at			
	checkout page.			
	4. User click "Select			
	address" label.			

	5. User select one address			
	from the list.			
	6. User click "Place order" button.			
	7 Here distants			
	7. User click the newly			
	created order from the			
	order list.			
Review and rate on a	1. User click "Profile" icon	The review and rating on	The review and rating on	Pass
completed order	at the navigation bar.	the order is submitted.	the order is submitted.	
		The review is shown at the	The review is shown at the	
	2. User click "My orders"	bottom of the home page	bottom of the home page	
	label.	after user relaunch the app.	after user relaunch the app.	

3. User click on a		
completed order from the		
order list.		
4. User click "Review"		
button.		
5. User click "Star" icons		
to rate order based on		
different categories.		
6. User enter review		
comment.		
7. User click "Submit"		
button.		

8. User relaunch the app		
and go to the home page.		

7.3.1.7 Contact Seller Module

Test Case			Test Steps	Expected Result	Actual Result	Status
Contact	seller	from	1. User click on a product	The text message is sent to	The text message is sent to	Pass
product det	tails page		from the product list.	seller.	seller.	
				The chat box is updated	The chat box is updated	
			2. User click "Chat" icon	with the new message.	with the new message.	
			at the product details page.			
			3. User continue to enter			
			the text message in the text			
			box.			

 Table 7.50 Integration Test Case - Contact Seller Module

4. User click "Send"			
button.			
1. User click "Profile" icon	The text message is sent to	The text message is sent to	Pass
at the navigation bar.	seller.	seller.	
	The chat box is updated	The chat box is updated	
2. User click "Contact us"	with the new message.	with the new message.	
abel at profile page.			
3. User enter the text			
message in the text box.			
4. User click "Send"			
button.			
4. b) 1. 1. 2. 2. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	User click "Send" utton. User click "Profile" icon the navigation bar. User click "Contact us" bel at profile page. User enter the text tessage in the text box. User click "Send" utton.	User click "Send" utton. User click "Profile" icon the navigation bar. User click "Contact us" bel at profile page. User enter the text nessage in the text box. User click "Send" utton.	User click "Send" utton. User click "Profile" icon User click "Profile" icon the navigation bar. User click "Contact us" bel at profile page. User enter the text tessage in the text box. User click "Send" utton.

7.3.1.8 Address Module

Test Case	Test Steps	Expected Result	Actual Result	Status
Create a new address	1. User click "Profile" icon	The new address is created	The new address is created	Pass
	at the navigation bar.	and is shown in the address	and is shown in the address	
		list.	list.	
	2. User click "My			
	addresses" label at profile			
	page.			
	3. User click "Add new			
	address" button at the			
	bottom of address list.			
	4. User enter all the			
	required information.			
	3. User click "Save			
	address" button			

 Table 7.51 Integration Test Case - Address Module

Update an address detail	1. User click "Profile" icon	The address is updated	The address is updated	Pass
	at the navigation bar.	with the new details and is	with the new details and is	
		shown in the address list.	shown in the address list.	
	2. User click "My			
	addresses" label at profile			
	page.			
	3. User click one of the			
	addresses from the address			
	list.			
	4. User enter new value for			
	the detail of the address.			
	5. Click "Save address"			
	button			

Delete an address	1. User click "Profile" icon	The address is deleted and	The address is deleted and	Pass
	at the navigation bar.	removed from the address	removed from the address	
		list.	list.	
	2. User click "My			
	addresses" label at profile			
	page.			
	3. User click one of the			
	addresses from the address			
	list.			
	4. User click "Delete			
	address" button.			

7.3.1.9 Admin Account Module

 Table 7.52 Integration Test Case - Admin Account Module

Test Case	Test Steps	Expected Result	Actual Result	Status
Register new account and	1. User enter login page.	New admin account is	New admin account is	Pass
login using the account.		created, and user can login	created, and user can login	
	2. User click "Register"	using the email and	using the email and	
	label.	password.	password.	
	3. User enters all required			
	information.			
	4. User click "Register"			
	button.			
	5. User click "Logout"			
	button at home.			
	6. User enter email and			
	password of the newly			
	created account.			

7. User click "Login" button.		

7.3.1.10 Product Management Module

1 abic 7.55 Integration Test Case - I found Management Mount

Test Case	Test Steps	Expected Result	Actual Result	Status
Create a new product	1. User click "Product"	New product is created and	New product is created and	Pass
	label at navigation bar.	shown in the product list.	shown in the product list.	
		The product detail is	The product detail is	
	2. User click "Add new	displayed in the product	displayed in the product	
	product" button.	details page.	details page.	
	3. User enter all the			
	necessary information.			
	4. User click "Save"			
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	button.			
	5. User search for the			
	newly created product			
	from product list.			
	6. User click "View"			
	button of the product from			
	product list.			
Update a product	1. User click "Product"	The product is updated	The product is updated	Pass
	label at navigation bar.	with the latest detail and is	with the latest detail and is	
		shown in the product	shown in the product	
	2. User click "View"	details page.	details page.	
	button of a product from			
	product list.			

	3. User enter new value for			
	the detail of the product.			
	4. User click "Save" button.			
Delete a product	1. User click "Product"	The product is deleted and	The product is deleted and	Pass
	label at navigation bar.	removed from the product	removed from the product	
		list.	list.	
	2. User click "Delete" of a			
	product from the list.			
	3. User click "OK" for the			
	confirmation message.			
Import product data from	1. User click "Product"	The product data is	The product data is	Pass
an Excel file	label at navigation bar.	imported to the database.	imported to the database.	

	2. User click "Import"	All imported products are	All imported products are	
	button.	shown in the product list.	shown in the product list.	
	3. User click "Choose file"			
	button and upload an excel			
	file.			
	4. User click "Import"			
	button.			
				_
Export product data to an	1. User click "Product"	All product data in the	All product data in the	Pass
Excel file	label at navigation bar.	database are exported to an	database are exported to an	
		Excel file.	Excel file.	
	2. User click "Export"			
	button.			
	3. User click "OK" for the			
	confirmation message.			

7.3.1.11 Offer Management Module

		-	•	
Test Case	Test Steps	Expected Result	Actual Result	Status
Accept an offer free	om 1. User click "Offers" label	The offer status is updated	The offer status is updated	Pass
customer	at navigation bar.	to "Accepted" and is	to "Accepted" and is	
		shown in the offer list.	shown in the offer list.	
	2. User click "Accept"			
	button at an ongoing offer			
	item which status is			
	"Pending".			
	3. User click "OK" for the			
	confirmation message.			
		1	1	

Table 7.54 Integration Test Case - Offer Management Module

Reject an offer from	1. User click "Offers" label	The offer status is updated	The offer status is updated	Pass
customer	at navigation bar.	to "Cancelled" and is	to "Cancelled" and is	
		shown in the offer list.	shown in the offer list.	
	2. User click "Reject"			
	button at an ongoing offer			
	item which status is			
	"Pending".			
	3. User click "OK" for the			
	confirmation message.			
Make a counteroffer to	1. User click "Offers" label	The offer is updated with	The offer is updated with	Pass
customer's offer	at navigation bar.	the new counteroffer price	the new counteroffer price	
		and is shown in the offer	and is shown in the offer	
	2. User click	list.	list.	
	"Counteroffer" button at			
	an ongoing offer item			
	which status is "Pending".			
		1		

3. User enter a counteroffer price.		
4. User click "Confirm" button.		

7.3.1.12 Order Management Module

Test Case	Test Steps	Expected Result	Actual Result	Status
Update status of an order	1. User click "Orders"	The order is updated with	The order is updated with	Pass
	label at navigation bar.	the new status and is	the new status and is	
		shown in the order details	shown in the order details	
	2. User click "View"	page.	page.	
	button of an order from the			
	order list.			

Table 7.55 Integration Test Case - Order Management Module

3. User click "Update		
status" button at the order		
details page.		
4. User select a new status		
from the dropdown list.		
1		
5. User click "Update"		
button.		

7.3.1.13 Reporting Module

Table 7.56 Integration Test Case - Reporting Module

Test Case	Test Steps	Expected Result	Actual Result	Status
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View sales report of	1. User click "Sales	The sales report from first	The sales report from first	Pass
current year	Report" label at navigation	day to last day of the	day to last day of the	
	bar.	current year is displayed.	current year is displayed.	
	2. User click "Year" tab at			
	the sales report page.			
View sales report of last	1. User click "Sales	The sales report from first	The sales report from first	Pass
month	Report" label at navigation	day to last day of last	day to last day of last	
montin	Report laber at havigation	day to last day of last	day to last day of last	
	bar.	month is displayed.	month is displayed.	
	2. User click "Last month"			
	tab at the sales report page.			
View sales report of this	1. User click "Sales	The sales report from first	The sales report from first	Pass
month	Report" label at navigation	day to last day of this	day to last day of this	
monui				
	bar.	month is displayed.	month is displayed.	

	2. User click "This month"			
	tab at the sales report page.			
View sales report of last 7	1. User click "Sales	The sales report from first	The sales report from first	Pass
days	Report" label at navigation	day to last day of last 7	day to last day of last 7	
	bar.	days is displayed.	days is displayed.	
	2. User click "Last 7 days"			
	tab at the sales report page.			
View sales report by	1. User click "Sales	The sales report between	The sales report between	Pass
customizing the date range	Report" label at navigation	the custom date range is	the custom date range is	
	bar.	displayed.	displayed.	
	2. User click "Custom" tab			
	at the sales report page.			

	3. User select the start date and end date.4. User click "Confirm" button.			
View inventory summary	1. User click "Inventory	The inventory summary	The inventory summary	Pass
report	Report" label at navigation	report is displayed.	report is displayed.	
	bar.			
	2. User click "Dashboard"			
	tab at the inventory report			
	page.			
View product upload	1. User click "Inventory	The product upload history	The product upload history	Pass
history	Report" label at navigation	is displayed.	is displayed.	
	bar.			

	2. User click "Upload			
	history" tab at the			
	inventory report page.			
View product performance	1. User click "Inventory	The product performance	The product performance	Pass
report	Report" label at navigation	report is displayed.	report is displayed.	
	bar.			
	2. User click			
	"Performance" tab at the			
	inventory report page.			

7.3.1.14 Customer Management Module

Table 7.57 Integration Test Case - Customer Management Module

Test Case Test Steps	Expected Result	Actual Result	Status	
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View customers	1. User click "Customers"	The customer data is	The customer data is	Pass
	label at navigation bar.	shown in a list.	shown in a list.	
Reply to customer's	1 User click "Customer	The text message is sent to	The text message is sent to	Pass
anguiriag with toxt	Somulae" label of	austomar and the shot hav	austomer and the shot how	1 455
enquiries with text	Service laber at	customer and the chat box	customer and the chat box	
message	navigation bar.	is updated with the new	is updated with the new	
		text message.	text message.	
	2. User click one of the			
	customers from the list.			
	3 User enter text message			
	5. Oser enter text message.			
	4. User click "Send"			
	button.			
Reply to customer's	1. User click "Customer	The image is sent to	The image is sent to	Pass
enquiries with image	Service" label at	customer and the chat box	customer and the chat box	
_	navigation bar.			

	is updated with the new	is updated with the new	
2. User click one of the	image.	image.	
customers from the list.			
3. User click "Paper clip"			
label.			
4. User select an image to			
send.			
5. User click "Send"			
button.			

7.3.1.15 Review Management Module

Test Case	Test Steps	Expected Result	Actual Result	Status
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View reviews	1. User click "Reviews"	The review data is shown	The review data is shown	Pass
	label at navigation bar.	in a list.	in a list.	

7.3.2 Integration Testing Result

As a result, a total of 46 integration test cases that covered all 15 modules were designed and executed, the system successfully passed all the test cases.

7.4 User Acceptance Testing

12 users were selected to participate in the user acceptance test to evaluate both the mobile app and the web app. The test cases for each system modules were prepared for the users to perform the tests. The results of the UAT were attached to Appendix C, and the results collected from all 12 testers were tabulated as follows.

Test Module Name	Number of Test Performed	Number of Test Passes	Comments
Customer Account	12	12	-
Product	12	12	-
Shopping Cart	12	12	-

Table 7.59 User Acceptance Test Result - Customer

Favourite	12	12	-
Offer	12	12	-
Order	12	12	-
Contact Seller	12	12	-
Address	12	12	-

Table 7.60 User Acceptance Test Result - Admin

Test Module Name	Number of Test Performed	Number of Test Passes	Comments
Admin Account	12	12	-
Product Management	12	12	-
Offer Management	12	12	-
Order Management	12	12	-
Reporting	12	12	-
Customer Management	12	12	-
Review Management	12	12	-

- 7.4.1 User Acceptance Test Cases for Customer
- 7.4.1.1 Customer Account Module

Test Case ID	UAT-001		
Tester's Name			
Testing Date			
Testing Start Time		Testing End Time	
Module Name	Customer Account		
Test Description		Status (Pass/Fail)	Comments
Able to register a new custom	er account.		
Able to display error message	if the input for the account registration is invalid.		
Able to log out of the account.			
Able to re-login with the registered account after logout.			
Able to view the profile details			
Able to update the profile deta	ails		
Able to display error message if the input for the profile update is invalid.			

7.4.1.2 Product Module

Test Case ID	UAT-002		
Tester's Name			
Testing Date			
Testing Start Time		Testing End Time	
Module Name	Product		
Test Description	1	Status (Pass/Fail)	Comments
Able to view a list of products.			
Able to search products by name.			
Able to filter products by category.			
Able to sort the product searching result.			
Able to filter the product searching result by price range.			
Able to view the detail of a product.			
Able to share a product to socia	al media.		

7.4.1.3 Shopping Cart Module

Test Case ID	UAT-003

Tester's Name			
Testing Date			
Testing Start Time		Testing End Time	
Module Name	Shopping Cart		
Test Description		Status (Pass/Fail)	Comments
Able to add a product to shopping cart.			
Able to display error message when try to add a product that has already in the			
cart.			
Able to view items in the shopping cart.			
Able to update a cart item's quantity.			
Able to display error message when the cart item quantity has reached maximum			
number.			
Able to remove a cart item from the shopping cart.			

7.4.1.4 Favourite Module

Test Case ID	UAT-004

Tester's Name			
Testing Date			
Testing Start Time		Testing End Time	
Module Name	Favourite		
Test Description		Status (Pass/Fail)	Comments
Able to add a product to favourite.			
Able to view products in the favourite list.			
Able to remove a product from the favourite list.			

7.4.1.5 Offer Module

Test Case ID	UAT-005		
Tester's Name			
Testing Date			
Testing Start Time		Testing End Time	
Module Name	Offer		
Test Description		Status (Pass/Fail)	Comments

Able to make a new offer.	
Able to display error message if the input for the offer price is invalid.	
Able to view offer items in the offer list.	
Able to cancel an offer.	
Able to update an offer.	
Able to display error message if the input for the new offer price is invalid.	
Able to accept an offer from seller.	
Able to add an accepted offer product to shopping cart.	

7.4.1.6 Order Module

Test Case ID	UAT-006		
Tester's Name			
Testing Date			
Testing Start Time		Testing End Time	
Module Name	Order	· · ·	
Test Description		Status (Pass/Fail)	Comments

Able to create a new order.	
Able to display error message if the cart item is not available.	
Able to view orders in the order list.	
Able to view the detail of an order.	
Able to review and rate on a completed order.	

7.4.1.7 Contact Seller Module

Test Case ID	UAT-007		
Tester's Name			
Testing Date			
Testing Start Time		Testing End Time	
Module Name	Contact Seller		
Test Description		Status (Pass/Fail)	Comments
Able to send a text message to seller.			
Able to display error message if empty message is sent.			

7.4.1.8 Address Module

Test Case ID	UAT-008		
Tester's Name			
Testing Date			
Testing Start Time		Testing End Time	
Module Name	Address		
Test Description		Status (Pass/Fail)	Comments
Able to create a new address.			
Able to display error message if the input for the address creation is invalid.			
Able to view addresses in the address list.			
Able to view the detail of an address.			
Able to update an address.			
Able to display error message if the input for the address update is invalid.			
Able to delete an address.			

7.4.2 User Acceptance Test Cases for Admin

7.4.2.1 Admin Account Module

Test Case ID	UAT-009					
Tester's Name						
Testing Date						
Testing Start Time		Testing End Time				
Module Name	Admin Account					
Test Description		Status (Pass/Fail)	Comments			
Test Description		Status (1 ass/1 all)	Comments			
Able to register a new admin a	ccount.					
Able to register a new admin a Able to display error message i	ccount. if the input for the account registration is invalid.					
Able to register a new admin a Able to display error message i Able to log out of the account.	ccount. if the input for the account registration is invalid.					

7.4.2.2 Product Management Module

Test Case ID	UAT-010		
Tester's Name			
Testing Date			
Testing Start Time		Testing End Time	

Module Name	e Product Management						
Test Description		Status (Pass/Fail)	Comments				
Able to create a new product.							
Able to display error message	if the input for the product creation is invalid.						
Able to view products in the p	product list.						
Able to search products by na	me.						
Able to view the detail of a pr	oduct.						
Able to update a product.							
Able to display error message	if the input for the product update is invalid.						
Able to delete a product.							
Able to import product data fr	rom an Excel file.						
Able to export product data to	an Excel file.						

