Aiture Interiors: Living Innovative

BY

LAM ZHENG XUAN

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BACHELOR OF INFORMATION SYSTEMS (HONOURS) BUSINESS INFORMATION SYSTEMS

Faculty of Information and Communication Technology (Kampar Campus)

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ABSTRACT

Aiture is a web-based system for online furniture shop. Due to the Covid-19 pandemic, people

prefer to shop online rather than physical shopping. This web-based system will give admin

and users a convenient way to shop and sell the product.

There are three problem which is inadequate mobile optimization, insufficient customer

support and communication and inconsistent product information. The of the project is to

giving customers the flexibility to shop day or night. Customers with different schedules and

time zones can be accommodated by an online platform that offers continuous accessibility.

The website has two part one is admin part, and one is user part. For the admin part the admin

needs to enter their username and password to login to the system. They can manage everything

in the system such as add new staff, add new products, edit the product price, update product

info, manage inventory and check customer's requirements and comments.

The user also needs to create an account and login into the system. When creating an account,

users are required to fill in their personal information such as name, email, contact number,

home address for online purchase purposes. After login into the system, users can start

browsing the website. Users also can add their wanted product to cart and then click the

checkout button to pay the bill.

The methodology that is used to develop this website is waterfall development. It is because it

is organized and efficient. Besides, it can define the end goal early and transfer information

well to the customer.

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LIST OF ABBREVIATIONS

ERD Entity Relationship Diagram

Chapter 1

Introduction

The system is about selling furniture online. Furniture is something that is very common and used in our daily lives. Furniture has been indispensable for every family since ancient times. There will be a market if there is demand; this is why I choose to sell furniture. I choose the title of the online furniture shop because it is a relevant topic in the world today. Furniture is important for our lives to give us healthier lifestyle, both mentally and physically. I choose the selling method of online selling because of the issues Covid-19 caused; the percentage of people shopping at websites has increased. The system is a web-based application, and is an online application. Users can browse the website anytime, anywhere using any device. Besides, users will feel more convenient when they are using the webpage to buy products because there are no time zone restrictions. They can browse the website 24/7.

1.1 Problem Statement and Motivation

The project was to address four problems. First and foremost is lack of comprehensive monitoring system. Websites are essential tools for organizations in today's digital environment to communicate with clients, provide services, and carry out transactions. But these websites and the companies that run them are seriously at danger of security breaches due to the lack of a thorough monitoring system. The absence of sufficient monitoring renders the website susceptible to multiple risks and vulnerabilities by making it difficult to identify and address security events, performance problems, and other irregularities.

Second, insufficient customer support and communication. When customers face some difficulties, some customers do not know where and who to contact, and this will cause a lot of inconvenience to the business and customer. Building trust and increasing overall customer satisfaction requires improving communication channels, promptly answering questions, and putting proactive customer support strategies into place.

Third, lack of authentication. If an e-commerce website lack of authentication, serious risks will happen to consumer trust, data security, and privacy when using an e-commerce platform. With sufficient authentication at the login function,

Finally, inconsistent product information. On the furniture eCommerce website, some of the website have errors and some information about product specifications, sizes, and materials are not clear. With this clear and consistent product information, we can build a trust with customer and this can help us to improve our furniture's sales.

This motivation of this project is to giving customers the flexibility to shop day or night. Customers with different schedules and time zones can be accommodated by an online platform that offers continuous accessibility. Besides, showcasing furniture products in a visually appealing manner. High-quality images, detailed product descriptions, and virtual displays can enhance the customer's online shopping experience and help them make informed purchasing decisions.

The idea behind this furniture eCommerce site's launch is to provide a cutting-edge shopping experience catered to the unique tastes of a wide range of clients. The objective is to break free from the limitations of traditional furniture shopping techniques by utilizing technology to improve operational effectiveness and provide an unmatched degree of customization. The project's primary driving force is the combination of efficiency and personalization. It envisions a time when furniture shopping goes beyond basic needs and becomes a fun, customized experience for each client.

1.2 Research Objectives

The first objective is to provide a monitoring system in the admin view system. All admins can view the changes that occur in both the customer and admin parts. The system will record all actions taken in the admin part, aiding organizations in safeguarding their digital assets and maintaining trust with stakeholders in an increasingly interconnected and dynamic online environment.

Secondly, the project aims to provide sufficient customer service and communication. In doing so, it aims to increase customer convenience when browsing the website. With the WhatsApp chatbox function, users can contact the shop owner or website developer when facing any issues. Besides, the WhatsApp chatbox can also serve as a channel for collecting customer feedback. This can encourage customers to share their thoughts on the browsing experience, product offerings, and the effectiveness of the chatbox support. This feedback can be invaluable for continuous improvement.

Thirdly, the project aims to provide sufficient authentication for the e-commerce website. In order to safeguard consumer information and foster brand trust, it applies trustworthy authentication methods. It also attempts to validate and sanitize each user input in order to thwart injection attacks such as SQL injection and cross-site scripting (XSS). It ensures that server-side validation of user inputs is correctly performed to prevent the processing of fraudulent data.

Finally, the project aims to provide sufficient and consistent product information. To solve the need for sufficient and consistent product information, the project will provide customers with comprehensive and trustworthy information so they can make informed decisions about what to buy by improving their comprehension of the products. Here's more information about the suggested remedy.

1.3 Project Scope and Direction

The website is categorized into two parts: customer and admin. The website is mobile responsive. Customers must have an account to log in to the system; otherwise, they cannot buy anything. Customers can create an account by entering their information. Additionally, both customers and admins can create an account if it is their first time logging in. If a customer forgets their account email or password, they can click the 'forgot password' link and enter their email to receive a verification code. They can then change their password after entering the correct verification code and proceed to log in. Customers can only view our home page, product page, and about us page without logging in to the system. If they want to buy an item from our online shop, they have to log in first. On the shop page, customers can search for products by name or sort by category to find the desired product. After that, customers can select the quantity of items and add them to the cart. Customers can also view cart details on the cart page. On the cart page, customers can edit item quantities or remove selected items. They can also see the subtotal or grand total at any time. Proceeding to the checkout page, the webpage will provide a small table to view the cart summary for the convenience of customers. Customers can also chat with us using the WhatsApp chat box if they encounter any problems.

For the admin part, admins must have an account to log in to the system. If an admin forgets their account password, they can reset it using the 'forgot password' function. Admins can edit their profiles and customer profiles. We have two types of admins: main admin and normal admin. The difference is that the main admin can edit their account and remove normal admin accounts, while normal admins can only edit their accounts. We also have an admin data log to record the history of changes. This means that all admins will be aware of changes made by other admins. Admins can edit customer information using the admin system. Additionally, admins can add new products to the product page. Besides that, admin also can use google analytics to manage their business. For example, through google analytics admin can view various types of analytics such as which webpage the customer staying the longest, how many users register the account and so on.