7.4.2.3 Offer Management Module

Test Case ID	UAT-011
Tester's Name	

Testing Date			
Testing Start Time		Testing End Time	
Module Name	Offer Management		
Test Description		Status (Pass/Fail)	Comments
Able to view offers in the offer list.			
Able to make a counteroffer to a customer's offer.			
Able to display error message	if the input for the counteroffer price is invalid.		
Able to accept an offer from customer.			
Able to reject an offer from cu	istomer.		

7.4.2.4 Order Management Module

Test Case ID	UAT-012		
Tester's Name			
Testing Date			
Testing Start Time		Testing End Time	
Module Name	Order Management		

Test Description	Status (Pass/Fail)	Comments
Able to view orders in the order list.		
Able to view the detail of an order.		
Able to update an order.		

7.4.2.5 Reporting Module

Test Case ID	UAT-013		
Tester's Name			
Testing Date			
Testing Start Time		Testing End Time	
Module Name	Reporting		·
Test Description		Status (Pass/Fail)	Comments
Able to view sales report of current year.			
Able to view sales report of last month.			
Able to view sales report of this month.			
Able to view sales report of las	t 7 days.		

Able to view sales report by customizing the date range.	
Able to view inventory summary report.	
Able to view product upload history.	
Able to view product performance report.	

7.4.2.6 Customer Management Module

Test Case ID	UAT-014		
Tester's Name			
Testing Date			
Testing Start Time		Testing End Time	
Module Name	Customer Management		
Test Description		Status (Pass/Fail)	Comments
Able to view customers in the o	customer list.		
Able to reply to customer's enquiries with a text message.			
Able to display error message if the text message is empty.			
Able to reply to customer's end	quiries with an image.		

7.4.2.7 Review Management Module

Test Case ID	UAT-015		
Tester's Name			
Testing Date			
Testing Start Time		Testing End Time	
Module Name	Review Management		
Test Description		Status (Pass/Fail)	Comments
Able to view reviews in the rev	view list.		

7.5 Usability Testing

After the testers finished their user acceptance tests, they were required to fill out a user satisfaction survey form. The usability test results were attached to Appendix D, and the results collected from all 12 testers were tabulated as follows. As a result, the mobile application for customers use achieved 90% of the SUS score.

Table 7.61 Usability Test Result

Tester	Score by Question 7								Total Score	SUS Score		
	1	2	3	4	5	6	7	8	9	10		

1	4	4	3	2	4	4	3	4	4	4	36	90
2	4	4	4	3	1	2	3	1	3	3	28	70
3	3	3	3	4	4	3	2	2	3	3	30	75
4	4	4	4	3	4	3	4	2	4	3	35	87.5
5	4	3	4	3	4	3	4	3	4	3	35	87.5
6	4	4	4	4	4	4	4	4	4	4	40	100
7	4	4	4	4	4	4	4	4	4	4	40	100
8	4	4	4	4	4	4	3	4	4	4	39	97.5
9	4	4	4	3	4	4	4	4	4	4	39	97.5
10	4	4	4	4	4	4	4	4	4	4	40	100
11	3	3	3	3	4	4	4	3	4	3	34	85
12	4	4	4	4	4	4	4	4	4	4	40	100
Average	3.83	3.75	3.75	3.42	3.75	3.58	3.58	3.25	3.83	3.58	36.33	90.83

CHAPTER 8

CONCLUSION AND RECOMMENDATIONS

8.1 Conclusion

In this project, a cross-platforms online retail shop application was developed to support Bargain Basement project. The software development methodology adopted in this project is the evolutionary prototyping model which involves planning phase, requirement gathering phase, prototype implementation phase, and testing phase in the SDLC.

At the early phase of this project, an interview was conducted with the staff of Bargain Basement to understand their daily operations in order to identify their current potential problem and also understand the requirement. A questionnaire was also prepared and distributed to public for requirement gathering.

After the requirements were gathered and documented, the prototype implementation phase was started with the development of the use case diagram, use case description, activity diagram, as well as the entity relationship diagram to represent the functionalities of the system and how the users will interact with the system. Next, the development of the online shop system that includes a web-based application and a mobile application was carried on.

The mobile application is for customers to browse and purchase the preloved items from Bargain Basement. It provides features such as allowing the customers to make an offer on a product, share a product to social media, and contact seller for any enquiries. The web-based application is for the staffs of Bargain Basement to manage the online shop by allowing them to manage the products, offers, orders, and also handle the enquiries from the customers. Other than that, the web-based application is support for the product import and export by using Excel files, and it also provides auto reporting feature for the staffs to better analyse the performance of the online shop.

When the development of the system has completed, both the webbased app and mobile app were tested by several software testing mechanisms such as unit testing, integration testing, user acceptance testing, and usability testing. For the user acceptance testing and usability testing, 12 users were selected to perform the test. As a result, the mobile application has achieved 90% of the SUS score.

In conclusion, a cross-platforms online retail shop application was developed at the end of this project and all the objectives were achieved:

- i. To **analyse** user requirements by conducting interview and LR on existing pre-loved platform-bases business and applications.
- To develop a cross-platforms online retail shop application to support Bargain Basement project.
 - Web-based management system for the Bargain Basement staffs to manage the online shop.
 - Mobile-based application that serves as a platform for people to browse and purchase the second-hand goods.
- iii. To evaluate the usability of the application by scoring 80 out of 100 in System Usability Scale (SUS) test.

8.2 **Recommendations for Future Work**

The current system developed has several limitations and the recommendations were suggested for future improvements.

No.	Limitation	Recommendation
1	The current system does not	The actual payment transactions
	support actual payment	can be implemented by connecting
	transactions between customers	to a payment gateway in order for
	and sellers.	the customer to pay for their order.
2	The current system does not	The shipping fees calculation can
	support shipping fees	be implemented by calculating the
	calculation.	total weight of the order items and
		the shipping rate of the delivery
		area.

 Table 8.1
 Limitations and Recommendations

3	The current system does not	The product variation can be
	support products with variations	implemented by allowing the
		admin to add a product that has
		different attributes, such as size
		and colour.
4	The current system does not	The notification system can be
	notify the users when there is an	implemented by sending a
	update on the offers or when they	notification when there is an
	received a new message.	update on the offers or when they
		received a new message.
5	Customers cannot send images	The chat system can be enhanced
	to sellers	by allowing the customer to send
		images instead of only text
		messages.

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APPENDICES





In the past 6 months, have you shopped online for gently used second-hand clothing and/or accessories?

30 responses


What types of second-hand items do you shop for online? 30 responses



Which online second-hand marketplaces do you shop the most? 30 responses



Which platform that you usually used for online shopping? ³⁰ responses



Based on your experience, what are your biggest challenges when shopping online second-hand marketplace?

30 responses

I am not sure if the product is in a good condition a not Not sure whether the item is in good condition as stated by seller Cant find the things i want price no sure the quality The condition of the item. Uncertain of the product's quality i dont like the layout. it make me hard to shop. Unable to gauge the exact conditions of second-hand items Scammer everywhere Negotiate price unsure Hard to find my fav piece having to trust the seller Scared to be scam Knowing the quality of the product N/A Find the trustworthy seller Unable to assess the quality quality of the product and the credibility of the sellers The website is very confusing Not sure if the quality is well-kept Worry about the real condition about the products That the quality of the item will be worse than in the picture the quality fear of authenticity and being scammed authenticity how to ensure the quality of the item encountering scammers

Do you have experience shopping at online charity thrift shops? If no, what is the reason? $_{\rm 30\,responses}$





What are the features you expect in an online charity thrift shop mobile application? ^{30 responses}

Do you agree that a bargaining feature in application will attract you to shop at the online charity thrift shop?

. 30 responses



Appendix B: Interview Questions

Interview Questions

- I have known that Bargain Basement is providing several drop off points to collect the items donated by community. Other than using the drop-off bins provided, are there other ways for people to donate their preloved items, such as online donation methods?
- 2. When there is a new item comes in, what steps do you take to register it into your inventory of the physical stores?
- 3. I know from your website that 20% of your items are brand new, how do you handle these new items? Do you separate them from the remaining items?
- 4. May I know what is the process of putting new items on the shelves for the online store, how do you register the new items into the inventory system of the online store?
- 5. Are the items sold on the online store from two different branches?
- 6. If yes, have you ever had problems with inventory management, such as failed to keep the inventory up to date across two branches?
- 7. Are all the items in the physical stores have been uploaded to the online store?
- 8. If no, is there any difficulties that prevents you from doing so?
- 9. May I know how the inventory is updated every time there is an item sold for both physical store and online store?
- 10. May I know more details about the process after the customer pays the order online until they get their items?
- 11. May I know if customers are allowed to pick up the items in the physical store after they paid their order online?
- 12. What are the difficulties you have encountered when you trying to perform sales analysis for your online store?
- 13. Does the current online shop website contribute a lot of sales for the project?
- 14. If no, what do you think is causing the problem, and do you think developing a mobile application would help?
- 15. If yes, do you think developing a mobile application would help in further expanding the horizon of the project?
- 16. What kind of features do you think should be included in the mobile application?
- 17. Do you think adding a "bargaining function" to the mobile application is good to attract the customers?

Appendix C: User Acceptance Test Results

Test Case ID	UAT-001			
Tester's Name	Low Chen Wan	Low Chen Wan		
Testing Date	5/9/2022			
Testing Start Time	3.17 PM	3.17 PM Testing End Time 3.23 PM		
Module Name	Customer Account			
Test Description	tion Status (Pass/Fail) Comments			
Able to register a new custome	a new customer account. Pass			
Able to display error message i	ble to display error message if the input for the account registration is invalid. Pass			
Able to log out of the account. Pass				
Able to re-login with the registered account after logout.		Pass		
Able to view the profile details		Pass		
Able to update the profile details Pass				
Able to display error message i	f the input for the profile update is invalid.	Pass		

Test Case ID	UAT-002			
Tester's Name	Low Chen Wan	Low Chen Wan		
Testing Date	5/9/2022			
Testing Start Time	3.23 PM	Testing End Time	3.28 PM	
Module Name	Product			
Test Description	t Description Status (Pass/Fail) Comments			
Able to view a list of products.	to view a list of products. Pass			
Able to search products by nan	ble to search products by name. Pass			
Able to filter products by category. Pass				
Able to sort the product searching result.		Pass		
Able to filter the product searching result by price range.		Pass		
Able to view the detail of a product. Pass				
Able to share a product to social	al media.	Pass		

Test Case ID	UAT-003		
Tester's Name	Low Chen Wan		
Testing Date	5/9/2022		
Testing Start Time	3.28 PM	Testing End Time	3.30 PM
Module Name	Shopping Cart		
Test Description	Status (Pass/Fail) Comments		
Able to add a product to shopp	shopping cart. Pass		
Able to display error message	e when try to add a product that has already in the Pass		
cart.			
Able to view items in the shopping cart.		Pass	
Able to update a cart item's quantity.		Pass	
Able to display error message when the cart item quantity has reached		Pass	
maximum number.	aximum number.		
Able to remove a cart item from	n the shopping cart.	Pass	

Test Case ID	UAT-004		
Tester's Name	Low Chen Wan		
Testing Date	5/9/2022		
Testing Start Time	3.31 PM Testing End Time 3.31 PM		
Module Name	Favourite		
Test Description	Description Status (Pass/Fail) Comments		
Able to add a product to favou	rite. Pass		
Able to view products in the fa	avourite list. Pass		
Able to remove a product from	h the favourite list.	Pass	

Test Case ID	UAT-005		
Tester's Name	Low Chen Wan		
Testing Date	5/9/2022		
Testing Start Time	3.32 PM Testing End Time 3.37 PM		
Module Name	Offer		
Test Description	Test Description Status (Pass/Fail) Comments		Comments
Able to make a new offer.	Able to make a new offer. Pass		
Able to display error message i	error message if the input for the offer price is invalid. Pass		
Able to view offer items in the offer list.		Pass	
Able to cancel an offer.		Pass	
Able to update an offer.		Pass	
Able to display error message if the input for the new offer price is invalid.		Pass	
Able to accept an offer from seller. Pass			
Able to add an accepted offer p	product to shopping cart.	Pass	

Test Case ID	UAT-006	UAT-006		
Tester's Name	Low Chen Wan	Low Chen Wan		
Testing Date	5/9/2022	5/9/2022		
Testing Start Time	3:37 PM	3:37 PM Testing End Time 3.42		
Module Name	Order	Order		
Test Description	Status (Pass/Fail) Comments			
Able to create a new order.	ble to create a new order. Pass			
Able to display error message	display error message if the cart item is not available. Pass			
Able to view orders in the order list.		Pass		
Able to view the detail of an	he detail of an order. Pass			
Able to review and rate on a	completed order.	Pass		

Test Case ID	UAT-007			
Tester's Name	Low Chen Wan			
Testing Date	5/9/2022			
Testing Start Time	3.42 PM Testing End Time 3.43 PM			
Module Name	Contact Seller			
Test Description	Status (Pass/Fail) Comments			
Able to send a text message to	o seller. Pass			
Able to display error message i	f empty message is sent.	Pass		

Test Case ID	UAT-008			
Tester's Name	Low Chen Wan	Low Chen Wan		
Testing Date	5/9/2022	5/9/2022		
Testing Start Time	3.43 PM	Testing End Time	3.46 PM	
Module Name	Address			
Test Description	ion Status (Pass/Fail) Comments		Comments	
Able to create a new address.	le to create a new address.			
Able to display error message if the input for the address creation is invalid. Pass				
Able to view addresses in the address list.		Pass		
Able to view the detail of an address.		Pass		
Able to update an address.		Pass		
Able to display error message if the input for the address update is invalid.		Pass		
Able to delete an address.		Pass		

Test Case ID	UAT-009			
Tester's Name	Low Chen Wan			
Testing Date	5/9/2022	5/9/2022		
Testing Start Time	3.47 PM Testing End Time 3.49 PM			
Module Name	Admin Account			
Test Description Status (Pass/Fail) Comments			Comments	
Able to register a new admin account. Pass				
Able to display error message if the input for the account registration is invalid. Pass				
Able to log out of the account. Pass				
Able to re-login with the regist	ered account after logout.	Pass		

Test Case ID	UAT-010		
Tester's Name	Low Chen Wan		
Testing Date	5/9/2022		
Testing Start Time	3.49 PM	Testing End Time	3.56 PM
Module Name	Product Management		
Test Description		Status (Pass/Fail)	Comments
Able to create a new product.		Pass	
Able to display error message	if the input for the product creation is invalid.	Pass	
Able to view products in the product list.		Pass	
Able to search products by name.		Pass	
Able to view the detail of a product.		Pass	
Able to update a product.		Pass	
Able to display error message if the input for the product update is invalid.		Pass	
Able to delete a product.		Pass	
Able to import product data from an Excel file.		Pass	
Able to export product data to	an Excel file.	Pass	

Test Case ID	UAT-011		
Tester's Name	Low Chen Wan		
Testing Date	5/9/2022		
Testing Start Time	3.56 PM Testing End Time 3.58 PM		
Module Name	Offer Management		
Test Description	Test Description Status (Pass/Fail) Comments		
Able to view offers in the offer	Able to view offers in the offer list. Pass		
Able to make a counteroffer to a customer's offer.		Pass	
Able to display error message if the input for the counteroffer price is invalid.		Pass	
Able to accept an offer from customer. Pass			
Able to reject an offer from cu	stomer.	Pass	

Test Case ID	UAT-012		
Tester's Name	Low Chen Wan		
Testing Date	5/9/2022		
Testing Start Time	3.58 PM Testing End Time 3.59 PM		
Module Name	Order Management		
Test Description	Status (Pass/Fail) Comments		
Able to view orders in the orde	r list. Pass		
Able to view the detail of an or	order. Pass		
Able to update an order.		Pass	

Test Case ID	UAT-013		
Tester's Name	Low Chen Wan		
Testing Date	5/9/2022		
Testing Start Time	3.59 PM Testing End Time 4.00 PM		
Module Name	Reporting		
Test Description	Status (Pass/Fail) Comments		
Able to view sales report of cur	rrent year.	Pass	
Able to view sales report of las	st month. Pass		
Able to view sales report of thi	is month. Pass		
Able to view sales report of las	st 7 days. Pass		
Able to view sales report by customizing the date range. P		Pass	
Able to view inventory summa	mmary report. Pass		
Able to view product upload hi	istory. Pass		
Able to view product performa	nce report.	Pass	

Test Case ID	UAT-014		
Tester's Name	Low Chen Wan		
Testing Date	5/9/2022		
Testing Start Time	4.00 PM Testing End Time 4.01 PM		
Module Name	Customer Management		
Test Description	Status (Pass/Fail) Comments		
Able to view customers in the	customer list. Pass		
Able to reply to customer's en	uiries with a text message. Pass		
Able to display error message	if the text message is empty. Pass		
Able to reply to customer's en	quiries with an image.	Pass	

Test Case ID	UAT-015		
Tester's Name	Low Chen Wan		
Testing Date	5/9/2022		
Testing Start Time	4.01 PM	Testing End Time	4.01 PM
Module Name	Review Management		
Test Description		Status (Pass/Fail)	Comments
Able to view reviews in the rev	riew list.	Pass	

Test Case ID	UAT-001			
Tester's Name	Chen Jun Jie	Chen Jun Jie		
Testing Date	06/09/2022			
Testing Start Time	1250am	Testing End Time	1253am	
Module Name	Customer Account			
Test Description	Status (Pass/Fail) Comments			
Able to register a new custome	er account. Pass			
Able to display error message i	if the input for the account registration is invalid. Pass			
Able to log out of the account.	Pass			
Able to re-login with the regist	sistered account after logout. Pass			
Able to view the profile details Pa		Pass		
Able to update the profile detail	ils Pass			
Able to display error message i	if the input for the profile update is invalid.	Pass		

Test Case ID	UAT-002		
Tester's Name	Chen Jun Jie		
Testing Date	06/09/2022		
Testing Start Time	1253am	Testing End Time	1258am
Module Name	Product		
Test Description	Status (Pass/Fail) Comments		
Able to view a list of products.	is. Pass		
Able to search products by nan	name. Pass		
Able to filter products by categ	egory. Pass		
Able to sort the product searching result. Pass			
Able to filter the product searching result by price range. Pass			
Able to view the detail of a pro	oduct. Pass		
Able to share a product to social	al media.	Pass	

Test Case ID	UAT-003			
Tester's Name	Chen Jun Jie			
Testing Date	06/09/2022	06/09/2022		
Testing Start Time	1258am	Testing End Time	0102am	
Module Name	Shopping Cart			
Test Description	Status (Pass/Fail) Comments			
Able to add a product to shopp	pping cart. Pass			
Able to display error message	when try to add a product that has already in the Pass			
cart.				
Able to view items in the shop	the shopping cart. Pass			
Able to update a cart item's quantity.		Pass		
Able to display error message when the cart item quantity has reached		Pass		
maximum number.				
Able to remove a cart item from	n the shopping cart.	Pass		

Test Case ID	UAT-004		
Tester's Name	Chen Jun Jie		
Testing Date	06/09/2022		
Testing Start Time	0102am	Testing End Time	0104am
Module Name	Favourite		
Test Description	st Description Status (Pass/Fail) Comments		
Able to add a product to favour	urite. Pass		
Able to view products in the fa	favourite list. Pass		
Able to remove a product from	the favourite list.	Pass	

Test Case ID	UAT-005			
Tester's Name	Chen Jun Jie			
Testing Date	06/09/2022	06/09/2022		
Testing Start Time	0104am Testing End Time 0110am			
Module Name	Offer			
Test Description	tion Status (Pass/Fail) Comments			
Able to make a new offer.	offer. Pass			
Able to display error message	ge if the input for the offer price is invalid. Pass			
Able to view offer items in the	in the offer list. Pass			
Able to cancel an offer.	to cancel an offer. Pass			
Able to update an offer.		Pass		
Able to display error message if the input for the new offer price is invalid.		Pass		
Able to accept an offer from se	rom seller. Pass			
Able to add an accepted offer p	product to shopping cart.	Pass		

Test Case ID	UAT-006			
Tester's Name	Chen Jun Jie	Chen Jun Jie		
Testing Date	06/09/2022			
Testing Start Time	0110am	0110am Testing End Time 0114am		
Module Name	Order			
Test Description	Status (Pass/Fail) Comments			
Able to create a new order.	Pass			
Able to display error message	e if the cart item is not available. Pass			
Able to view orders in the order	e to view orders in the order list. Pass			
Able to view the detail of an o	order. Pass			
Able to review and rate on a c	ompleted order.	Pass		

Test Case ID	UAT-007		
Tester's Name	Chen Jun Jie		
Testing Date	06/09/2022		
Testing Start Time	0114am	Testing End Time	0117am
Module Name	Contact Seller		
Test Description		Status (Pass/Fail)	Comments
Able to send a text message to	text message to seller. Pass		
Able to display error message i	f empty message is sent.	Pass	

Test Case ID	UAT-008			
Tester's Name	Chen Jun Jie	Chen Jun Jie		
Testing Date	06/09/2022			
Testing Start Time	0117am	Testing End Time	0121am	
Module Name	Address			
Test Description	Status (Pass/Fail) Comments			
Able to create a new address.	Pass			
Able to display error message i	if the input for the address creation is invalid. Pass			
Able to view addresses in the a	address list. Pass			
Able to view the detail of an address.		Pass		
Able to update an address.		Pass		
Able to display error message i	if the input for the address update is invalid. Pass			
Able to delete an address.		Pass		

Test Case ID	UAT-009			
Tester's Name	Chen Jun Jie			
Testing Date	06/09/2022	06/09/2022		
Testing Start Time	0121am Testing End Time 0124am			
Module Name	Admin Account			
Test Description	Status (Pass/Fail) Comments			
Able to register a new admin a	ccount. Pass			
Able to display error message i	if the input for the account registration is invalid. Pass			
Able to log out of the account.	t. Pass			
Able to re-login with the regist	ered account after logout.	Pass		

Test Case ID	UAT-010			
Tester's Name	Chen Jun Jie			
Testing Date	06/09/2022			
Testing Start Time	0124am	Testing End Time	0128am	
Module Name	Product Management			
Test Description		Status (Pass/Fail)	Comments	
Able to create a new product.		Pass		
Able to display error message i	if the input for the product creation is invalid.	Pass		
Able to view products in the product list.		Pass		
Able to search products by name.		Pass		
Able to view the detail of a product.		Pass		
Able to update a product.		Pass		
Able to display error message if the input for the product update is invalid.		Pass		
Able to delete a product.		Pass		
Able to import product data from an Excel file.		Pass		
Able to export product data to a	an Excel file.	Pass		

Test Case ID	UAT-011				
Tester's Name	Chen Jun Jie				
Testing Date	06/09/2022				
Testing Start Time	0128am	0128am Testing End Time 0132am			
Module Name	Offer Management				
Test Description	Status (Pass/Fail) Comments				
Able to view offers in the offer	e offer list. Pass				
Able to make a counteroffer to	o a customer's offer. Pass				
Able to display error message i	lay error message if the input for the counteroffer price is invalid. Pass				
Able to accept an offer from cu	customer. Pass				
Able to reject an offer from cu	stomer.	Pass			

Test Case ID	UAT-012				
Tester's Name	Chen Jun Jie	Chen Jun Jie			
Testing Date	06/09/2022				
Testing Start Time	0132am	Testing End Time	0134am		
Module Name	Order Management				
Test Description		Status (Pass/Fail)	Comments		
Able to view orders in the orde	der list. Pass				
Able to view the detail of an or	order. Pass				
Able to update an order.		Pass			

Test Case ID	UAT-013			
Tester's Name	Chen Jun Jie			
Testing Date	06/09/2022			
Testing Start Time	0134am	Testing End Time	0136am	
Module Name	Reporting			
Test Description		Status (Pass/Fail)	Comments	
Able to view sales report of cu	rrent year.	Pass		
Able to view sales report of las	ast month. Pass			
Able to view sales report of this	his month. Pass			
Able to view sales report of las	ast 7 days. Pass			
Able to view sales report by customizing the date range. Pass				
Able to view inventory summa	nmary report. Pass			
Able to view product upload h	istory. Pass			
Able to view product performa	ince report.	Pass		

Test Case ID	UAT-014			
Tester's Name	Chen Jun Jie			
Testing Date	06/09/2022			
Testing Start Time	0136am	Testing End Time	0139am	
Module Name	Customer Management			
Test Description	Description Status (Pass/Fail) Comments			
Able to view customers in the o	e customer list. Pass			
Able to reply to customer's end	quiries with a text message. Pass			
Able to display error message i	e if the text message is empty. Pass			
Able to reply to customer's end	juiries with an image.	Pass		

Test Case ID	UAT-015		
Tester's Name	Chen Jun Jie		
Testing Date	06/09/2022		
Testing Start Time	0139am	Testing End Time	0140am
Module Name	Review Management		
Test Description		Status (Pass/Fail)	Comments
Able to view reviews in the rev	view list.	Pass	

Test Case ID	UAT-001			
Tester's Name	Teo Chuan Yi			
Testing Date	05/09/2022			
Testing Start Time	0829pm	Testing End Time	0832pm	
Module Name	Customer Account			
Test Description	tion Status (Pass/Fail) Comments			
Able to register a new custome	r account.	Pass		
Able to display error message i	sage if the input for the account registration is invalid. Pass			
Able to log out of the account.	the account. Pass			
Able to re-login with the registered account after logout. Pass				
Able to view the profile details		Pass		
Able to update the profile detail	e to update the profile details Pass			
Able to display error message i	if the input for the profile update is invalid.	Pass		

Test Case ID	UAT-002			
Tester's Name	Teo Chuan Yi			
Testing Date	05/09/2022			
Testing Start Time	0832pm	Testing End Time	0837pm	
Module Name	Product			
Test Description	est Description Status (Pass/Fail) Comments			
Able to view a list of products.	to view a list of products. Pass			
Able to search products by nan	ble to search products by name. Pass			
Able to filter products by category. Pass				
Able to sort the product searching result.		Pass		
Able to filter the product searching result by price range.		Pass		
Able to view the detail of a pro	etail of a product. Pass			
Able to share a product to social	oduct to social media. Pass			

Test Case ID	UAT-003			
Tester's Name	Teo Chuan Yi			
Testing Date	05/09/2022			
Testing Start Time	0837pm	Testing End Time	0838pm	
Module Name	Shopping Cart			
Test Description	Test Description Status (Pass/Fail) Comments			
Able to add a product to shopp	Able to add a product to shopping cart. Pa			
Able to display error message	e to display error message when try to add a product that has already in the Pass			
cart.				
Able to view items in the shopping cart.		Pass		
Able to update a cart item's quantity.		Pass		
Able to display error message when the cart item quantity has reached		Pass		
maximum number.	Der.			
Able to remove a cart item from	n the shopping cart.	Pass		

Test Case ID	UAT-004			
Tester's Name	Teo Chuan Yi			
Testing Date	05/09/2022			
Testing Start Time	0838pm	Testing End Time	0839pm	
Module Name	Favourite			
Test Description	est Description Status (Pass/Fail) Comments			
Able to add a product to favou	urite. Pass			
Able to view products in the fa	favourite list. Pass			
Able to remove a product from	the favourite list.	Pass		

Test Case ID	UAT-005			
Tester's Name	Teo Chuan Yi			
Testing Date	05/09/2022			
Testing Start Time	0839pm	Testing End Time	0843pm	
Module Name	Offer			
Test Description		Status (Pass/Fail)	Comments	
Able to make a new offer.	v offer. Pass			
Able to display error message i	e if the input for the offer price is invalid. Pass			
Able to view offer items in the	the offer list. Pass			
Able to cancel an offer.	cancel an offer. Pass			
Able to update an offer.		Pass		
Able to display error message if the input for the new offer price is invalid. Pass				
Able to accept an offer from se	o accept an offer from seller. Pass			
Able to add an accepted offer p	product to shopping cart.	Pass		

Test Case ID	UAT-006	UAT-006			
Tester's Name	Teo Chuan Yi				
Testing Date	05/09/2022				
Testing Start Time	0844pm	0844pm Testing End Time 0849pm			
Module Name	Order	Order			
Test Description		Status (Pass/I	'ail)	Comments	
Able to create a new order.	Pass				
Able to display error message	if the cart item is not available. Pass				
Able to view orders in the ord	to view orders in the order list. Pass				
Able to view the detail of an o	order. Pass				
Able to review and rate on a c	ompleted order.	Pass			

Test Case ID	UAT-007		
Tester's Name	Teo Chuan Yi		
Testing Date	05/09/2022		
Testing Start Time	0849pm	Testing End Time	0850pm
Module Name	Contact Seller		
Test Description		Status (Pass/Fail)	Comments
Able to send a text message to	d a text message to seller. Pass		
Able to display error message i	f empty message is sent.	Pass	

Test Case ID	UAT-008			
Tester's Name	Teo Chuan Yi			
Testing Date	05/09/2022	05/09/2022		
Testing Start Time	0850pm	Testing End Time	0852pm	
Module Name	Address			
Test Description	Status (Pass/Fail) Comments		Comments	
Able to create a new address.	o create a new address.			
Able to display error message i	message if the input for the address creation is invalid. Pass			
Able to view addresses in the a	iddresses in the address list. Pass			
Able to view the detail of an address.		Pass		
Able to update an address.		Pass		
Able to display error message i	ay error message if the input for the address update is invalid. Pass			
Able to delete an address.		Pass		

Test Case ID	UAT-009		
Tester's Name	Teo Chuan Yi		
Testing Date	05/09/2022		
Testing Start Time	0852pm Testing End Time 0854pm		
Module Name	Admin Account		
Fest Description Status (Pass/Fail) Comments			Comments
Able to register a new admin ad	o register a new admin account. Pass		
Able to display error message i	splay error message if the input for the account registration is invalid. Pass		
Able to log out of the account. Pass			
Able to re-login with the regist	ered account after logout.	Pass	

Test Case ID	UAT-010		
Tester's Name	Teo Chuan Yi		
Testing Date	05/09/2022		
Testing Start Time	0855pm	Testing End Time	0859pm
Module Name	Product Management		
Test Description		Status (Pass/Fail)	Comments
Able to create a new product.		Pass	
Able to display error message if the input for the product creation is invalid.		Pass	
Able to view products in the product list.		Pass	
Able to search products by name.		Pass	
Able to view the detail of a product.		Pass	
Able to update a product.		Pass	
Able to display error message if the input for the product update is invalid.		Pass	
Able to delete a product.		Pass	
Able to import product data from an Excel file.		Pass	
Able to export product data to an Excel file. Pass			

Test Case ID	UAT-011			
Tester's Name	Teo Chuan Yi	Teo Chuan Yi		
Testing Date	05/09/2022	05/09/2022		
Testing Start Time	0859pm	0859pm Testing End Time 0901pm		
Module Name	Offer Management			
Test Description	Status (Pass/Fail) Comments			
Able to view offers in the offer	er list. Pass			
Able to make a counteroffer to	a customer's offer. Pass			
Able to display error message i	ge if the input for the counteroffer price is invalid. Pass			
Able to accept an offer from cu	customer. Pass			
Able to reject an offer from cus	stomer.	Pass		

Test Case ID	UAT-012		
Tester's Name	Teo Chuan Yi		
Testing Date	05/09/2022		
Testing Start Time	0901pm Testing End Time 0902pm		
Module Name	Order Management		
Test Description	Status (Pass/Fail) Comments		
Able to view orders in the order	r list. Pass		
Able to view the detail of an or	rder. Pass		
Able to update an order.		Pass	

Test Case ID	UAT-013			
Tester's Name	Teo Chuan Yi	Teo Chuan Yi		
Testing Date	05/09/2022			
Testing Start Time	0902pm	Testing End Time	0904pm	
Module Name	Reporting			
Test Description	Status (Pass/Fail) Comments		Comments	
Able to view sales report of cu	current year. Pass			
Able to view sales report of las	ast month. Pass			
Able to view sales report of this	nis month. Pass			
Able to view sales report of las	ast 7 days. Pass			
Able to view sales report by customizing the date range.		Pass		
Able to view inventory summary report.		Pass		
Able to view product upload h	istory. Pass			
Able to view product performa	ince report.	Pass		

Test Case ID	UAT-014		
Tester's Name	Teo Chuan Yi		
Testing Date	05/09/2022		
Testing Start Time	0904pm Testing End Time 0906pm		
Module Name	Customer Management		
Test Description	scription Status (Pass/Fail) Comments		
Able to view customers in the	customer list. Pass		
Able to reply to customer's end	quiries with a text message. Pass		
Able to display error message i	if the text message is empty. Pass		
Able to reply to customer's end	juiries with an image.	Pass	

Test Case ID	UAT-015		
Tester's Name	Teo Chuan Yi		
Testing Date	05/09/2022		
Testing Start Time	0907pm	Testing End Time	0907pm
Module Name	Review Management		
Test Description		Status (Pass/Fail)	Comments
Able to view reviews in the rev	riew list.	Pass	

Test Case ID	UAT-001			
Tester's Name	Lee Yan	Lee Yan		
Testing Date	05/09/2022			
Testing Start Time	1030pm	Testing End Time	1035pm	
Module Name	Customer Account			
Test Description	Status (Pass/Fail) Comments			
Able to register a new custome	mer account. Pass			
Able to display error message i	if the input for the account registration is invalid. Pass			
Able to log out of the account.	Pass			
Able to re-login with the regist	h the registered account after logout. Pass			
Able to view the profile details		Pass		
Able to update the profile detail	details Pass			
Able to display error message i	f the input for the profile update is invalid.	Pass		