1.4 Contributions

This project endeavors to transform the website landscape. It aims to elevate the efficiency of payment metz`hods, digitize furniture shop operations allowing them to operate more smoothly, optimize furniture turnover, enhance customer satisfaction, and enhance customer experience when browsing the website. Simultaneously, it responds to the preferences of contemporary furniture enthusiasts for a shopping experience that is not only convenient but also uniquely tailored, considering the specific needs of diverse customer groups to the maximum extent possible. In this convergence of efficiency and customization, the project's motivation takes shape, paving the way towards a future where furniture shopping is a seamless, enjoyable, and truly customer-centric experience.

1.5 Report Organization

This report has 5 chapters in total. Chapter 1 is about the introduction of the project, some problem statements and motivation, research objectives, project scope and direction, and contribution of the project. In chapter 2, is some of the literature review about the others website. Chapter 3 is about the system hardware requirements and the method that used to design the webpage. For chapter 4 is the basic software requirements that used to develop the webpage. Finally, chapter 5 is the conclusion about what had done in final year project 1 and something that plan to be done in final year project 2.

Chapter 2

2.1 Literature Review

2.1.1 Ikea

(Kenny Fang. 2016) proposed that Ikea is a Swedish company, and their modern furniture is affordable. The business focuses on little designs that are typically put together at home by the customer. Moreover, Ikea provides various type of furniture to fulfill the customer requirement.



Figure 2.1.1 Ikea main page

Features of Ikea

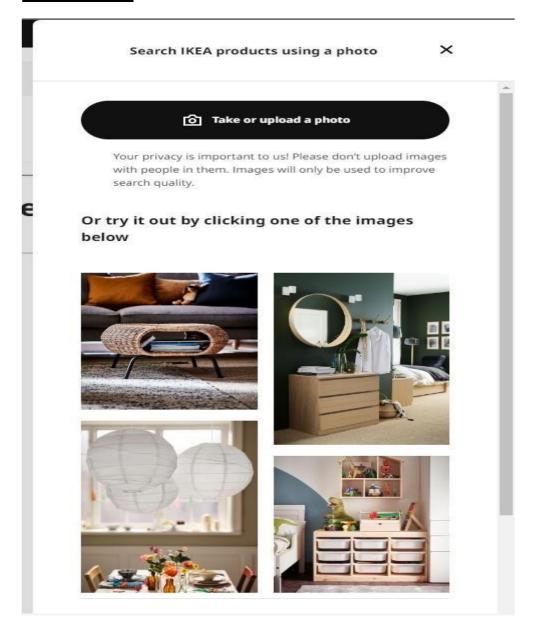


Figure 2.1.2 Ikea search bar

This [1] is very easy to use because customer can search their furniture by uploading or taking a picture of their product. When the product is uploaded the website can detect all the furniture inside the picture that uploaded by customer.

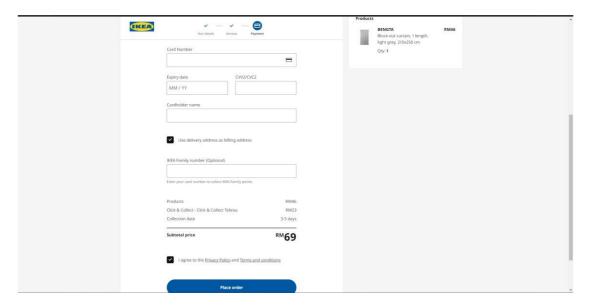


Figure 2.1.3 Ikea payment page

In [2] user need to fill in their credit or debit card details to make payment. Besides, on this page, users also have the option to choose to use the delivery address as the billing address so they do not need to fill in the address too many times.

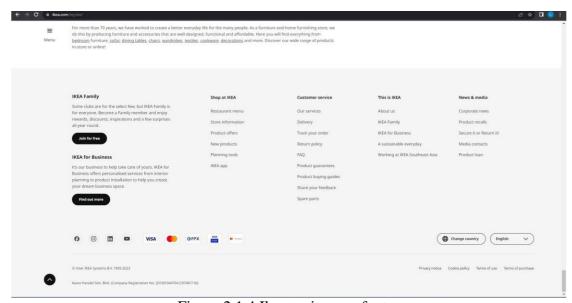


Figure 2.1.4 Ikea main page footer

In [1] the footer of the webpage has the introduction of the company; customers can learn more information about the company such as the business nature of the company and the business model of the company. Besides, the footer also has a summary of navigation to another page which will provide more convenience to the customer if they want to locate to other pages. Moreover, the footer also has a social media button for customers to click, and it will navigate to the respective social media accounts for the customer to follow their updates.

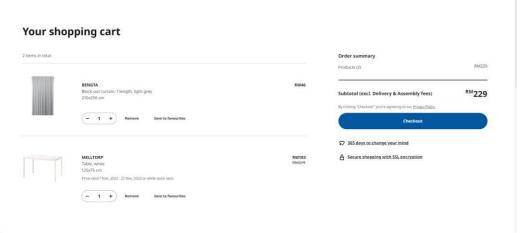


Figure 2.1.5 Ikea shopping cart

In [3] Ikea provides an easy-to-use shopping cart system. The shopping cart has detailed product descriptions such as the product name, product quantity, and product price. Customers also can remove the item from the shopping cart. Furthermore, customers also can see the total price in the order summary view. Apart from that, customers also can save their favorite furniture as favorites which can save a lot of time when customers want to buy again the product.

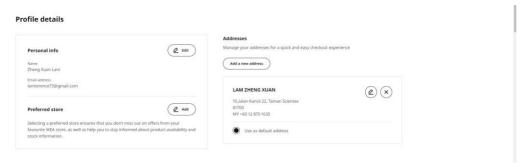


Figure 2.1.6 Ikea profile page

At [4] shows a user's profile details such as name, and email address. Besides this page also shows what is the preferred store of the user and the delivery address. Users can edit all the information at [4].



Figure 2.1.7 Ikea main page header

In [1] the header part many features can improve user experience for example the promotion link, when the user clicks will redirect the user to the promotion item. Besides, there are cart button, a wish list button, and a profile button that will redirect the user to the respective page. Besides, users also can search for the product they want.



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Products

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Marketplace

Theme

Customer Service

Our services

IKEA for Business

Offers & Promotions

Inspiration

Meet our home furnishing experts

IKEA in real homes

Home solutions video gallery

Planning Support

Figure 2.1.8 Ikea menu bar

The menu panel on [1] also concludes all the web pages that the user might want to visit this will save a lot of time when the user browses the webpage and increase their browsing experience. But the font size in the menu panel on [1] is not standardized it might make users feel confused when browsing the menu panel.

2.1.2 **CASSA**

Cassa is an e-commerce home living online store that sells a wide range of home furniture and accessories. Cassa's focus will be on the quality of the product. User can buy more quality products from their website.



Figure 2.1.9 Cassa main page

Strengths of Cassa

- WhatsApp chat box: Cassa provides a WhatsApp button feature that links to the owner's WhatsApp this makes the customer to contact the owner when they need help.
- Multi-language support: Cassa supports multiple languages for different regions, catering to a global customer base.
- Multi-currency support: Cassa also supports 2 types of currency which are SGD or MYR, customers can switch between these two currencies.

Weaknesses of Cassa

- Lack of sustainable and eco-friendly options: Cassa does not have eco-friendly options for their product. All their products are made from real materials, and it is not eco-friendly.
- Inconsistent product information: Cassa's products information is not consistent. Some of the product's dimensions are mentioned in the description some are mentioned together with the product name, some are mentioned inside the picture.

2.1.3 fortytwo

With over 600,000 monthly visits, Fortytwo is the largest home furnishings eCommerce website in Singapore. They also provide the best online shopping experience to customers.

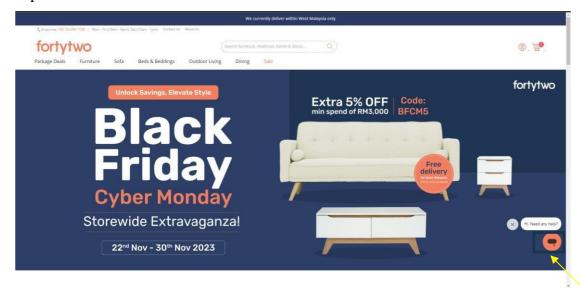


Figure 2.1.10 fortytwo main page.

Live chat box

Strength of fortytwo

- Live chat box: fortytwo provide a live chat box button feature that can let customers chat with the seller online without redirect to other social media platforms.
- Subscribe feature: fortytwo website have a subscribe button, customer need to enter their email and they will receive their latest promotion and deals.
- Review system: fortytwo have the review system for their product to let their customer to comment on their product.

Weaknesses of fortytwo

• Lack of sustainable and eco-friendly options: fortytwo does not have eco-friendly options for their product. All their products are made from real materials, and it is not eco-friendly.

- Lack of mobile optimization: The webpage is not mobile responsive. When using smaller screen size of mobile phone to browse the website, some content will not show properly.
- Delivery within west Malaysia only: fortytwo only delivered their product within West Malaysia only this will give some of the customers who does not live in West Malaysia but want to buy product from their website a lot of in convenience.

2.1.4 Dezign District Malaysia

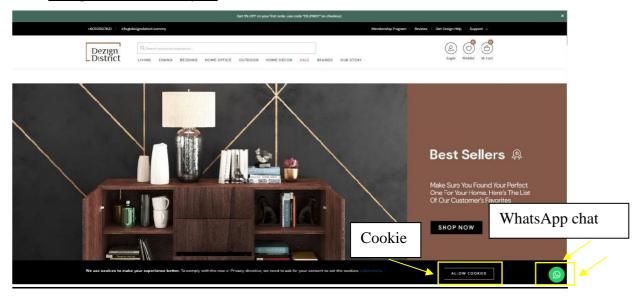


Figure 2.1.11 Dezign District main page.

Strength of Dezign District

- WhatsApp chat box: Dezign District provide a WhatsApp chat box button feature that can let customers chat with the seller online without redirect to other social media platforms.
- Cookie feature: Dezign District website have use cookie to improve their website and help to personalize customer's experience, including advertising and analytics.
- Consistent product information: Dezign District's products information is consistent. All the product information such as product dimension, product weight and product color are displayed well in the product description.

Weaknesses of Dezign District

- Lack of mobile optimization: Dezign District's webpage is not mobile responsive. When using smaller screen size of mobile phone to browse the website, some content will not show properly.
- Lack of multi-language support: Dezign District's webpage does not support multiple languages for different regions, and it is not catering to a global customer base.

2.1.5 mumu

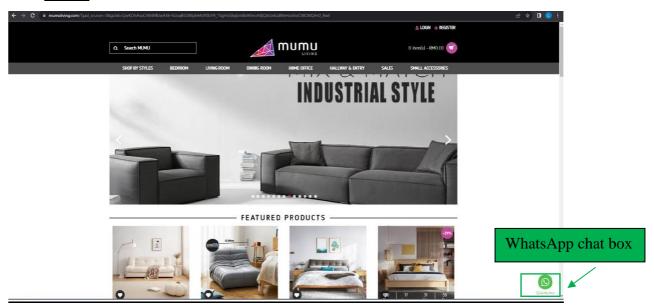


Figure 2.1.12 mumu main page.

Strength of mumu

- WhatsApp chat box: mumu provide a WhatsApp chat box button feature that
 can let customers chat with the seller online without redirect to other social
 media platforms.
- Wishlist feature: mumu website have wish list features that allow users to add their favorite product to wish list. This will save a lot of time when user want to buy again the product without browsing the product list.

Weaknesses of mumu

- Lack of mobile optimization: mumu's webpage is not mobile responsive.
 When using smaller screen size of mobile phone to browse the website, some content will not show properly.
- Lack of multi-language support: mumu's webpage does not supports
 multiple languages for different regions, and it is not catering to a global
 customer base.
- Inconsistent product information: mumu's products information is not consistent. Some of the product's does not have enough information such as product weight and product dimensions.

2.1.6 <u>Summary</u>

Name/Feature	Live chat box	Comment	Consistent product information	Authentication
Ikea	✓	x	✓	√
Cassa	x	x	x	√
fortytwo	✓	✓	✓	х
Dezign District	√	√	√	x
mumu	✓	x	x	х
Proposed system	√	√	√	√

Chapter 3

SYSTEM METHODOLOGY/APPROACH

3.1 Method

The method that I use to develop this system is waterfall development. In waterfall

development have 5 different stages that have their own specific task which show at below:

System

All the computer hardware is required to meet the minimum requirements to browse the

internet fluently. Below is the list of minimum requirements that computer needs to meet to

browse the website.