Test Case ID	UAT-002		
Tester's Name	Lee Yan		
Testing Date	05/09/2022		
Testing Start Time	1035pm	Testing End Time	1038pm
Module Name	Product		
Test Description	Status (Pass/Fail) Comments		
Able to view a list of products.	products. Pass		
Able to search products by nan	by name. Pass		
Able to filter products by catego	ategory. Pass		
Able to sort the product searching result. Pass			
Able to filter the product searching result by price range.		Pass	
Able to view the detail of a pro	duct. Pass		
Able to share a product to social	al media.	Pass	

Test Case ID	UAT-003			
Tester's Name	Lee Yan	Lee Yan		
Testing Date	05/09/2022	05/09/2022		
Testing Start Time	1038pm	Testing End Time	1040pm	
Module Name	Shopping Cart			
Test Description	Status (Pass/Fail) Comments		Comments	
Able to add a product to shopp	product to shopping cart.			
Able to display error message	when try to add a product that has already in the	Pass		
cart.				
Able to view items in the shop	ew items in the shopping cart. Pass			
Able to update a cart item's quantity.		Pass		
Able to display error message when the cart item quantity has reached		Pass		
maximum number.	num number.			
Able to remove a cart item from	n the shopping cart.	Pass		

Test Case ID	UAT-004		
Tester's Name	Lee Yan		
Testing Date	05/09/2022		
Testing Start Time	1040pm Testing End Time 1042pm		
Module Name	Favourite		
Test Description	Status (Pass/Fail) Comments		
Able to add a product to favou	rite. Pass		
Able to view products in the fa	avourite list. Pass		
Able to remove a product from	n the favourite list.	Pass	

Test Case ID	UAT-005			
Tester's Name	Lee Yan	Lee Yan		
Testing Date	05/09/2022	05/09/2022		
Testing Start Time	1042pm	Testing End Time	1046pm	
Module Name	Offer			
Test Description		Status (Pass/Fail)	Comments	
Able to make a new offer.	Pass			
Able to display error message	if the input for the offer price is invalid. Pass			
Able to view offer items in the	e offer list. Pass			
Able to cancel an offer.	r. Pass			
Able to update an offer. P		Pass		
Able to display error message if the input for the new offer price is invalid.		Pass		
Able to accept an offer from se	pt an offer from seller. Pass			
Able to add an accepted offer p	product to shopping cart.	Pass		

Test Case ID	UAT-006			
Tester's Name	Lee Yan	Lee Yan		
Testing Date	05/09/2022	05/09/2022		
Testing Start Time	1046pm Testing End Time 1048pm			
Module Name	Order			
Test Description	Status (Pass/Fail) Comments			
Able to create a new order.	Pass			
Able to display error message i	if the cart item is not available. Pass			
Able to view orders in the order list.		e order list. Pass		
Able to view the detail of an or	order. Pass			
Able to review and rate on a co	mpleted order.	Pass		

Test Case ID	UAT-007			
Tester's Name	Lee Yan			
Testing Date	05/09/2022			
Testing Start Time	1048pm	Testing End Time	1050pm	
Module Name	Contact Seller			
Test Description	on Status (Pass/Fail) Comments			
Able to send a text message to	id a text message to seller. Pass			
Able to display error message i	f empty message is sent.	Pass		

Test Case ID	UAT-008			
Tester's Name	Lee Yan	Lee Yan		
Testing Date	05/09/2022	_		
Testing Start Time	1050pm	Testing End Time	1055pm	
Module Name	Address			
Test Description	Status (Pass/Fail) Comments		Comments	
Able to create a new address.	a new address. Pa			
Able to display error message i	r message if the input for the address creation is invalid. Pass			
Able to view addresses in the a	ble to view addresses in the address list.			
Able to view the detail of an address.		Pass		
Able to update an address.		Pass		
Able to display error message i	ssage if the input for the address update is invalid. Pass			
Able to delete an address.		Pass		

Test Case ID	UAT-009		
Tester's Name	Lee Yan		
Testing Date	05/09/2022		
Testing Start Time	1055pm Testing End Time 1058pm		
Module Name	Admin Account		
Test Description	est Description Status (Pass/Fail) Comments		
Able to register a new admin ad	dmin account. Pass		
Able to display error message i	ssage if the input for the account registration is invalid. Pass		
Able to log out of the account.	out of the account. Pass		
Able to re-login with the regist	ered account after logout.	Pass	

Test Case ID	UAT-010		
Tester's Name	Lee Yan		
Testing Date	05/09/2022		
Testing Start Time	1058pm	Testing End Time	1105pm
Module Name	Product Management		
Test Description		Status (Pass/Fail)	Comments
Able to create a new product.		Pass	
Able to display error message i	f the input for the product creation is invalid.	Pass	
Able to view products in the product list.		Pass	
Able to search products by name.		Pass	
Able to view the detail of a product.		Pass	
Able to update a product.		Pass	
Able to display error message if the input for the product update is invalid.		Pass	
Able to delete a product.		Pass	
Able to import product data from an Excel file.		Pass	
Able to export product data to an Excel file. Pass			

Test Case ID	UAT-011			
Tester's Name	Lee Yan	Lee Yan		
Testing Date	05/09/2022			
Testing Start Time	1105pm	1105pm Testing End Time 1108pm		
Module Name	Offer Management			
Test Description	Status (Pass/Fail) Comments			
Able to view offers in the offer	r list. Pass			
Able to make a counteroffer to	a customer's offer. Pass			
Able to display error message i	e if the input for the counteroffer price is invalid. Pass			
Able to accept an offer from cu	Pass Pass			
Able to reject an offer from cu	stomer.	Pass		

Test Case ID	UAT-012		
Tester's Name	Lee Yan		
Testing Date	05/09/2022		
Testing Start Time	1108pm Testing End Time 1110pm		
Module Name	Order Management		
Test Description	Status (Pass/Fail) Comments		
Able to view orders in the orde	r list. Pass		
Able to view the detail of an or	rder. Pass		
Able to update an order.		Pass	

Test Case ID	UAT-013			
Tester's Name	Lee Yan	Lee Yan		
Testing Date	05/09/2022			
Testing Start Time	1110pm	Testing End Time	1112pm	
Module Name	Reporting			
Test Description	Status (Pass/Fail) Comments		Comments	
Able to view sales report of cu	current year. Pass			
Able to view sales report of las	ist month. Pass			
Able to view sales report of thi	is month. Pass			
Able to view sales report of las	ast 7 days. Pass			
Able to view sales report by customizing the date range.		Pass		
Able to view inventory summa	to view inventory summary report. Pass			
Able to view product upload hi	istory. Pass			
Able to view product performa	nce report.	Pass		

Test Case ID	UAT-014		
Tester's Name	Lee Yan		
Testing Date	05/09/2022		
Testing Start Time	1112pm Testing End Time 1115pm		
Module Name	Customer Management		
Test Description	escription Status (Pass/Fail) Comments		
Able to view customers in the	customer list. Pass		
Able to reply to customer's end	quiries with a text message. Pass		
Able to display error message i	if the text message is empty. Pass		
Able to reply to customer's end	juiries with an image.	Pass	

Test Case ID	UAT-015			
Tester's Name	Lee Yan			
Testing Date	05/09/2022			
Testing Start Time	1115pm	Testing End Time	1116pm	
Module Name	Review Management			
Test Description		Status (Pass/Fail)	Comments	
Able to view reviews in the rev	view list.	Pass		
Test Case ID	UAT-001			
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Tester's Name	Yap Pak Lam	Yap Pak Lam		
Testing Date	05/09/2022	05/09/2022		
Testing Start Time	1120pm	Testing End Time	1123pm	
Module Name	Customer Account			
Test Description	Status (Pass/Fail) Comments			
Able to register a new custome	er account. Pass			
Able to display error message i	f the input for the account registration is invalid. Pass			
Able to log out of the account.	Pass			
Able to re-login with the regist	e registered account after logout. Pass			
Able to view the profile details		Pass		
Able to update the profile detail	ils Pass			
Able to display error message i	if the input for the profile update is invalid.	Pass		

Test Case ID	UAT-002		
Tester's Name	Yap Pak Lam		
Testing Date	05/09/2022		
Testing Start Time	1123pm	Testing End Time	1127pm
Module Name	Product		
Test Description		Status (Pass/Fail)	Comments
Able to view a list of products.		Pass	
Able to search products by nan	name. Pass		
Able to filter products by catego	products by category. Pas		
Able to sort the product searching result.		Pass	
Able to filter the product searching result by price range.		Pass	
Able to view the detail of a pro	roduct. Pass		
Able to share a product to social	al media.	Pass	

Test Case ID	UAT-003			
Tester's Name	Yap Pak Lam	Yap Pak Lam		
Testing Date	05/09/2022			
Testing Start Time	1127pm	Testing End Time	1130pm	
Module Name	Shopping Cart			
Test Description	Status (Pass/Fail) Comments			
Able to add a product to shopp	opping cart. Pass			
Able to display error message	when try to add a product that has already in the Pass			
art.				
Able to view items in the shopping cart. Pass		Pass		
Able to update a cart item's quantity.		Pass		
Able to display error message when the cart item quantity has reached		Pass		
maximum number.	im number.			
Able to remove a cart item from	n the shopping cart.	Pass		

Test Case ID	UAT-004		
Tester's Name	Yap Pak Lam		
Testing Date	05/09/2022		
Testing Start Time	1130pm	Testing End Time	1132pm
Module Name	Favourite		
Test Description		Status (Pass/Fail)	Comments
Able to add a product to favou	rite.	Pass	
Able to view products in the fa	favourite list. Pass		
Able to remove a product from	the favourite list.	Pass	

Test Case ID	UAT-005			
Tester's Name	Yap Pak Lam			
Testing Date	05/09/2022			
Testing Start Time	1132pm	1132pm Testing End Time 1136pm		
Module Name	Offer			
Test Description	otion Status (Pass/Fail) Comments		Comments	
Able to make a new offer.	fer. Pass			
Able to display error message	if the input for the offer price is invalid. Pass			
Able to view offer items in the	he offer list. Pass			
Able to cancel an offer.		Pass		
Able to update an offer.		Pass		
Able to display error message if the input for the new offer price is invalid.		Pass		
Able to accept an offer from se	pt an offer from seller. Pass			
Able to add an accepted offer p	product to shopping cart.	Pass		

Test Case ID	UAT-006	UAT-006		
Tester's Name	Yap Pak Lam	Yap Pak Lam		
Testing Date	05/09/2022			
Testing Start Time	1136pm	Testing End Time	1140pm	
Module Name	Order			
Test Description	Status (Pass/Fail) Comments			
Able to create a new order.	new order. Pass			
Able to display error message	ssage if the cart item is not available. Pass			
Able to view orders in the order list.		Pass		
Able to view the detail of an o	order. Pass			
Able to review and rate on a c	completed order.	Pass		

Test Case ID	UAT-007		
Tester's Name	Yap Pak Lam		
Testing Date	05/09/2022		
Testing Start Time	1140pm	Testing End Time	1142pm
Module Name	Contact Seller		
Test Description		Status (Pass/Fail)	Comments
Able to send a text message to seller. Pass			
Able to display error message i	f empty message is sent.	Pass	

Test Case ID	UAT-008			
Tester's Name	Yap Pak Lam	Yap Pak Lam		
Testing Date	05/09/2022			
Testing Start Time	1142pm	Testing End Time	1145pm	
Module Name	Address			
Test Description	Status (Pass/Fail) Comments			
Able to create a new address.	to create a new address.			
Able to display error message i	le to display error message if the input for the address creation is invalid.			
Able to view addresses in the address list.		Pass		
Able to view the detail of an address.		Pass		
Able to update an address.		Pass		
Able to display error message if the input for the address update is invalid.		Pass		
Able to delete an address.		Pass		

Test Case ID	UAT-009		
Tester's Name	Yap Pak Lam		
Testing Date	05/09/2022		
Testing Start Time	1145pm	Testing End Time	1147pm
Module Name	Admin Account		
Test Description Status (Pass/Fail) Comments			Comments
Able to register a new admin account. Pass			
Able to display error message if the input for the account registration is invalid. Pass			
Able to log out of the account. Pass			
Able to re-login with the regist	re-login with the registered account after logout. Pass		

Test Case ID	UAT-010		
Tester's Name	Yap Pak Lam		
Testing Date	05/09/2022		
Testing Start Time	1147pm	Testing End Time	1152pm
Module Name	Product Management		
Test Description		Status (Pass/Fail)	Comments
Able to create a new product.		Pass	
Able to display error message	if the input for the product creation is invalid.	Pass	
Able to view products in the product list.		Pass	
Able to search products by name.		Pass	
Able to view the detail of a product.		Pass	
Able to update a product.		Pass	
Able to display error message if the input for the product update is invalid.		Pass	
Able to delete a product.		Pass	
Able to import product data from an Excel file.		Pass	
Able to export product data to	an Excel file.	Pass	

Test Case ID	UAT-011		
Tester's Name	Yap Pak Lam		
Testing Date	05/09/2022		
Testing Start Time	1152pm	Testing End Time	1155pm
Module Name	Offer Management		
Test Description	Status (Pass/Fail) Comments		
Able to view offers in the offer	ble to view offers in the offer list. Pass		
Able to make a counteroffer to	e to make a counteroffer to a customer's offer. Pass		
Able to display error message if the input for the counteroffer price is invalid. Pass		Pass	
Able to accept an offer from cu	accept an offer from customer. Pass		
Able to reject an offer from cu	stomer.	Pass	

Test Case ID	UAT-012		
Tester's Name	Yap Pak Lam		
Testing Date	05/09/2022		
Testing Start Time	1155pm	Testing End Time	1156pm
Module Name	Order Management		
Test Description		Status (Pass/Fail)	Comments
Able to view orders in the orde	r list. Pass		
Able to view the detail of an or	order. Pass		
Able to update an order.		Pass	

Test Case ID	UAT-013			
Tester's Name	Yap Pak Lam	Yap Pak Lam		
Testing Date	05/09/2022	05/09/2022		
Testing Start Time	1156pm	1156pm Testing End Time 1157pm		
Module Name	Reporting			
Test Description	Status (Pass/Fail) Comments			
Able to view sales report of cu	urrent year. Pass			
Able to view sales report of las	st month. Pass			
Able to view sales report of this	is month. Pass			
Able to view sales report of las	st 7 days. Pass			
Able to view sales report by customizing the date range. Pass				
Able to view inventory summa	nary report. Pass			
Able to view product upload h	istory. Pass			
Able to view product performa	nce report.	Pass		

Test Case ID	UAT-014		
Tester's Name	Yap Pak Lam		
Testing Date	05/09/2022		
Testing Start Time	1157pm Testing End Time 1158pm		
Module Name	Customer Management		
Test Description	est Description Status (Pass/Fail) Comments		
Able to view customers in the	customer list. Pass		
Able to reply to customer's en	uiries with a text message. Pass		
Able to display error message	if the text message is empty. Pass		
Able to reply to customer's en	quiries with an image.	Pass	

Test Case ID	UAT-015		
Tester's Name	Yap Pak Lam		
Testing Date	05/09/2022		
Testing Start Time	1158pm	Testing End Time	1159pm
Module Name	Review Management		
Test Description		Status (Pass/Fail)	Comments
Able to view reviews in the rev	view list.	Pass	

Test Case ID	UAT-001		
Tester's Name	Chua Qing Wen		
Testing Date	05/09/2022		
Testing Start Time	0945pm	Testing End Time	0947pm
Module Name	Customer Account		
Test Description	Status (Pass/Fail) Comments		
Able to register a new custome	er account. Pass		
Able to display error message i	if the input for the account registration is invalid. Pass		
Able to log out of the account.	Pass		
Able to re-login with the regist	stered account after logout. Pass		
Able to view the profile details Pass			
Able to update the profile detail	ils Pass		
Able to display error message i	f the input for the profile update is invalid.	Pass	

Test Case ID	UAT-002			
Tester's Name	Chua Qing Wen	Chua Qing Wen		
Testing Date	05/09/2022			
Testing Start Time	0947pm	Testing End Time	0952pm	
Module Name	Product			
Test Description	Status (Pass/Fail) Comments			
Able to view a list of products.	ts. Pass			
Able to search products by nan	name. Pass			
Able to filter products by categ	egory. Pass			
Able to sort the product search	Able to sort the product searching result. Pass			
Able to filter the product searching result by price range. Pass				
Able to view the detail of a pro	oduct. Pass			
Able to share a product to social	al media.	Pass		

Test Case ID	UAT-003			
Tester's Name	Chua Qing Wen			
Testing Date	05/09/2022	05/09/2022		
Testing Start Time	0952pm	Testing End Time	0955pm	
Module Name	Shopping Cart			
Test Description	Status (Pass/Fail) Comments			
Able to add a product to shopp	pping cart. Pass			
Able to display error message	when try to add a product that has already in the Pass			
cart.				
Able to view items in the shop	pping cart. Pass			
Able to update a cart item's quantity. Pass				
Able to display error message	display error message when the cart item quantity has reached Pass			
maximum number.				
Able to remove a cart item from	n the shopping cart.	Pass		

Test Case ID	UAT-004		
Tester's Name	Chua Qing Wen		
Testing Date	05/09/2022		
Testing Start Time	0955pm Testing End Time 0957pm		
Module Name	Favourite		
Test Description	Status (Pass/Fail) Comments		
Able to add a product to favour	rite.	Pass	
Able to view products in the fa	avourite list. Pass		
Able to remove a product from	the favourite list.	Pass	

Test Case ID	UAT-005		
Tester's Name	Chua Qing Wen		
Testing Date	05/09/2022		
Testing Start Time	0957pm	Testing End Time	1000pm
Module Name	Offer		
Test Description	Status (Pass/Fail) Comments		
Able to make a new offer.	Pass		
Able to display error message	if the input for the offer price is invalid. Pass		
Able to view offer items in the	offer list. Pass		
Able to cancel an offer.	Pass		
Able to update an offer. Pass			
Able to display error message if the input for the new offer price is invalid. Pass			
Able to accept an offer from se	eller. Pass		
Able to add an accepted offer p	product to shopping cart.	Pass	

Test Case ID	11AT 006			
Test Case ID	UA1-000	UA1-006		
Tester's Name	Chua Qing Wen			
Testing Date	05/09/2022	05/09/2022		
Testing Start Time	1000pm	1000pm Testing End Time 1005pm		
Module Name	Order			
Test Description	Status (Pass/Fail) Comments			
Able to create a new order.	Pass			
Able to display error message	if the cart item is not available.	if the cart item is not available. Pass		
Able to view orders in the ord	er list. Pass			
Able to view the detail of an o	rder. Pass			
Able to review and rate on a c	completed order.	Pass		

Test Case ID	UAT-007		
Tester's Name	Chua Qing Wen		
Testing Date	05/09/2022		
Testing Start Time	1005pm	Testing End Time	1007pm
Module Name	Contact Seller		
Test Description		Status (Pass/Fail)	Comments
Able to send a text message to	sage to seller. Pass		
Able to display error message i	f empty message is sent.	Pass	

Test Case ID	UAT-008			
Tester's Name	Chua Qing Wen	Chua Qing Wen		
Testing Date	05/09/2022		_	
Testing Start Time	1007pm	Testing End Time	1010pm	
Module Name	Address			
Test Description	Status (Pass/Fail) Comments			
Able to create a new address.	Pass			
Able to display error message i	sage if the input for the address creation is invalid. Pass			
Able to view addresses in the a	addresses in the address list. Pass			
Able to view the detail of an address.		Pass		
Able to update an address.		Pass		
Able to display error message i	sage if the input for the address update is invalid. Pass			
Able to delete an address.		Pass		

Test Case ID	UAT-009			
Tester's Name	Chua Qing Wen	Chua Qing Wen		
Testing Date	05/09/2022	05/09/2022		
Testing Start Time	1010pm Testing End Time 1012pm			
Module Name	Admin Account			
Test Description	ription Status (Pass/Fail) Comments			
Able to register a new admin ad	account. Pass			
Able to display error message i	if the input for the account registration is invalid. Pass			
Able to log out of the account.	Pass			
Able to re-login with the regist	ered account after logout.	Pass		

Test Case ID	UAT-010		
Tester's Name	Chua Qing Wen		
Testing Date	05/09/2022		
Testing Start Time	1012pm	Testing End Time	1017pm
Module Name	Product Management		
Test Description		Status (Pass/Fail)	Comments
Able to create a new product.		Pass	
Able to display error message i	f the input for the product creation is invalid.	Pass	
Able to view products in the product list.		Pass	
Able to search products by name.		Pass	
Able to view the detail of a product.		Pass	
Able to update a product.		Pass	
Able to display error message if the input for the product update is invalid.		Pass	
Able to delete a product.		Pass	
Able to import product data from an Excel file.		Pass	
Able to export product data to a	an Excel file.	Pass	

Test Case ID	UAT-011			
Tester's Name	Chua Qing Wen	Chua Qing Wen		
Testing Date	05/09/2022			
Testing Start Time	1017pm Testing End Time 1019pm			
Module Name	Offer Management			
Test Description	Status (Pass/Fail) Comments			
Able to view offers in the offer	er list. Pass			
Able to make a counteroffer to	a customer's offer. Pass			
Able to display error message	e if the input for the counteroffer price is invalid. Pass			
Able to accept an offer from cu	customer. Pass			
Able to reject an offer from cu	stomer.	Pass		

Test Case ID	UAT-012		
Tester's Name	Chua Qing Wen		
Testing Date	05/09/2022		
Testing Start Time	1019pm Testing End Time 1021pm		
Module Name	Order Management		
Test Description	Status (Pass/Fail) Comments		
Able to view orders in the order	r list. Pass		
Able to view the detail of an or	order. Pass		
Able to update an order.		Pass	

Test Case ID	UAT-013		
Tester's Name	Chua Qing Wen		
Testing Date	05/09/2022		
Testing Start Time	1021pm	Testing End Time	1023pm
Module Name	Reporting		
Test Description	Status (Pass/Fail) Comments		
Able to view sales report of cu	rrent year.	Pass	
Able to view sales report of las	st month.	Pass	
Able to view sales report of thi	is month. Pass		
Able to view sales report of las	st 7 days. Pass		
Able to view sales report by cu	Able to view sales report by customizing the date range. Pass		
Able to view inventory summa	ummary report. Pass		
Able to view product upload hi	istory. Pass		
Able to view product performa	nce report.	Pass	

Test Case ID	UAT-014		
Tester's Name	Chua Qing Wen		
Testing Date	05/09/2022		
Testing Start Time	1023pm Testing End Time 1026pm		
Module Name	Customer Management		
Test Description	est Description Status (Pass/Fail) Comments		
Able to view customers in the	e customer list. Pass		
Able to reply to customer's end	quiries with a text message. Pass		
Able to display error message i	sage if the text message is empty. Pass		
Able to reply to customer's end	quiries with an image.	Pass	

Test Case ID	UAT-015		
Tester's Name	Chua Qing Wen		
Testing Date	05/09/2022		
Testing Start Time	1026pm	Testing End Time	1027pm
Module Name	Review Management		
Test Description		Status (Pass/Fail)	Comments
Able to view reviews in the rev	view list.	Pass	

Test Case ID	UAT-001			
Tester's Name	Lim See Khuan	Lim See Khuan		
Testing Date	05/09/2022			
Testing Start Time	1810	Testing End Time	1814	
Module Name	Customer Account			
Test Description	Status (Pass/Fail) Comments			
Able to register a new custome	r account.	Pass		
Able to display error message i	if the input for the account registration is invalid. Pass			
Able to log out of the account.	Pass			
Able to re-login with the regist	ith the registered account after logout. Pass			
Able to view the profile details Pass				
Able to update the profile detail	details Pass			
Able to display error message i	f the input for the profile update is invalid.	Pass		

Test Case ID	UAT-002		
Tester's Name	Lim See Khuan		
Testing Date	05/09/2022		
Testing Start Time	1814	Testing End Time	1817
Module Name	Product		
Test Description	n Status (Pass/Fail) Comments		
Able to view a list of products.	iew a list of products. Pass		
Able to search products by nan	e to search products by name. Pass		
Able to filter products by categ	by category. Pass		
Able to sort the product searching result. P		Pass	
Able to filter the product searching result by price range. Pass		Pass	
Able to view the detail of a pro	il of a product. Pass		
Able to share a product to social	al media.	Pass	

Test Case ID	UAT-003		
Tester's Name	Lim See Khuan		
Testing Date	05/09/2022		
Testing Start Time	1817	Testing End Time	1818
Module Name	Shopping Cart		
Test Description	Status (Pass/Fail) Comments		
Able to add a product to shopp	opping cart. Pass		
Able to display error message	when try to add a product that has already in the Pass		
cart.			
Able to view items in the shop	opping cart. Pass		
Able to update a cart item's quantity. Pass			
Able to display error message when the cart item quantity has reached Pass			
maximum number.			
Able to remove a cart item from	n the shopping cart.	Pass	

Test Case ID	UAT-004		
Tester's Name	Lim See Khuan		
Testing Date	05/09/2022		
Testing Start Time	1818 Testing End Time 1819		
Module Name	Favourite		
Test Description	ription Status (Pass/Fail) Comments		
Able to add a product to favour	rite. Pass		
Able to view products in the fa	favourite list. Pass		
Able to remove a product from	the favourite list.	Pass	

Test Case ID	UAT-005			
Tester's Name	Lim See Khuan	Lim See Khuan		
Testing Date	05/09/2022			
Testing Start Time	1819	Testing End Time	1822	
Module Name	Offer			
Test Description	Status (Pass/Fail) Comments			
Able to make a new offer.		Pass		
Able to display error message	e if the input for the offer price is invalid. Pass			
Able to view offer items in the	e offer list. Pass			
Able to cancel an offer.	Pass			
Able to update an offer. Pass				
Able to display error message if the input for the new offer price is invalid. Pass				
Able to accept an offer from se	ble to accept an offer from seller. Pass			
Able to add an accepted offer p	product to shopping cart.	Pass		

Test Case ID	UAT-006			
Tester's Name	Lim See Khuan	Lim See Khuan		
Testing Date	05/09/2022			
Testing Start Time	1822	Testing End Time	1824	
Module Name	Order			
Test Description	Status (Pass/Fail) Comments			
Able to create a new order.	Pass			
Able to display error message i	e if the cart item is not available. Pass			
Able to view orders in the orde	w orders in the order list. Pass			
Able to view the detail of an or	an order. Pass			
Able to review and rate on a co	mpleted order.	Pass		

Test Case ID	UAT-007		
Tester's Name	Lim See Khuan		
Testing Date	05/09/2022		
Testing Start Time	1824	Testing End Time	1824
Module Name	Contact Seller		
Test Description	on Status (Pass/Fail) Comments		
Able to send a text message to	send a text message to seller. Pass		
Able to display error message i	f empty message is sent.	Pass	

Test Case ID	UAT-008			
Tester's Name	Lim See Khuan	Lim See Khuan		
Testing Date	05/09/2022			
Testing Start Time	1824	Testing End Time	1826	
Module Name	Address			
Test Description	ption Status (Pass/Fail) Comments		Comments	
Able to create a new address.	Able to create a new address. Pass			
Able to display error message i	to display error message if the input for the address creation is invalid. Pass			
Able to view addresses in the a	to view addresses in the address list. Pass			
Able to view the detail of an address.		Pass		
Able to update an address.		Pass		
able to display error message if the input for the address update is invalid. Pass				
Able to delete an address.		Pass		

Test Case ID	UAT-009			
Tester's Name	Lim See Khuan			
Testing Date	05/09/2022	05/09/2022		
Testing Start Time	1826 Testing End Time 1829			
Module Name	Admin Account			
Test Description	Fest Description Status (Pass/Fail) Comments			
Able to register a new admin ad	admin account. Pass			
Able to display error message i	or message if the input for the account registration is invalid. Pass			
Able to log out of the account. Pass				
Able to re-login with the regist	ered account after logout.	Pass		

Test Case ID	UAT-010		
Tester's Name	Lim See Khuan		
Testing Date	05/09/2022		
Testing Start Time	1829	Testing End Time	1832
Module Name	Product Management		
Test Description		Status (Pass/Fail)	Comments
Able to create a new product.		Pass	
Able to display error message if the input for the product creation is invalid.		Pass	
Able to view products in the product list.		Pass	
Able to search products by name.		Pass	
Able to view the detail of a product.		Pass	
Able to update a product.		Pass	
Able to display error message if the input for the product update is invalid.		Pass	
Able to delete a product.		Pass	
Able to import product data from an Excel file.		Pass	
Able to export product data to a	an Excel file.	Pass	

Test Case ID	UAT-011			
Tester's Name	Lim See Khuan	Lim See Khuan		
Testing Date	05/09/2022			
Testing Start Time	1832	1832 Testing End Time 1834		
Module Name	Offer Management			
Test Description	Description Status (Pass/Fail) Comments			
Able to view offers in the offer	ffer list. Pass			
Able to make a counteroffer to	er to a customer's offer. Pass			
Able to display error message i	le to display error message if the input for the counteroffer price is invalid. Pass			
Able to accept an offer from cu	ept an offer from customer. Pass			
Able to reject an offer from cu	stomer.	Pass		

Test Case ID	UAT-012		
Tester's Name	Lim See Khuan		
Testing Date	05/09/2022		
Testing Start Time	1834 Testing End Time 1834		
Module Name	Order Management		
Test Description	Status (Pass/Fail) Comments		
Able to view orders in the order	r list. Pass		
Able to view the detail of an or	order. Pass		
Able to update an order.		Pass	

Test Case ID	UAT-013			
Tester's Name	Lim See Khuan	Lim See Khuan		
Testing Date	05/09/2022	05/09/2022		
Testing Start Time	1834	Testing End Time	1836	
Module Name	Reporting			
Test Description	Status (Pass/Fail) Comments		Comments	
Able to view sales report of cu	port of current year. Pass			
Able to view sales report of las	last month. Pass			
Able to view sales report of thi	this month. Pass			
Able to view sales report of las	last 7 days. Pass			
Able to view sales report by customizing the date range.		Pass		
Able to view inventory summary report. Pas		Pass		
Able to view product upload hi	istory. Pass			
Able to view product performa	ince report.	Pass		

Test Case ID	UAT-014		
Tester's Name	Lim See Khuan		
Testing Date	05/09/2022		
Testing Start Time	1836 Testing End Time 1839		
Module Name	Customer Management		
Test Description	Description Status (Pass/Fail) Comments		
Able to view customers in the c	customer list. Pass		
Able to reply to customer's end	quiries with a text message. Pass		
Able to display error message i	if the text message is empty. Pass		
Able to reply to customer's end	uiries with an image.	Pass	

Test Case ID	UAT-015		
Tester's Name	Lim See Khuan		
Testing Date	05/09/2022		
Testing Start Time	1839	Testing End Time	1840
Module Name	Review Management		
Test Description		Status (Pass/Fail)	Comments
Able to view reviews in the rev	view list.	Pass	

Test Case ID	UAT-001			
Tester's Name	Chong Jun Tian	Chong Jun Tian		
Testing Date	05/09/2022	05/09/2022		
Testing Start Time	1703	Testing End Time	1707	
Module Name	Customer Account			
Test Description	Status (Pass/Fail) Comments			
Able to register a new custome	er account. Pass			
Able to display error message i	if the input for the account registration is invalid. Pass			
Able to log out of the account.	Pass			
Able to re-login with the regist	ble to re-login with the registered account after logout. Pass			
Able to view the profile details		Pass		
Able to update the profile detail	the profile details Pass			
Able to display error message i	f the input for the profile update is invalid.	Pass		

Test Case ID	UAT-002		
Tester's Name	Chong Jun Tian		
Testing Date	05/09/2022		
Testing Start Time	1707	Testing End Time	1710
Module Name	Product		
Test Description	st Description Status (Pass/Fail) Comments		Comments
Able to view a list of products.		Pass	
Able to search products by name. Pass		Pass	
Able to filter products by category. Pa		Pass	
Able to sort the product searching result.		Pass	
Able to filter the product searching result by price range.		Pass	
Able to view the detail of a pro	tail of a product. Pass		
Able to share a product to social	oduct to social media. Pass		

Test Case ID	UAT-003			
Tester's Name	Chong Jun Tian			
Testing Date	05/09/2022	05/09/2022		
Testing Start Time	1710	Testing End Time	1711	
Module Name	Shopping Cart			
Test Description	Status (Pass/Fail) Comments			
Able to add a product to shopp	t to shopping cart. Pass			
Able to display error message	e when try to add a product that has already in the Pass			
cart.				
Able to view items in the shop	ble to view items in the shopping cart. Pass			
Able to update a cart item's quantity.		Pass		
Able to display error message when the cart item quantity has reached		Pass		
maximum number.				
Able to remove a cart item from	n the shopping cart.	Pass		

Test Case ID	UAT-004		
Tester's Name	Chong Jun Tian		
Testing Date	05/09/2022		
Testing Start Time	1711 Testing End Time 1712		
Module Name	Favourite		
Test Description	est Description Status (Pass/Fail) Comments		
Able to add a product to favour	irite. Pass		
Able to view products in the fa	avourite list. Pass		
Able to remove a product from	the favourite list.	Pass	

Test Case ID	UAT-005		
Tester's Name	Chong Jun Tian		
Testing Date	05/09/2022		
Testing Start Time	1712	Testing End Time	1715
Module Name	Offer		
Test Description	Description Status (Pass/Fail) Comments		
Able to make a new offer.		Pass	
Able to display error message	ge if the input for the offer price is invalid. Pass		
Able to view offer items in the	ns in the offer list. Pass		
Able to cancel an offer. Pass			
Able to update an offer.		Pass	
Able to display error message if the input for the new offer price is invalid.		Pass	
Able to accept an offer from se	ble to accept an offer from seller. Pass		
Able to add an accepted offer p	product to shopping cart.	Pass	