Processor: Intel Pentium 4 higher or equivalent

Ram: 8GB higher

Storage: 256GB or higher

Graphic: NVIDIA GT 730 higher or equivalent

Operating System: Windows 10 or higher

Analysis

In the analysis part, I will do some literature review in chapter 2 to collect some information

about other's furniture website and make some improvement on our website. Besides, I will do

some analysis about the basic function that need to be included in the eCommerce website. For

example, an eCommerce website at the customer part must have:

1. Product List: Show products with clear images, descriptions, prices, name, and

category.

2. Search Function: Allow user to search the product by keyword.

3. User register and login: Allow user to login into their account and create a new account.

4. Shopping cart: Allow user to add, remove, and update item before they proceed to

checkout.

5. Profile: Allow user to see all their personal information and edit their personal

information.

6. Checkout function: Allow user to make payment and key in their shipping address to

complete the transaction.

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WhatsApp chat box to address any inquiries or issues cause.

- 7. Review function: Allow customers to review and give feedback on every product they had purchased.
- 8. About us page: A small introduction about company's vision, mission, and small introduction about the company.

Design

In design phase I will start to define the interface of my eCommerce website, define the database, and create a detailed system design on the gathered idea in analysis part. Moreover, I will also ERD model show at Figure 3.2.1 and data dictionary show at Figure 3.2.2. Furthermore, there are some system design such as software design and web page design that had been done in chapter 4.

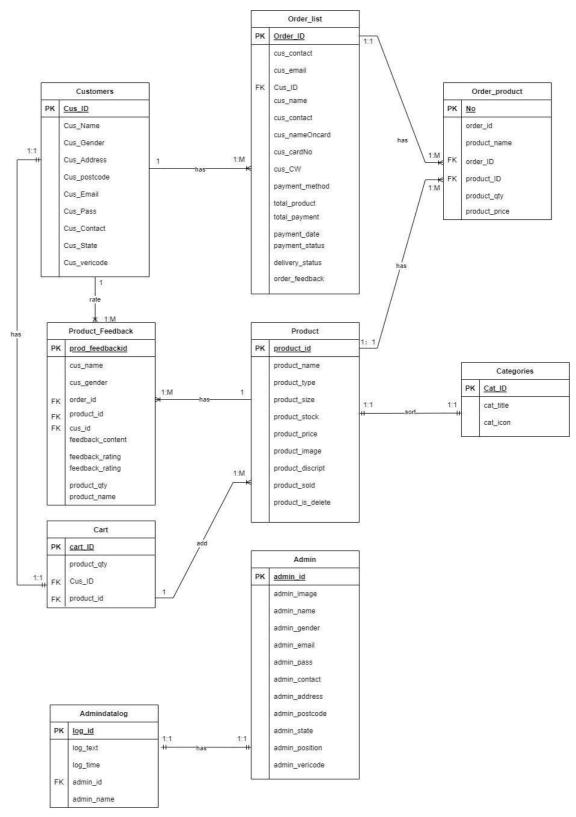


Figure 3.2.1 Entity Relationship Model

Table Name	Attribute Name	Contents	Туре	Format	Required	PK or FK	FK reference Table
admin	admin_id	Admin ID	AutoNumber	9	Y	PK	
	admin_image	Admin contact number	Text	9999999999	Y		
	admin_name	Admin name	Text	Xxxxxxx	Y		
	admin_gender	Admin Gender	Text	Xxxxxxx	Y		
	admin_email	Admin Email	Text	Xxxxxxx	Y		
	admin_pass	Admin Password	Text	Xxxxxxx	Y		
	admin_contact	Admin Contact	Text	Xxxxxxx	Y		
	admin_address	Admin Address	Text	Xxxxxxx	Y		
	admin_postcode	Admin Postcode	Text	Xxxxxxx	Y		
	admin_state	Admin State	Text	Xxxxxxx	Y		
	admin_position	Admin Position	Text	Xxxxxxx	Y		
	admin_vericode	Admin Verification Code	Text	Xxxxxxx	Y		
admindatalog	log_id	Log ID	AutoNumber	9	Y	PK	
	admin_id	Admin ID	AutoNumber	9	Y	FK	admin
	admin_name	Admin name	Text	Xxxxxxx	Y		
	log_Text	Log Text	Text	Xxxxxxx	Y		
	log_time	Log Time	Text	Xxxxxxx	Y		
cart	cart_id	Cart ID	AutoNumber	9	Y	PK	
	cus_id	Customer ID	AutoNumber	9	Y	FK	customer
	product_id	Product ID	AutoNumber	9	Y	FK	product
	product_qty	Product Quantity	Int (99)	9	Y		
categories	cat_id	Category ID	AutoNumber	9	Y	PK	
	cat_icon	Categoty Icon	Tect	Xxxxxxx	Y		
	cat_title	Category Title	Text	Xxxxxxx	Y		
customer	Cus_ID	Customer ID	AutoNumber	9	Y	PK	
	Cus_Name	Customer Name	Text	Xxxxxxx	Y		
	Cus_Gender	Customer Gender	Text	Xxxxxxx	Y		
	Cus_Address	Customer Address	Text	Xxxxxxx	Y		
	Cus_postcode	Customer Postcode	Text	Xxxxxxx	Y		
	Cus_Contact	Customer Contact	Vchar(10)	Xxxxxxx	Y		
	Cus_Email	Customer Email	Text	Xxxxxxx	Y		
	Cus_pass	Customer Password	Text	Xxxxxxx	Y		
	cus_state	Customer State	Text	Xxxxxxx	Y		
	cus_vericode	Customer Verification Code	Text	Xxxxxxx	Y		

Figure 3.2.2 Data Dictionary

Implementation

At this phase I will write code based on the specification outlined in the design phase. Besides, I will also implement front-end interfaces, back-end functionality for front-end I will use HTML, javascript, jquery, ajax and css to design the webpage for back-end I will use php language and sql language to connect the back-end of the system to the database. Besides I will also do some unit testing in the eCommerce website that I created. Moreover, I will also implement google analytics into our website to visualize the key activity of our website. Las but not least, I will also implement SEO site checkup tools to make some improvement on our website in order to create a secure website and improve user experience

Operation

In this phase is my fyp 2, I will publish on the server. I will also ensure all configurations are set up for production, including security measures and performance optimizations. Besides, I will do some maintenance in the future to maintain my system and increase the user experience. Moreover, I will also update the system when new function is available to attract more users to use my system. Furthermore, I will also use Google analytics to keep track how many user browse the website and what are their preference during browsing the website.