Test Case ID	UAT-006	UAT-006		
Tester's Name	Chong Jun Tian	Chong Jun Tian		
Testing Date	05/09/2022	05/09/2022		
Testing Start Time	1715	1715 Testing End Time 1717		
Module Name	Order			
Test Description	Status (Pass/Fail) Comments			
Able to create a new order.	Pass			
Able to display error message	e if the cart item is not available. Pass			
Able to view orders in the ord	n the order list. Pass			
Able to view the detail of an o	order. Pass			
Able to review and rate on a c	completed order.	Pass		

Test Case ID	UAT-007		
Tester's Name	Chong Jun Tian		
Testing Date	05/09/2022		
Testing Start Time	1717 Testing End Time 1717		
Module Name	Contact Seller		
Test Description	escription Status (Pass/Fail) Comments		
Able to send a text message to	age to seller. Pass		
Able to display error message i	f empty message is sent.	Pass	

Test Case ID	UAT-008		
Tester's Name	Chong Jun Tian		
Testing Date	05/09/2022		_
Testing Start Time	1717	Testing End Time	1719
Module Name	Address		
Test Description	Status (Pass/Fail) Comments		Comments
Able to create a new address.	dress. Pass		
Able to display error message i	Tor message if the input for the address creation is invalid. Pass		
Able to view addresses in the address list. Pa		Pass	
Able to view the detail of an address.		Pass	
Able to update an address.		Pass	
Able to display error message i	sage if the input for the address update is invalid. Pass		
Able to delete an address.		Pass	

Test Case ID	UAT-009			
Tester's Name	Chong Jun Tian			
Testing Date	05/09/2022			
Testing Start Time	1719 Testing End Time 1721			
Module Name	Admin Account			
Test Description Status (Pass/Fail) Comments			Comments	
Able to register a new admin a	le to register a new admin account. Pass			
Able to display error message i	message if the input for the account registration is invalid. Pass			
ble to log out of the account. Pass				
Able to re-login with the regist	ered account after logout.	Pass		

Test Case ID	UAT-010		
Tester's Name	Chong Jun Tian		
Testing Date	05/09/2022		
Testing Start Time	1721 Testing End Time 1724		
Module Name	Product Management		
Test Description		Status (Pass/Fail)	Comments
Able to create a new product.		Pass	
Able to display error message i	Able to display error message if the input for the product creation is invalid.		
Able to view products in the product list.		Pass	
Able to search products by name.		Pass	
Able to view the detail of a pro-	duct.	Pass	
Able to update a product.		Pass	
Able to display error message if the input for the product update is invalid.		Pass	
Able to delete a product.		Pass	
Able to import product data from an Excel file.		Pass	
Able to export product data to a	an Excel file.	Pass	

Test Case ID	UAT-011			
Tester's Name	Chong Jun Tian	Chong Jun Tian		
Testing Date	05/09/2022	05/09/2022		
Testing Start Time	1724	1724 Testing End Time 1726		
Module Name	Offer Management			
Test Description	Description Status (Pass/Fail) Comments			
Able to view offers in the offer	e offer list. Pass			
Able to make a counteroffer to	ffer to a customer's offer. Pass			
Able to display error message i	e to display error message if the input for the counteroffer price is invalid. Pass			
Able to accept an offer from cu	er from customer. Pass			
Able to reject an offer from cu	stomer.	Pass		

Test Case ID	UAT-012		
Tester's Name	Chong Jun Tian		
Testing Date	05/09/2022		
Testing Start Time	1726 Testing End Time 1726		
Module Name	Order Management		
Test Description	Status (Pass/Fail) Comments		
Able to view orders in the orde	r list. Pass		
Able to view the detail of an or	order. Pass		
Able to update an order.		Pass	

Test Case ID	UAT-013			
Tester's Name	Chong Jun Tian			
Testing Date	05/09/2022	05/09/2022		
Testing Start Time	1726	Testing End Time	1727	
Module Name	Reporting			
Test Description	Status (Pass/Fail) Comments			
Able to view sales report of cu	current year. Pass			
Able to view sales report of las	ast month. Pass			
Able to view sales report of thi	his month. Pass			
Able to view sales report of las	port of last 7 days. Pass			
Able to view sales report by customizing the date range.		Pass		
Able to view inventory summary report. Pass				
Able to view product upload h	nistory. Pass			
Able to view product performa	nce report.	Pass		

Test Case ID	UAT-014		
Tester's Name	Chong Jun Tian		
Testing Date	05/09/2022		
Testing Start Time	1727 Testing End Time 1729		
Module Name	Customer Management		
Test Description	Description Status (Pass/Fail) Comments		
Able to view customers in the	he customer list. Pass		
Able to reply to customer's end	equiries with a text message. Pass		
Able to display error message	ge if the text message is empty. Pass		
Able to reply to customer's en	quiries with an image.	Pass	

Test Case ID	UAT-015		
Tester's Name	Chong Jun Tian		
Testing Date	05/09/2022		
Testing Start Time	1729	Testing End Time	1729
Module Name	Review Management		
Test Description	escription Status (Pass/Fail) Comments		
Able to view reviews in the rev	view list.	Pass	

Test Case ID	UAT-001		
Tester's Name	Chau Yuet Jing		
Testing Date	05/09/2022		
Testing Start Time	1740 Testing End Time 1744		
Module Name	Customer Account		
Test Description		Status (Pass/Fail)	Comments
Able to register a new customer account. Pass			
Able to display error message i	le to display error message if the input for the account registration is invalid. Pass		
Able to log out of the account. Pass			
Able to re-login with the registered account after logout.		Pass	
Able to view the profile details		Pass	
Able to update the profile details Pass			
Able to display error message if the input for the profile update is invalid. Pass			

Test Case ID	UAT-002		
Tester's Name	Chau Yuet Jing		
Testing Date	05/09/2022		
Testing Start Time	1744 Testing End Time 1747		
Module Name	Product		
Test Description Status (Pass/Fail) Comments		Comments	
Able to view a list of products.		Pass	
Able to search products by name.		Pass	
Able to filter products by category.		Pass	
Able to sort the product searching result.		Pass	
Able to filter the product searching result by price range.		Pass	
Able to view the detail of a product. Pass			
Able to share a product to social media.		Pass	

Test Case ID	UAT-003		
Tester's Name	Chau Yuet Jing		
Testing Date	05/09/2022		
Testing Start Time	1747 Testing End Time 1748		
Module Name	Shopping Cart		
Test Description		Status (Pass/Fail)	Comments
Able to add a product to shopping cart.		Pass	
Able to display error message	e to display error message when try to add a product that has already in the		
cart.			
Able to view items in the shopping cart.		Pass	
Able to update a cart item's quantity.		Pass	
Able to display error message when the cart item quantity has reached		Pass	
maximum number.			
Able to remove a cart item from	m from the shopping cart. Pass		

Test Case ID	UAT-004			
Tester's Name	Chau Yuet Jing			
Testing Date	05/09/2022			
Testing Start Time	1748 Testing End Time 1749			
Module Name	Favourite			
Test Description Status (Pass/Fail) Comments			Comments	
Able to add a product to favour	oduct to favourite. Pass			
Able to view products in the fa	he favourite list. Pass			
Able to remove a product from	ove a product from the favourite list. Pass			

Test Case ID	UAT-005		
Tester's Name	Chau Yuet Jing		
Testing Date	05/09/2022		
Testing Start Time	1749 Testing End Time 1752		
Module Name	Offer		
Test Description Status (Pass/Fail) Com		Comments	
Able to make a new offer.		Pass	
Able to display error message if the input for the offer price is invalid.		Pass	
Able to view offer items in the offer list. Pass		Pass	
Able to cancel an offer.		Pass	
Able to update an offer.		Pass	
Able to display error message if the input for the new offer price is invalid.		Pass	
Able to accept an offer from seller. Pass			
Able to add an accepted offer product to shopping cart. Pass			

Test Case ID	UAT 006			
Test Case ID	UAT-000			
Tester's Name	Chau Yuet Jing			
Testing Date	05/09/2022	05/09/2022		
Testing Start Time	1752 Testing End Time 1754			
Module Name	Order			
Test Description	Test Description Status (Pass/Fail) Comments		Comments	
Able to create a new order.	e to create a new order. Pass			
Able to display error message if the cart item is not available. Pass				
Able to view orders in the order list.		Pass		
ble to view the detail of an order. Pass				
Able to review and rate on a completed order. Pass				

Test Case ID	UAT-007			
Tester's Name	Chau Yuet Jing			
Testing Date	05/09/2022			
Testing Start Time	1754 Testing End Time 1754			
Module Name	Contact Seller			
Fest Description Status (Pass/Fail) Comments			Comments	
Able to send a text message to seller. Pass				
Able to display error message i	ge if empty message is sent. Pass			

Test Case ID	UAT-008		
Tester's Name	Chau Yuet Jing		
Testing Date	05/09/2022		
Testing Start Time	1754 Testing End Time 1756		
Module Name	Address		
Test Description		Status (Pass/Fail)	Comments
Able to create a new address.		Pass	
Able to display error message if the input for the address creation is invalid.		Pass	
Able to view addresses in the address list.		Pass	
Able to view the detail of an address.		Pass	
Able to update an address.		Pass	
Able to display error message if the input for the address update is invalid.		Pass	
Able to delete an address.		Pass	
Test Case ID	UAT-009		
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Tester's Name	Chau Yuet Jing		
Testing Date	05/09/2022		
Testing Start Time	1756 Testing End Time 1758		
Module Name	Admin Account		
Test Description Status (Pass/Fail) Comments			Comments
Able to register a new admin account. Pass			
Able to display error message if the input for the account registration is invalid. Pass			
Able to log out of the account. Pass			
Able to re-login with the regist	ered account after logout.	Pass	

Test Case ID	UAT-010		
Tester's Name	Chau Yuet Jing		
Testing Date	05/09/2022		
Testing Start Time	1758	Testing End Time	1801
Module Name	Product Management		
Test Description		Status (Pass/Fail)	Comments
Able to create a new product.		Pass	
Able to display error message if the input for the product creation is invalid.		Pass	
Able to view products in the product list.		Pass	
Able to search products by name.		Pass	
Able to view the detail of a product.		Pass	
Able to update a product.		Pass	
Able to display error message if the input for the product update is invalid.		Pass	
Able to delete a product.		Pass	
Able to import product data from an Excel file.		Pass	
Able to export product data to a	Able to export product data to an Excel file. Pass		

Test Case ID	UAT-011		
Tester's Name	Chau Yuet Jing		
Testing Date	05/09/2022		
Testing Start Time	1801 Testing End Time 1803		
Module Name	Offer Management		
Test Description	Test Description Status (Pass/Fail) Comments		
Able to view offers in the offer	ble to view offers in the offer list. Pass		
Able to make a counteroffer to	Able to make a counteroffer to a customer's offer. Pass		
Able to display error message if the input for the counteroffer price is invalid. Pass			
Able to accept an offer from customer. Pass			
Able to reject an offer from cu	stomer.	Pass	

Test Case ID	UAT-012		
Tester's Name	Chau Yuet Jing		
Testing Date	05/09/2022		
Testing Start Time	1803 Testing End Time 1803		
Module Name	Order Management		
Test Description	Description Status (Pass/Fail) Comments		
Able to view orders in the orde	er list. Pass		
Able to view the detail of an or	il of an order. Pass		
Able to update an order.		Pass	

Test Case ID	UAT-013			
Tester's Name	Chau Yuet Jing	Chau Yuet Jing		
Testing Date	05/09/2022			
Testing Start Time	1803 Testing End Time 1804			
Module Name	Reporting			
Test Description	Status (Pass/Fail) Comments			
Able to view sales report of cur	current year. Pass			
Able to view sales report of las	ast month. Pass			
Able to view sales report of thi	his month. Pass			
Able to view sales report of las	last 7 days. Pass			
Able to view sales report by customizing the date range.		Pass		
Able to view inventory summary report. Pass				
Able to view product upload hi	history. Pass			
Able to view product performa	nce report.	Pass		

Test Case ID	UAT-014		
Tester's Name	Chau Yuet Jing		
Testing Date	05/09/2022		
Testing Start Time	1804 Testing End Time 1806		
Module Name	Customer Management		
Test Description Status (Pass/Fail) Comments			
Able to view customers in the	in the customer list. Pass		
Able to reply to customer's en	nquiries with a text message. Pass		
Able to display error message	r message if the text message is empty. Pass		
Able to reply to customer's en	quiries with an image.	Pass	

Test Case ID	UAT-015		
Tester's Name	Chau Yuet Jing		
Testing Date	05/09/2022		
Testing Start Time	1806	Testing End Time	1806
Module Name	Review Management		
Test Description		Status (Pass/Fail)	Comments
Able to view reviews in the rev	riew list.	Pass	

Test Case ID	UAT-001			
Tester's Name	Yok Choon Cheak	Yok Choon Cheak		
Testing Date	06/09/2022			
Testing Start Time	1205am	Testing End Time	1207am	
Module Name	Customer Account			
Test Description	Status (Pass/Fail) Comments			
Able to register a new custome	er account. Pass			
Able to display error message i	if the input for the account registration is invalid. Pass			
Able to log out of the account.	Pass			
Able to re-login with the regist	Able to re-login with the registered account after logout. Pass			
Able to view the profile details		Pass		
Able to update the profile details Pass				
Able to display error message i	f the input for the profile update is invalid.	Pass		

Test Case ID	UAT-002			
Tester's Name	Yok Choon Cheak	Yok Choon Cheak		
Testing Date	06/09/2022			
Testing Start Time	1207am	Testing End Time	1212am	
Module Name	Product		_	
Test Description	Status (Pass/Fail) Comments			
Able to view a list of products.	ts. Pass			
Able to search products by nan	cts by name. Pass			
Able to filter products by categ	ategory. Pass			
Able to sort the product searching result. Pass				
Able to filter the product searching result by price range.		Pass		
Able to view the detail of a pro	w the detail of a product. Pass			
Able to share a product to social	al media.	Pass		

Test Case ID	UAT-003			
Tester's Name	Yok Choon Cheak	Yok Choon Cheak		
Testing Date	06/09/2022			
Testing Start Time	1212am	Testing End Time	1214am	
Module Name	Shopping Cart			
Test Description	st Description Status (Pass/Fail) Comments			
Able to add a product to shopp	ble to add a product to shopping cart. Pass			
Able to display error message	ge when try to add a product that has already in the Pass			
cart.				
Able to view items in the shopping cart.		Pass		
Able to update a cart item's quantity.		Pass		
Able to display error message when the cart item quantity has reached		Pass		
maximum number.				
Able to remove a cart item from	n the shopping cart.	Pass		

Test Case ID	UAT-004		
Tester's Name	Yok Choon Cheak		
Testing Date	06/09/2022		
Testing Start Time	1214am Testing End Time 1215am		
Module Name	Favourite		
Test Description	st Description Status (Pass/Fail) Comments		
Able to add a product to favour	urite. Pass		
Able to view products in the fa	favourite list. Pass		
Able to remove a product from	the favourite list.	Pass	

Test Case ID	UAT-005			
Tester's Name	Yok Choon Cheak	Yok Choon Cheak		
Testing Date	06/09/2022			
Testing Start Time	1215am Testing End Time 1220am			
Module Name	Offer			
Test Description	Test Description Status (Pass/Fail) Comments			
Able to make a new offer. Pass				
Able to display error message	to display error message if the input for the offer price is invalid. Pass			
Able to view offer items in the	ble to view offer items in the offer list. Pass			
Able to cancel an offer. Pass		Pass		
Able to update an offer.		Pass		
Able to display error message if the input for the new offer price is invalid.		Pass		
Able to accept an offer from seller. Pass				
Able to add an accepted offer p	product to shopping cart.	Pass		

Test Case ID	UAT-006			
Tester's Name	Yok Choon Cheak	Yok Choon Cheak		
Testing Date	06/09/2022	06/09/2022		
Testing Start Time	1220am	1220am Testing End Time 1223am		
Module Name	Order			
Test Description	Status (Pass/Fail) Comments			
Able to create a new order.	Pass			
Able to display error message	if the cart item is not available. Pass			
Able to view orders in the orde	order list. Pass			
Able to view the detail of an o	order. Pass			
Able to review and rate on a co	ompleted order.	Pass		

Test Case ID	UAT-007		
Tester's Name	Yok Choon Cheak		
Testing Date	06/09/2022		
Testing Start Time	1223am	Testing End Time	1225am
Module Name	Contact Seller		
Test Description	est Description Status (Pass/Fail) Comments		
Able to send a text message to seller. Pass			
Able to display error message i	f empty message is sent.	Pass	

Test Case ID	UAT-008			
Tester's Name	Yok Choon Cheak	Yok Choon Cheak		
Testing Date	06/09/2022	_		
Testing Start Time	1225am	Testing End Time	1227am	
Module Name	Address			
Test Description	Status (Pass/Fail) Comments			
Able to create a new address.	ess. Pass			
Able to display error message i	or message if the input for the address creation is invalid. Pass			
Able to view addresses in the a	he address list. Pass			
Able to view the detail of an address. Pass				
Able to update an address.		Pass		
Able to display error message i	splay error message if the input for the address update is invalid. Pass			
Able to delete an address.		Pass		

Test Case ID	UAT-009		
Tester's Name	Yok Choon Cheak		
Testing Date	06/09/2022		
Testing Start Time	1227am Testing End Time 1230am		
Module Name	Admin Account		
Test Description	Fest Description Status (Pass/Fail) Comments		
Able to register a new admin ad	v admin account. Pass		
Able to display error message i	ge if the input for the account registration is invalid. Pass		
Able to log out of the account.	to log out of the account. Pass		
Able to re-login with the regist	ered account after logout.	Pass	

Test Case ID	UAT-010		
Tester's Name	Yok Choon Cheak		
Testing Date	06/09/2022		
Testing Start Time	1230am	Testing End Time	1235am
Module Name	Product Management		
Test Description		Status (Pass/Fail)	Comments
Able to create a new product.		Pass	
Able to display error message i	f the input for the product creation is invalid.	Pass	
Able to view products in the product list.		Pass	
Able to search products by name.		Pass	
Able to view the detail of a product.		Pass	
Able to update a product.		Pass	
Able to display error message if the input for the product update is invalid.		Pass	
Able to delete a product.		Pass	
Able to import product data from an Excel file.		Pass	
Able to export product data to a	Able to export product data to an Excel file. Pass		

Test Case ID	UAT-011			
Tester's Name	Yok Choon Cheak	Yok Choon Cheak		
Testing Date	06/09/2022			
Testing Start Time	1235am Testing End Time 1240am			
Module Name	Offer Management			
Test Description	ion Status (Pass/Fail) Comments			
Able to view offers in the offer	offer list. Pass			
Able to make a counteroffer to	o a customer's offer. Pass			
Able to display error message i	essage if the input for the counteroffer price is invalid. Pass			
Able to accept an offer from cu	om customer. Pass			
Able to reject an offer from cu	stomer.	Pass		

Test Case ID	UAT-012		
Tester's Name	Yok Choon Cheak		
Testing Date	06/09/2022		
Testing Start Time	1240am Testing End Time 1243am		
Module Name	Order Management		
Test Description	Status (Pass/Fail) Comments		
Able to view orders in the orde	r list. Pass		
Able to view the detail of an or	order. Pass		
Able to update an order.		Pass	

Test Case ID	UAT-013			
Tester's Name	Yok Choon Cheak			
Testing Date	06/09/2022			
Testing Start Time	1243am	1243am Testing End Time 1245am		
Module Name	Reporting			
Test Description	Status (Pass/Fail) Comments			
Able to view sales report of cu	rrent year.	Pass		
Able to view sales report of las	t of last month. Pass			
Able to view sales report of thi	port of this month. Pass			
Able to view sales report of las	of last 7 days. Pass			
Able to view sales report by customizing the date range.		Pass		
Able to view inventory summary report. P		Pass		
Able to view product upload hi	history. Pass			
Able to view product performa	nce report.	Pass		

Test Case ID	UAT-014		
Tester's Name	Yok Choon Cheak		
Testing Date	06/09/2022		
Testing Start Time	1245am Testing End Time 1247am		
Module Name	Customer Management		
Test Description	iption Status (Pass/Fail) Comments		
Able to view customers in the o	customer list. Pass		
Able to reply to customer's end	uiries with a text message. Pass		
Able to display error message i	e if the text message is empty. Pass		
Able to reply to customer's end	uiries with an image.	Pass	

Test Case ID	UAT-015		
Tester's Name	Yok Choon Cheak		
Testing Date	06/09/2022		
Testing Start Time	1247am	Testing End Time	1247am
Module Name	Review Management		
Test Description	escription Status (Pass/Fail) Comments		
Able to view reviews in the rev	view list.	Pass	

Test Case ID	UAT-001			
Tester's Name	Yong Yung Shen	Yong Yung Shen		
Testing Date	05/09/2022			
Testing Start Time	0910pm	Testing End Time	0913pm	
Module Name	Customer Account			
Test Description	Status (Pass/Fail) Comments			
Able to register a new custome	tomer account. Pass			
Able to display error message i	sage if the input for the account registration is invalid. Pass			
Able to log out of the account.	Pass Pass			
Able to re-login with the regist	Able to re-login with the registered account after logout. Pass			
Able to view the profile details		Pass		
Able to update the profile detail	e to update the profile details Pass			
Able to display error message i	f the input for the profile update is invalid.	Pass		

Test Case ID	UAT-002		
Tester's Name	Yong Yung Shen		
Testing Date	05/09/2022		
Testing Start Time	0913pm	Testing End Time	0918pm
Module Name	Product		
Test Description	tion Status (Pass/Fail) Comments		
Able to view a list of products.	Able to view a list of products. Pass		
Able to search products by nan	ble to search products by name. Pass		
Able to filter products by categ	roducts by category. Pass		
Able to sort the product searching result. Pass		Pass	
Able to filter the product searching result by price range.		Pass	
Able to view the detail of a pro	e detail of a product. Pass		
Able to share a product to social	al media.	Pass	

Test Case ID	UAT-003		
Tester's Name	Yong Yung Shen		
Testing Date	05/09/2022		
Testing Start Time	0918pm	Testing End Time	0919pm
Module Name	Shopping Cart		
Test Description	Status (Pass/Fail) Comments		
Able to add a product to shopp	ping cart. Pass		
Able to display error message	when try to add a product that has already in the Pass		
cart.			
Able to view items in the shop	pping cart. Pass		
Able to update a cart item's qu	Able to update a cart item's quantity. Pass		
Able to display error message when the cart item quantity has reached Pass			
maximum number.			
Able to remove a cart item from	n the shopping cart.	Pass	

Test Case ID	UAT-004		
Tester's Name	Yong Yung Shen		
Testing Date	05/09/2022		
Testing Start Time	0920pm Testing End Time 0921pm		
Module Name	Favourite		
Test Description	Status (Pass/Fail) Comments		
Able to add a product to favou	rite. Pass		
Able to view products in the fa	avourite list. Pass		
Able to remove a product from	the favourite list.	Pass	

Test Case ID	UAT-005		
Tester's Name	Yong Yung Shen		
Testing Date	05/09/2022		
Testing Start Time	0921pm	Testing End Time	0924pm
Module Name	Offer		
Test Description	Status (Pass/Fail) Comments		
Able to make a new offer.	Pass		
Able to display error message	if the input for the offer price is invalid. Pass		
Able to view offer items in the	offer list. Pass		
Able to cancel an offer.	Pass		
Able to update an offer. Pass			
Able to display error message if the input for the new offer price is invalid. Pass			
Able to accept an offer from se	n offer from seller. Pass		
Able to add an accepted offer p	product to shopping cart.	Pass	

Test Case ID	UAT-006			
Tester's Name	Yong Yung Shen			
Testing Date	05/09/2022			
Testing Start Time	0924pm	Testing End Time	0927pm	
Module Name	Order			
Test Description	Status (Pass/Fail) Comments			
Able to create a new order.	Pass			
Able to display error message	if the cart item is not available. Pass			
Able to view orders in the order	ler list. Pass			
Able to view the detail of an o	order. Pass			
Able to review and rate on a c	ompleted order.	Pass		

Test Case ID	UAT-007			
Tester's Name	Yong Yung Shen			
Testing Date	05/09/2022			
Testing Start Time	0927pm Testing End Time 0928pm			
Module Name	Contact Seller			
Test Description	Status (Pass/Fail) Comments			
Able to send a text message to	to seller. Pass			
Able to display error message i	f empty message is sent.	Pass		

Test Case ID	UAT-008		
Tester's Name	Yong Yung Shen		
Testing Date	05/09/2022		_
Testing Start Time	0928pm	Testing End Time	0930pm
Module Name	Address		
Test Description	Status (Pass/Fail) Comments		
Able to create a new address.		Pass	
Able to display error message i	if the input for the address creation is invalid. Pass		
Able to view addresses in the a	address list. Pass		
Able to view the detail of an ad	Able to view the detail of an address. Pass		
Able to update an address. Pass			
Able to display error message i	ge if the input for the address update is invalid. Pass		
Able to delete an address.		Pass	

Test Case ID	UAT-009		
Tester's Name	Yong Yung Shen		
Testing Date	05/09/2022		
Testing Start Time	0930pm Testing End Time 0932pm		
Module Name	Admin Account		
Test Description	est Description Status (Pass/Fail) Comments		
Able to register a new admin ad	v admin account. Pass		
Able to display error message i	sage if the input for the account registration is invalid. Pass		
Able to log out of the account.	le to log out of the account. Pass		
Able to re-login with the regist	ered account after logout.	Pass	

Test Case ID	UAT-010		
Tester's Name	Yong Yung Shen		
Testing Date	05/09/2022		
Testing Start Time	0932pm	Testing End Time	0934pm
Module Name	Product Management		
Test Description		Status (Pass/Fail)	Comments
Able to create a new product.		Pass	
Able to display error message i	if the input for the product creation is invalid.	Pass	
Able to view products in the product list.		Pass	
Able to search products by name.		Pass	
Able to view the detail of a product.		Pass	
Able to update a product.		Pass	
Able to display error message if the input for the product update is invalid.		Pass	
Able to delete a product.		Pass	
Able to import product data from an Excel file.		Pass	
Able to export product data to a	an Excel file.	Pass	

Test Case ID	UAT-011			
Tester's Name	Yong Yung Shen	Yong Yung Shen		
Testing Date	05/09/2022			
Testing Start Time	0934pm	0934pm Testing End Time 0936pm		
Module Name	Offer Management			
Test Description	Status (Pass/Fail) Comments			
Able to view offers in the offer	r list. Pass			
Able to make a counteroffer to	a customer's offer. Pass			
Able to display error message	if the input for the counteroffer price is invalid. Pass			
Able to accept an offer from cu	customer. Pass			
Able to reject an offer from cu	stomer.	Pass		

Test Case ID	UAT-012			
Tester's Name	Yong Yung Shen	Yong Yung Shen		
Testing Date	05/09/2022			
Testing Start Time	0936pm Testing End Time 0938pm			
Module Name	Order Management			
Test Description	Status (Pass/Fail) Comments			
Able to view orders in the orde	r list. Pass			
Able to view the detail of an or	rder. Pass			
Able to update an order.		Pass		

Test Case ID	UAT-013		
Tester's Name	Yong Yung Shen		
Testing Date	05/09/2022		
Testing Start Time	0938pm	Testing End Time	0940pm
Module Name	Reporting		
Test Description		Status (Pass/Fail)	Comments
Able to view sales report of cu	urrent year. Pass		
Able to view sales report of las	st month. Pass		
Able to view sales report of thi	is month. Pass		
Able to view sales report of las	st 7 days. Pass		
Able to view sales report by customizing the date range. Pass			
Able to view inventory summa	entory summary report. Pass		
Able to view product upload hi	istory. Pass		
Able to view product performa	nce report.	Pass	

Test Case ID	UAT-014			
Tester's Name	Yong Yung Shen			
Testing Date	05/09/2022	05/09/2022		
Testing Start Time	0940pm	0940pm Testing End Time 0942pm		
Module Name	Customer Management			
Test Description	Status (Pass/Fail) Comments			
Able to view customers in the	customer list. Pass			
Able to reply to customer's end	juiries with a text message. Pass			
Able to display error message i	if the text message is empty. Pass			
Able to reply to customer's end	juiries with an image.	Pass		

Test Case ID	UAT-015		
Tester's Name	Yong Yung Shen		
Testing Date	05/09/2022		
Testing Start Time	0942pm	Testing End Time	0943pm
Module Name	Review Management		
Test Description		Status (Pass/Fail)	Comments
Able to view reviews in the rev	riew list.	Pass	

Test Case ID	UAT-001			
Tester's Name	Chang Yew Wen	Chang Yew Wen		
Testing Date	05/09/2022			
Testing Start Time	4.17 pm	Testing End Time	4.21 pm	
Module Name	Customer Account			
Test Description	Status (Pass/Fail) Comments			
Able to register a new custome	ner account. Pass			
Able to display error message i	ssage if the input for the account registration is invalid. Pass			
Able to log out of the account.	nt. Pass			
Able to re-login with the regist	Able to re-login with the registered account after logout. Pass			
Able to view the profile details		Pass		
Able to update the profile detail	date the profile details Pass			
Able to display error message i	f the input for the profile update is invalid.	Pass		

Test Case ID	UAT-002			
Tester's Name	Chang Yew Wen	Chang Yew Wen		
Testing Date	05/09/2022			
Testing Start Time	4.22 pm	Testing End Time	4.27 pm	
Module Name	Product			
Test Description	Description Status (Pass/Fail) Comments			
Able to view a list of products.	to view a list of products. Pass			
Able to search products by nan	Able to search products by name. Pass			
Able to filter products by categ	le to filter products by category. Pass			
Able to sort the product searching result.		Pass		
Able to filter the product searching result by price range.		Pass		
Able to view the detail of a pro	to view the detail of a product. Pass			
Able to share a product to social	al media.	Pass		

Test Case ID	UAT-003			
Tester's Name	Chang Yew Wen			
Testing Date	05/09/2022	05/09/2022		
Testing Start Time	4.27 pm Testing End Time 4.28 pm			
Module Name	Shopping Cart			
Test Description	Status (Pass/Fail) Comments			
Able to add a product to shopp	a product to shopping cart. Pass			
Able to display error message	e when try to add a product that has already in the Pass			
cart.				
Able to view items in the shopping cart. Pass				
Able to update a cart item's quantity.		Pass		
Able to display error message when the cart item quantity has reached		Pass		
maximum number.				
Able to remove a cart item from	n the shopping cart.	Pass		

Test Case ID	UAT-004		
Tester's Name	Chang Yew Wen		
Testing Date	05/09/2022		
Testing Start Time	4.29 pm Testing End Time 4.30 pm		
Module Name	Favourite		
Test Description	st Description Status (Pass/Fail) Comments		
Able to add a product to favour	urite. Pass		
Able to view products in the fa	favourite list. Pass		
Able to remove a product from	the favourite list.	Pass	

Test Case ID	UAT-005			
Tester's Name	Chang Yew Wen	Chang Yew Wen		
Testing Date	05/09/2022			
Testing Start Time	4.30 pm	Testing End Time	4.34 pm	
Module Name	Offer			
Test Description	Fest Description Status (Pass/Fail) Comments			
Able to make a new offer.	Able to make a new offer. Pass			
Able to display error message	olay error message if the input for the offer price is invalid. Pass			
Able to view offer items in the	view offer items in the offer list. Pass			
Able to cancel an offer. Pass				
Able to update an offer.		Pass		
Able to display error message if the input for the new offer price is invalid.		Pass		
Able to accept an offer from seller. Pass				
Able to add an accepted offer p	product to shopping cart.	Pass		

Test Case ID	UAT-006	UAT-006		
Tester's Name	Chang Yew Wen	Chang Yew Wen		
Testing Date	05/09/2022			
Testing Start Time	4.34 pm	4.34 pm Testing End Time 4.37 pm		
Module Name	Order			
Test Description	Status (Pass/Fail) Comments			
Able to create a new order.	new order. Pass			
Able to display error message	e if the cart item is not available. Pass			
Able to view orders in the ord	to view orders in the order list. Pass			
Able to view the detail of an o	order. Pass			
Able to review and rate on a c	ompleted order.	Pass		

Test Case ID	UAT-007		
Tester's Name	Chang Yew Wen		
Testing Date	05/09/2022		
Testing Start Time	4.37 pm	Testing End Time	4.38 pm
Module Name	Contact Seller		
Test Description		Status (Pass/Fail)	Comments
ble to send a text message to seller. Pass			
Able to display error message i	f empty message is sent.	Pass	

Test Case ID	UAT-008		
Tester's Name	Chang Yew Wen		
Testing Date	05/09/2022		
Testing Start Time	4.38 pm	Testing End Time	4.39 pm
Module Name	Address		
Test Description	n Status (Pass/Fail) Comments		
Able to create a new address.	e a new address. Pass		
Able to display error message i	to display error message if the input for the address creation is invalid. Pass		
Able to view addresses in the a	ble to view addresses in the address list. Pass		
Able to view the detail of an address.		Pass	
Able to update an address.		Pass	
Able to display error message i	le to display error message if the input for the address update is invalid. Pass		
Able to delete an address.		Pass	

Test Case ID	UAT-009		
Tester's Name	Chang Yew Wen		
Testing Date	05/09/2022		
Testing Start Time	4.40 pm Testing End Time 4.43 pm		
Module Name	Admin Account		
Test Description Status (Pass/Fail) Comments			Comments
Able to register a new admin ad	ble to register a new admin account. Pass		
Able to display error message i	lay error message if the input for the account registration is invalid. Pass		
ble to log out of the account. Pass			
Able to re-login with the regist	ered account after logout.	Pass	