System Design

4.1 Setting up.

4.1.1 Software

Before starting to develop the website, there are four software needed to be installed and downloaded in my laptop:

- Google Chrome
 - o Version:120.0.6099.71 (Official Build) (64-bit)
 - o For launching the webpage
- Visual Studio Code
 - o Version: 1.85
 - o For developing front-end webpage
- Php Storm
 - o Version: 2023.3.2
 - o For developing back-end webpage
- Xampp
 - o Version:3.3.0
 - o For creating database

4.2 System Preview

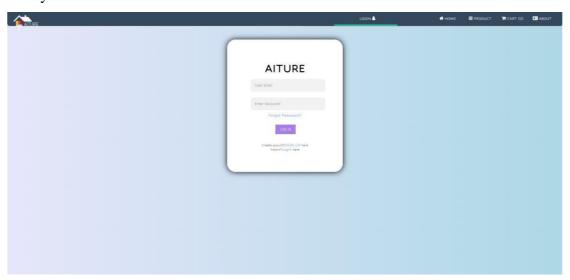


Figure 4.2.1 Login page

This is the login page of the customer site in the system user have to login by key in their email address and password. If user does not have an account, they can click the sign-up word and it will redirect to the sign-up page. When user key in the invalid user email and password the system will prompt out "Invalid username or password"

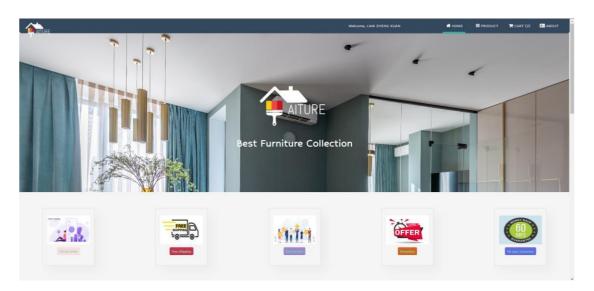


Figure 4.2.2 Home page

This is the home page of the system. In this page will display some of the product that we sell. When successful login the header of the will displays "Welcome the username".

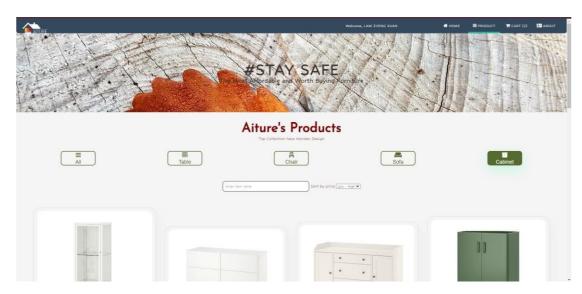


Figure 4.2.3 Product page

This is the product page of the system user can sort the product by category, key in the product name or sort the price of the product either low to high or high to low. In this page, product detail such as product category, product name, product price and the remaining stock of the product.

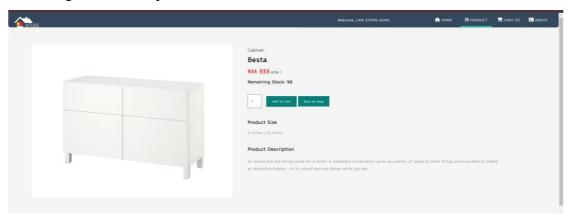


Figure 4.2.4 Product detail page

This is the product detail page. All the product information such as product name, product category, product price, product size, product description, and the remaining stock will be displayed here. User also can add the item to cart or back to the product page.

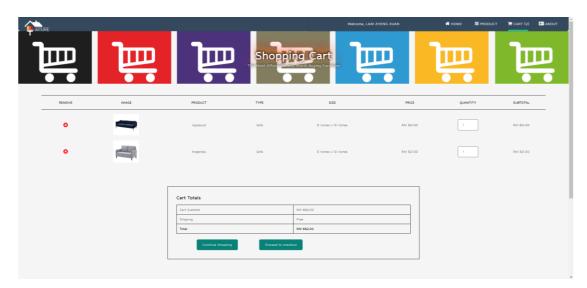


Figure 4.2.5 Shopping cart

This is the shopping cart of the system. In this page will display all the item that had added by the user and display the price of the product and the total price of all the products. User can click proceed to checkout to complete the transaction or back to the product page.

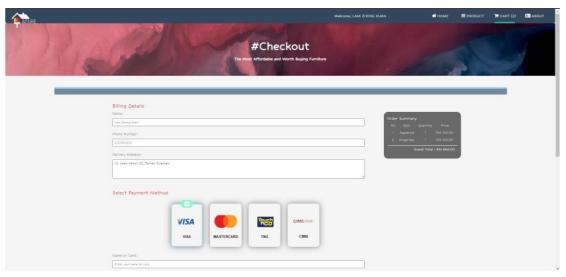


Figure 4.2.6 Checkout page

This is the checkout page of the system. User needs to key in their information and payment information to complete the transaction. User also needs to choose what type of card they want to use. For the billing details, user no need to key in their billing details unless the user wants to change billing address. The system will automatically fill the billing address based on the address that registered by them user.

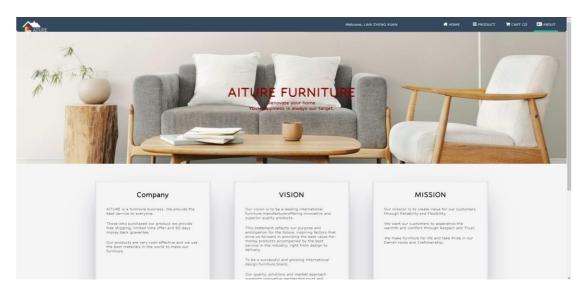


Figure 4.2.7 About us page

This is the about us page of the system. In this page will display a small introduction of the company and the vision and mission of the company.

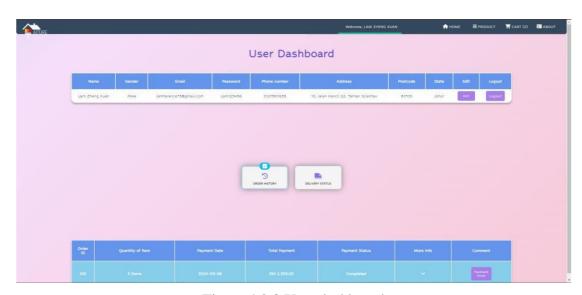


Figure 4.2.8 User dashboard

This is the user dashboard of the system. User can see all their information and the product delivery information in this page. Besides user can also change their information in this page. At this page user can click logout to logout the website. Besides, user can track back the order history in this page and user can give feedback on the item that they had purchased.

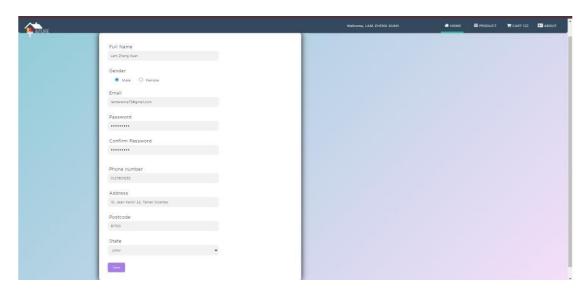


Figure 4.2.9 Edit profile.

This is the user edit profile page. User can edit their profile in this page. When user did not key in all the required detail the system will inform the user that the field is required to fill in. Moreover, if the user key in the invalid format on the email, phone number, and password field the system will also prompt out a message to ask users to follow the format needed.



Figure 4.2.10 Register page.

This is the register page of the system. In this page user can create their account to buy the product from the system. When user did not key in all the required detail the system will inform the user that the field is required to fill in. Moreover, if the user key in the invalid format on the email, phone number, and password field the system will also prompt out a message to ask users to follow the format needed.

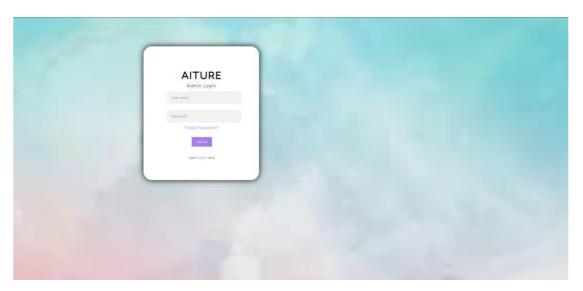


Figure 4.2.11 Admin login page.

This is the admin login page of the system. Admin needs to key in their email address and password to login into the system. When user key in the invalid user email and password the system will prompt out "Invalid username or password".

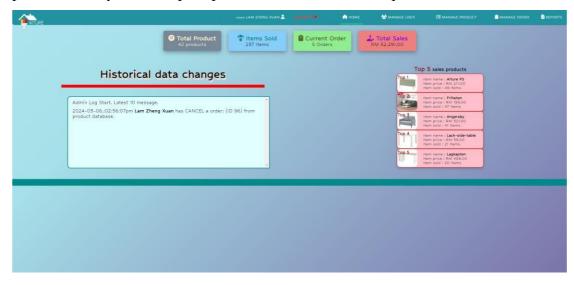


Figure 4.2.12 Admin main page.

This is the admin main page of the system. In this page admin can see all the history data that had been done by other admin and the hot sale product for the hot sale product field the system will display the product name, item price, and item sold. At this page admin can watch total product, total item sold, current order, and total sales.

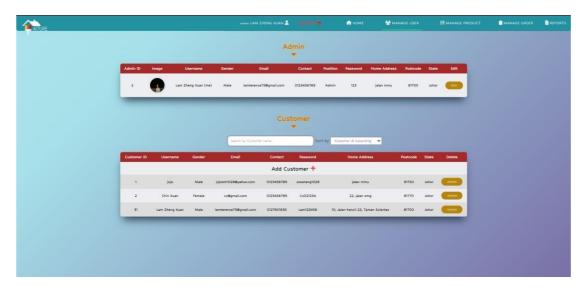


Figure 4.2.13 Manage user page.

This is the manage user part, main admin can add new account for the new member who just join our company. In this page admin also can view all the customer accounts for contacting the customer. Admin can search for the customer's name or sort the customer ID by ascending or descending.

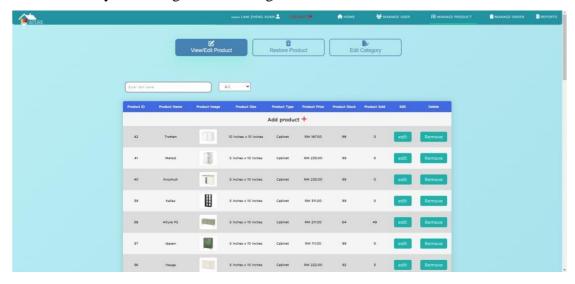


Figure 4.2.14 Manage product page.

This is the manage product page. Admin can manage add the products that need to be sell in the customer part system. Admin can search all the product by name or sort the product by category. Besides, admin also can edit all the product detail or remove the whole item. For accidentally deleted product, admin can restore the product at the restore product field.

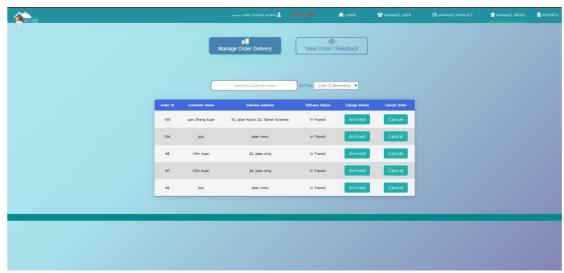


Figure 4.2.15 Manage order page.

This is the manage order page of the system. In this page admin can manage the order delivery to the customer and view the order feedback of the customer at the view order field. Admin also can search the customer's name or sort the order ID in ascending order or descending order in both manage order delivery field and view order field.

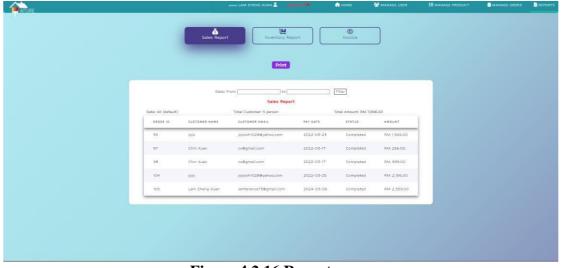


Figure 4.2.16 Report page.

This is the report page of the admin part. Admin can view the sales report, inventory report and the invoice that had been sent to the customer. For the sales report and inventory report, admin can sort that report by date. Moreover, admin also can print all the sales report, inventory, and the invoice if needed.

System Implementation

5.1 SYSTEM IMPLEMENTATION

For system implementation part I had already completed the website development based on the system preview at chapter 4. After developed the website, I upload the website to the web hosting server in order to implement the google analytics in to the website. After implement the google analytics, I noticed that, there are not much user browsing my website through google analytics. So, I open a email account to promote my product to the user.

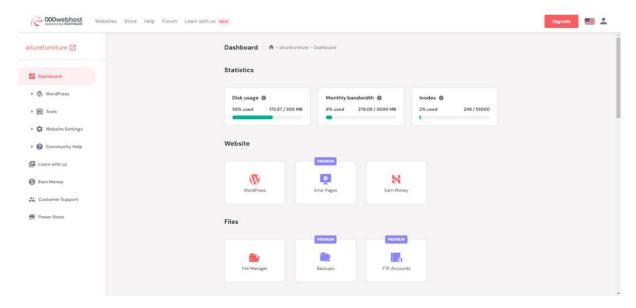


Figure 5.1.1 Web hosting dashboard page.