Test Case ID	UAT-010		
Tester's Name	Chang Yew Wen		
Testing Date	05/09/2022		
Testing Start Time	4.43 pm	Testing End Time	4.47 pm
Module Name	Product Management		
Test Description		Status (Pass/Fail)	Comments
Able to create a new product.		Pass	
Able to display error message i	f the input for the product creation is invalid.	Pass	
Able to view products in the product list.		Pass	
Able to search products by name.		Pass	
Able to view the detail of a product.		Pass	
Able to update a product.		Pass	
Able to display error message if the input for the product update is invalid.		Pass	
Able to delete a product.		Pass	
Able to import product data from an Excel file.		Pass	
Able to export product data to a	an Excel file.	Pass	

Test Case ID	UAT-011			
Tester's Name	Chang Yew Wen	Chang Yew Wen		
Testing Date	05/09/2022	05/09/2022		
Testing Start Time	4.47 pm	4.47 pm Testing End Time 4.48 pm		
Module Name	Offer Management			
Test Description	Description Status (Pass/Fail) Comments			
Able to view offers in the offer	to view offers in the offer list. Pass			
Able to make a counteroffer to	offer to a customer's offer. Pass			
Able to display error message	display error message if the input for the counteroffer price is invalid. Pass			
Able to accept an offer from cu	n customer. Pass			
Able to reject an offer from cu	stomer.	Pass		

Test Case ID	UAT-012						
Tester's Name	Chang Yew Wen	Chang Yew Wen					
Testing Date	05/09/2022						
Testing Start Time	4.48 pm	Testing End Time	4.49 pm				
Module Name	Order Management						
Test Description		Status (Pass/Fail)	Comments				
Able to view orders in the orde	r list.	Pass					
Able to view the detail of an or	er. Pass						
Able to update an order.		Pass					

Test Case ID	UAT-013						
Tester's Name	Chang Yew Wen						
Testing Date	05/09/2022						
Testing Start Time	4.49 pm	4.49 pm Testing End Time 4.51 pm					
Module Name	Reporting						
Test Description		Status (Pass/Fail)	Comments				
Able to view sales report of cu	arrent year. Pass						
Able to view sales report of las	st month.	onth. Pass					
Able to view sales report of thi	is month.	Pass					
Able to view sales report of last 7 days.		Pass					
Able to view sales report by customizing the date range.		Pass					
Able to view inventory summary report.		Pass					
Able to view product upload h	istory.	Pass					
Able to view product performa	nce report.	Pass					

Test Case ID	UAT-014							
Tester's Name	Chang Yew Wen	Chang Yew Wen						
Testing Date	05/09/2022	05/09/2022						
Testing Start Time	4.51 pm Testing End Time 4.52 pm							
Module Name	Customer Management							
Test Description		Status (Pass/Fail) Comments						
Able to view customers in the	customer list.	Pass						
Able to reply to customer's en	nquiries with a text message. Pass							
Able to display error message	ge if the text message is empty. Pass							
Able to reply to customer's en	quiries with an image.	Pass						

Test Case ID	UAT-015		
Tester's Name	Chang Yew Wen		
Testing Date	05/09/2022		
Testing Start Time	4.52 pm	Testing End Time	4.53 pm
Module Name	Review Management		
Test Description		Status (Pass/Fail)	Comments
Able to view reviews in the rev	riew list.	Pass	

Email * low.ch.wan@gmail.com					
Please rate the foll	owing statements	*			
	Strongly Disagree - 1	2	3	4	Strongly Agree - 5
I think that I would like to use this system for purchasing preloved items.	0	0	0	0	۲
I found the system unnecessarily complex.	۲	0	0	\bigcirc	0
I thought the system was easy to use	0	0	\bigcirc	۲	\bigcirc
I think that I would need the support of a technical person to be able to use this system.	0	0	۲	0	0
I found this system was easily moved through without a lot of backtracking or data re-entry.	0	0	0	0	۲
I thought there was too much inconsistency in this system.	۲	0	0	0	0
I would imagine that most people would learn to use this system very quickly.	0	0	0	۲	0

Appendix D: User Satisfaction Survey Results

I found the system very awkward to use.	۲	0	0	0	0		
I feit very confident using the system.	\bigcirc	\bigcirc	0	0	۲		
I needed to learn a lot of things before I could get going with this system.	۲	0	0	0	0		
What did you like bes I really like about the of	* What did you like best about the application? I really like about the offer price function where i can bargain with the seller about the highest price i can afford.						
* What did you like least about the application? placing the orders after the checkout							
* Do you have any other final comments or questions? overall good. UI is consistency and sufficient error hint was given							
				Sub	mitted 05/09/2022. 16:11		

Email * j.tian117@yahoo.com					
Please rate the foll	owing statements	*			
	Strongly Disagree - 1	2	3	4	Strongly Agree - 5
I think that I would like to use this system for purchasing preloved items.	0	0	0	0	۲
I found the system unnecessarily complex.	۲	0	0	0	0
I thought the system was easy to use	0	0	\bigcirc	0	۲
I think that I would need the support of a technical person to be able to use this system.	0	۲	0	0	0
I found this system was easily moved through without a lot of backtracking or data re-entry.	0	۲	0	0	0
I thought there was too much inconsistency in this system.	0	0	۲	0	0
I would imagine that most people would learn to use this system very quickly.	0	0	0	۲	0

I found the system very awkward to use.	\bigcirc	0	0	۲	0		
I felt very confident using the system.	\bigcirc	0	0	۲	0		
I needed to learn a lot of things before I could get going with this system.	0	۲	0	0	0		
What did you like bes easy to be used	* What did you like best about the application?						
* What did you like least about the application? the information is not that clear							
* Do you have any other final comments or questions? nice application							

Email * chauyuetjing00@gmail.com					
Please rate the foll	owing statements	*			Strongly Agroo
	Disagree - 1	2	3	4	5
I think that I would like to use this system for purchasing preloved items.	0	0	0	۲	0
I found the system unnecessarily complex.	0	۲	0	0	0
I thought the system was easy to use	0	0	\bigcirc	۲	0
I think that I would need the support of a technical person to be able to use this system.	۲	0	0	0	0
I found this system was easily moved through without a lot of backtracking or data re-entry.	0	0	0	0	۲
I thought there was too much inconsistency in this system.	0	۲	0	\bigcirc	0
I would imagine that most people would learn to use this system very quickly.	0	0	۲	0	0

I found the system very awkward to use.	\bigcirc	0	۲	\bigcirc	0		
I felt very confident using the system.	\bigcirc	0	0	۲	0		
I needed to learn a lot of things before I could get going with this system.	0	۲	0	0	0		
What did you like bes Clean page and easy to	* What did you like best about the application? Clean page and easy to be used						
What did you like leas	* What did you like least about the application? more selection can be provided						
Do you have any othe Nice try and I love it	* Do you have any other final comments or questions? Nice try and I love it						

Email * seekhuan2123@gmail.com					
Please rate the foll	owing statements	*			
	Strongly Disagree - 1	2	3	4	Strongly Agree - 5
I think that I would like to use this system for purchasing preloved items.	0	0	0	0	۲
I found the system unnecessarily complex.	۲	0	0	\bigcirc	0
I thought the system was easy to use	0	0	0	0	۲
I think that I would need the support of a technical person to be able to use this system.	0	۲	0	0	0
I found this system was easily moved through without a lot of backtracking or data re-entry.	0	0	0	0	۲
I thought there was too much inconsistency in this system.	0	۲	0	0	0
I would imagine that most people would learn to use this system very quickly.	0	0	0	0	۲

I found the system very awkward to use.	0	0	۲	0	0				
I felt very confident using the system.	\bigcirc	0	0	\bigcirc	۲				
I needed to learn a lot of things before I could get going with this system.	0	۲	0	0	0				
What did you like bes I think the most attraction What did you like lease	* What did you like best about the application? I think the most attractive of the app is the bargain price of the product What did you like least about the application?								
The design of the appli	The design of the application too simple								
* Do you have any other final comments or questions? * nil									
				Sub	mitted 05/09/2022, 18:37				
Email * yewwenchang@hotmail.com									
----------------------------------------------------------------------------------------------------------------	--------------------------	---	------------	---------	-----------------------	--	--	--	--
Please rate the following statements. *									
	Strongly Disagree - 1	2	3	4	Strongly Agree - 5				
I think that I would like to use this system for purchasing preloved items.	0	0	0	0	۲				
I found the system unnecessarily complex.	0	۲	0	\circ	0				
I thought the system was easy to use	0	0	\bigcirc	0	۲				
I think that I would need the support of a technical person to be able to use this system.	0	۲	0	0	0				
I found this system was easily moved through without a lot of backtracking or data re-entry.	0	0	0	0	۲				
I thought there was too much inconsistency in this system.	0	۲	0	0	0				
I would imagine that most people would learn to use this system very quickly.	0	0	0	0	۲				

I found the system very awkward to use.	0	۲	0	0	0				
I felt very confident using the system.	\bigcirc	0	0	0	۲				
I needed to learn a lot of things before I could get going with this system.	0	۲	0	0	0				
What did you like bes Convenience What did you like leas	* What did you like best about the application? Convenience What did you like least about the application? NA								
Do you have any othe Overall is good.	er final comme	ents or questions'	*						
				Sub	mitted 05/09/2022, 18:59				

Email * leeyan.april4@gmail.com								
Please rate the following statements. *								
	Strongly Disagree - 1	2	3	4	Strongly Agree - 5			
I think that I would like to use this system for purchasing preloved items.	0	0	0	0	۲			
I found the system unnecessarily complex.	۲	0	0	0	0			
I thought the system was easy to use	0	0	\bigcirc	0	۲			
I think that I would need the support of a technical person to be able to use this system.	۲	0	0	0	0			
I found this system was easily moved through without a lot of backtracking or data re-entry.	0	0	0	0	۲			
I thought there was too much inconsistency in this system.	۲	0	0	0	0			
I would imagine that most people would learn to use this system very quickly.	0	0	0	0	۲			

system very awkward to use.	۲	0	\bigcirc	\bigcirc	0			
I felt very confident using the system.	\bigcirc	0	0	\bigcirc	۲			
I needed to learn a lot of things before I could get going with this system.	۲	0	0	0	0			
* What did you like best about the application? The simple design that is very easy to understand and comfortable								
* What did you like least about the application? Nothing								
What did you like leas	st about the a	* oplication?						

Please rate the following statements. * Strongly Strongly Agree -2 3 4 Disagree - 1 5 I think that I would like to use \odot this system for purchasing preloved items. I found the system ۲ unnecessarily complex. I thought the system was easy ۲ to use I think that I would need the support of a ۲ technical person to be able to use this system. I found this system was easily moved 0 ۲ through without a lot of backtracking or data re-entry. I thought there was too much ۲ inconsistency in this system. I would imagine that most people ۲ would learn to use this system very quickly.

Email *

yappaklam@gmail.com

I found the system very awkward to use.	۲	0	0	0	0				
I felt very confident using the system.	0	0	0	0	۲				
I needed to learn a lot of things before I could get going with this system.	۲	0	0	0	0				
* What did you like best about the application? The functions are all available for both admin and customer									
What did you like leas	* What did you like least about the application? Nothing								
Do you have any othe	r final comme	nts or questions	*						
				Sub	mitted 0.5/09/2022 21:12				

Email * wennqc@gmail.com									
Please rate the following statements. *									
	Strongly Disagree - 1	2	3	4	Strongly Agree - 5				
I think that I would like to use this system for purchasing preloved items.	0	0	0	0	۲				
I found the system unnecessarily complex.	۲	0	0	0	0				
I thought the system was easy to use	0	0	\bigcirc	0	۲				
I think that I would need the support of a technical person to be able to use this system.	۲	0	0	0	0				
I found this system was easily moved through without a lot of backtracking or data re-entry.	0	0	0	0	۲				
I thought there was too much inconsistency in this system.	۲	0	0	0	0				
I would imagine that most people would learn to use this system very quickly.	0	0	0	۲	0				

I found the system very awkward to use.	۲	0	0	0	0	
I felt very confident using the system.	\bigcirc	0	0	0	۲	
I needed to learn a lot of things before I could get going with this system.	۲	0	0	0	0	
What did you like bes	st about the ap arious features	plication? provided as a seco	and hand item shop	oping platform		
What did you like lea	st about the ap	* oplication?				
N/A						
* Do you have any other final comments or questions?						
No						
				Sub	mitted 05/09/2022, 21:13	

Email * chuanyi77@gmail.com									
Please rate the following statements. *									
	Strongly Disagree - 1	2	3	4	Strongly Agree - 5				
I think that I would like to use this system for purchasing preloved items.	0	0	0	0	۲				
I found the system unnecessarily complex.	۲	0	0	\circ	0				
I thought the system was easy to use	0	0	\bigcirc	0	۲				
I think that I would need the support of a technical person to be able to use this system.	0	۲	0	0	0				
I found this system was easily moved through without a lot of backtracking or data re-entry.	0	0	0	0	۲				
I thought there was too much inconsistency in this system.	۲	0	0	0	0				
I would imagine that most people would learn to use this system very quickly.	0	0	0	0	۲				

I found the system very awkward to use.	۲	0	0	0	0				
I felt very confident using the system.	0	0	0	\bigcirc	۲				
I needed to learn a lot of things before I could get going with this system.	۲	0	0	0	0				
What did you like leas the contact seller function	* What did you like best about the application? we can make offer in the mobile application. What did you like least about the application? the contact seller function does not allow me to upload a photo.								
Do you have any othe	r final comme	nts or questions'	*						
				Sub	mitted 05/09/2022, 21:13				

Email * yok723000@gmail.com										
Please rate the fol	Please rate the following statements. *									
	Strongly Disagree - 1	2	3	4	Strongly Agree - 5					
I think that I would like to use this system for purchasing preloved items.	0	0	0	0	۲					
I found the system unnecessarily complex.	۲	0	0	0	0					
I thought the system was easy to use	0	0	\bigcirc	0	۲					
I think that I would need the support of a technical person to be able to use this system.	۲	0	0	0	0					
I found this system was easily moved through without a lot of backtracking or data re-entry.	0	0	0	0	۲					
I thought there was too much inconsistency in this system.	۲	0	0	0	0					
I would imagine that most people would learn to use this system very quickly.	0	0	0	0	۲					

I found the system very awkward to use.	۲	0	0	0	0
I felt very confident using the system.	0	0	0	0	۲
I needed to learn a lot of things before I could get going with this system.	۲	0	0	0	0
What did you like bes	t about the ap tems based on	* plication? my preferences			
What did you like leas	at about the ap	* oplication?			
Do you have any othe	r final comme	ents or questions	*		

Email * yongyouth7@gmail.com									
Please rate the following statements. *									
	Strongly Disagree - 1	2	3	4	Strongly Agree - 5				
I think that I would like to use this system for purchasing preloved items.	0	0	0	۲	0				
I found the system unnecessarily complex.	0	۲	0	\circ	0				
I thought the system was easy to use	0	0	0	۲	0				
I think that I would need the support of a technical person to be able to use this system.	0	۲	0	0	0				
I found this system was easily moved through without a lot of backtracking or data re-entry.	0	0	0	0	۲				
I thought there was too much inconsistency in this system.	۲	0	0	0	0				
I would imagine that most people would learn to use this system very quickly.	0	0	0	0	۲				

I found the system very awkward to use.	0	۲	\bigcirc	\bigcirc	\bigcirc	
I felt very confident using the system.	0	\bigcirc	\bigcirc	0	۲	
I needed to learn a lot of things before I could get going with this system.	0	۲	0	0	0	
* What did you like best about the application? The ability to make offer to the seller						
What did you like lea	st about the ap e item within the	* plication? favourite list				
Do you have any oth	er final commer up box is unnece	nts or questions? essary.	*			

Email * cjie5514@gmail.com	1				
Please rate the foll	owing statements	*			
	Strongly Disagree - 1	2	3	4	Strongly Agree - 5
I think that I would like to use this system for purchasing preloved items.	0	0	0	0	۲
I found the system unnecessarily complex.	۲	0	0	\circ	0
I thought the system was easy to use	0	0	\bigcirc	0	۲
I think that I would need the support of a technical person to be able to use this system.	۲	0	0	0	0
I found this system was easily moved through without a lot of backtracking or data re-entry.	0	0	0	0	۲
I thought there was too much inconsistency in this system.	۲	0	0	0	0
I would imagine that most people would learn to use this system	0	0	0	0	۲

I found the system very awkward to use.	۲	\bigcirc	\bigcirc	\bigcirc	0		
I felt very confident using the system.	0	0	0	0	۲		
I needed to learn a lot of things before I could get going with this system.	۲	0	0	0	0		
* What did you like best about the application? I can bargain the price with the seller							
* What did you like least about the application? *							
* Do you have any other final comments or questions? No							