This is the web hosting dashboard page. In the figure 5.1.1 the web hosting platform that using for upload the whole Aiture Furniture: Living Innovative's website is 000Webhost platform. In this dashboard user can see various types of statistic such as disk usage, monthly bandwidth and inodes.

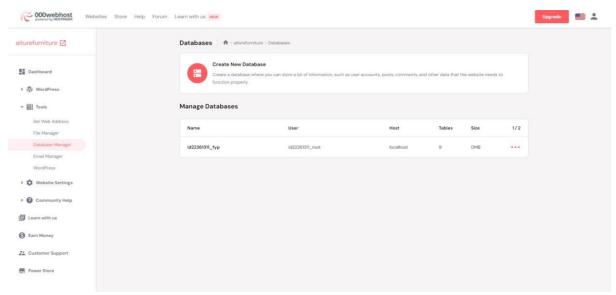


Figure 5.1.2 Web hosting database page.

The figure 5.1.2 is the web hosting database page. In this page we have to create a new database in the server by key in the database name, username, host and password. After created the database, we can import the data to the database.

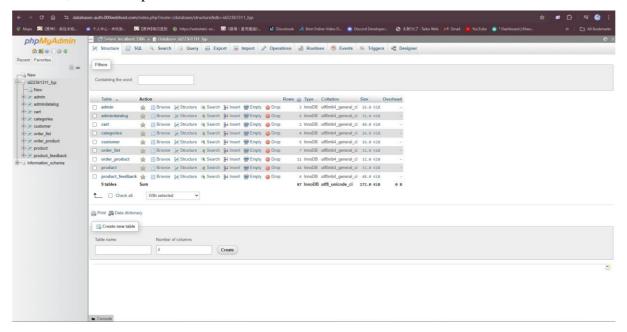


Figure 5.1.3 Web hosting phpMyAdmin page.

The figure 5.1.3 is the web hosting phpMyAdmin page. After create the database, we are able to import the data to the phpMyAdmin page.

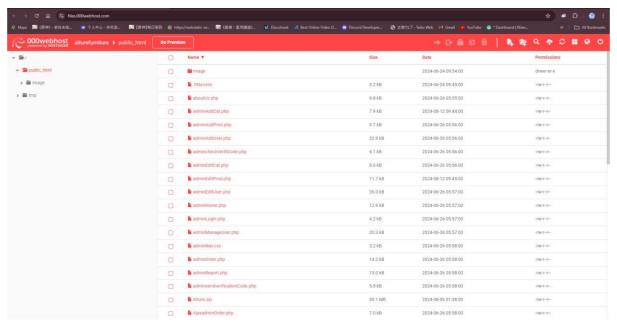


Figure 5.1.4 Web hosting file manager page

The figure 5.1.4 is the web hosting file manager page, all the source file of the Aiture Furniture: Living Innovative are uploaded to the file manager page.

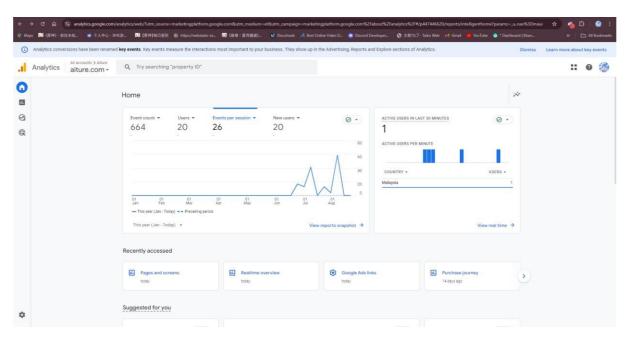


Figure 5.1.5 Google Analytic dashboard page.

In figure 5.1.5 is the google analytic dashboard page. The whole website of Aiture Furniture: Living Innovative is implement the google analytic. The purpose of implementing the google analytic to the website is to understanding the customer behavior, enhance market strategy and also improving user experience.

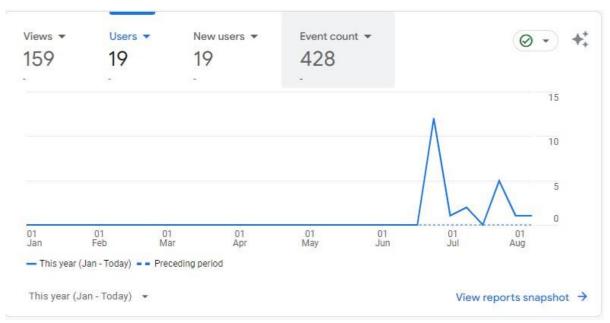


Figure 5.1.6 Google Analytic metric.

In figure 5.1.6 the metric shows that user engagement and activity trend over 1 year. The line chart shows that there are only 19 user, all of whom are new users. Besides, this website only have 159 views and 428 event count.



Figure 5.1.7 User by Country ID Analysis.

In figure 5.1.7 the metric shows that user by Country ID analysis. In this metric we can conclude that there are 7 users from Malaysia and 4 users from United State.



Figure 5.1.8 Realtime Overview

In figure 5.1.8 the bar chart shows that total active user in last 30 minutes and last 5 minutes over country. Throughout the graph we can conclude that there are very few user to browse our Aiture Furniture: Living Innovative's website because this website is currently new and does not much people know this website.

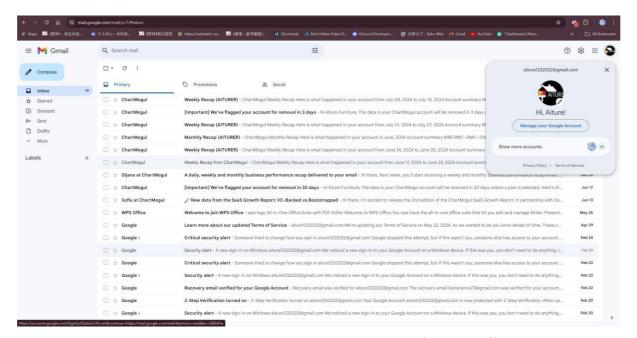


Figure 5.1.9 Aiture Furniture:Living Innovative's Gmail.

In figure 5.1.9 is the Aiture Furniture: Living Innovative's official gmail. This gmail is mainly use for advertising purpose to solve less user buying our product on our platform and less people browsing our website. When we have promotion, we will sent the promotion detail to all of our user by using email. Besides this gmail also as an communication tools between customers and admin.

System Evaluation And Discussion

6.1 System Testing Setup And Result

Test	Test Case	Expected Result Actual Result	Status
ID			
1	Upload the	The website is able The website is able	Pass
	Aiture	to upload to to upload to	
	Furniture:	000Webhosting 000Webhosting	
	Living	Server and able to Server and able to	
	Innovative's	browse using the browse using the	
	website in to	browser browser	
	the server		
2	Implement the	Successful Matomo analytic	Fail
	matomo	installation of tools is successful	
	analytic tools	matomo into the implemented into	
	in the Aiture	website and the the website but is	
	Furniture:	matomo analytics not able to analyze	
	Living	tools able to analyze the data from the	
	Innovative's	the data from the website	
	website	website	
3	Implement	Implement the Google analytic tag	Pass
	google	google analytic tag is successful	
	analytic tools	into the website implemented into	
	into the Aiture	source code and the the source code and	
	Furniture:	google analytic able to retrieve the	
	Living	tools able to analyze data from the Aiture	
	Innovative's	the data from the Furniture: Living	
	website	website Innovative's website	

4	Using SEO	•	SEO site checkup	•	SEO site checkup	Pass
	site checkup to		generate a checkup		can generate a	
	generate a	score and provide			checkup score and	
	checkup score		what to		provide what to	
			improvement need		improvement need	
			to do in order to		to do in order to	
			improve the Aiture		improve the Aiture	
			Furniture: Living		Furniture: Living	
			Innovative's website		Innovative's website	

6.3 Project Challenges

The biggest challenge in this project is implementing analytic tools in the website. This is because there are various types of analytic tools such as matomo and google analytics. Analytics tools are crucial in understanding user behavior, monitoring sales performance, and making data-driven decisions to raise the overall efficacy of the website. Choosing and integrating the appropriate tools, however, can be difficult because there are so many possibilities accessible, each with special features, advantages, and disadvantages of their own. One of the most often used tools is Google Analytics, which provides comprehensive reporting options, strong tracking capabilities, and easy interaction with other Google services. Because of its strong features and abundance of support, it is frequently utilized. But it also has a steep learning curve for new users and may raise privacy issues.

6.4 Objective Evaluation

For the objective evaluation, this system aims to provide monitoring system in the admin view system. Besides, other than admin view systems, this website also use google analytics to keep track of our client's behavior such as how many user register the account, how many event count for the website, and so on. These data can help us to know more about our user preferences and make some promotion to attract our user to buy products from our website. Besides through these data, we can also do some improvements that can increase the user experience such as provide sufficient customer service and communication. We will provide a various type of method such as email, phone number and whatsapp chat box to let our customers able to communicate with us easily. Besides, for the website security part we will also provide sufficient authentication for the e-commerce website. We will use various type of authentication to secure our website for example we will use password hash functions to store all the user's and admin's account password in to the database. Moreover, we will also use mysqil real escape string function to prevent SQL injection to our database to make sure our database is safe to store data. Last but not least, we will also provide sufficient and consistent product information such as product dimension, product description, remaining stock, and customer feedback to increase user experience. Through these information user will know more about our products weather the product is their choice and weather the product can fit their space or not.

6.5 Concluding Remark

As the first concluding remark is to provide monitoring system in the admin view system, we had already achieve at figure 4.2.12 the admin main page. In this page the admin can see all the history data that had been done by other admin and the hot sale product for the hot sale product field the system will display the product name, item price, and item sold. At this page admin can watch total product, total item sold, current order, and total sales besides, at figure 5.1.5 is the implementation of google analytics to the Aiture Furniture: Living Innovative website. By implementing the google analytic to the website is to understanding the customer behavior, enhance market strategy and also improving user experience.



Figure 6.5.1 Footer of Aiture Furniture: Living Innovative

The second concluding remark is provide sufficient customer service and communication. In figure 6.5.1 is the footer of Aiture Furnitue: Living Innovative. In this footer we had already provide various types of contact information and social media platforms such as email address, phone number, address, facebook, twitter, whatsapp and Instagram. User can reach us by using the contact information or click on the social media platform icon.

The third concluding remark is provide sufficient authentication for the e-commerce website. For this concluding remark to stop SQL injection, we had to employ the genuine escape string function in MySQL. The final piece of advice is to give accurate and comprehensive product information. In figure 4.2.4 is the sample of one product information page. All the product information such as product name, product category, product price, product size, product description, and the remaining stock will be displayed here. User also can add the item to cart or back to the product page.

7.1 Conclusion

As a conclusion I had already completed the whole system in my FYP1 and in FYP 2 I also utilize Google analytics to track how many users browse the website and to understand their preferences during browsing. The reason that I choose Google analytics is because Google analytics is a powerful analytics tool. By implementing Google analytics, I can gain valuable insights into user behavior and make improvements to enhance their user experience. Additionally, I can ensure that the products we sell meet their expectations. After using the google analytics, I realize that there are lack of user to browse the Aiture Furniture: Living Innovative's website, so I open an email account for promoting our furniture in order to attract more customers to browse our website.

7.2 Recommendation

As the first recommendation is enhance user experience through personalization and access. It is important to concentrate on improving user experience, bolstering security, and guaranteeing operational efficiency when developing an eCommerce website. Because it enables the website to provide personalized content and product recommendations based on user preferences, personalization is essential for increasing user engagement and conversion rates. Besides, I will also include various payment method such as digital wallet and buy now pay later (BNPL). The Aiture Furniture: Living Innovative will not only meet industry standards by focusing on these areas, but it will also provide an exceptional shopping experience that boosts sales, fosters customer loyalty, and guarantees long-term success.

REFERENCES

[1] ikea, "Buy Furniture Malaysia Online | Furniture Home Ideas," Ikea.com, 2020. https://www.ikea.com/my/en/

[2] "IKEA checkout," www.ikea.com. https://www.ikea.com/my/en/checkout/payment/

[3]"IKEA cart," www.ikea.com. https://www.ikea.com/my/en/cart/

[4]"IKEA Profile Pages," www.ikea.com. https://www.ikea.com/my/en/profile/profile-details/

[5]kennyfang, "Why choose IKEA?," T1 2016 MPK732 Marketing Management (Cluster B), May 15, 2016.

https://mpk732t12016clusterb.wordpress.com/2016/05/15/why-choose-ikea/

[6] "Dezign District Malaysia," dezigndistrict.com.my.

https://dezigndistrict.com.my/?gad_source=1&gclid=CjwKCAiAvdCrBhBREiwAX6-6UtT_tZrwNoXwDHKQ9tndlSllQZfVnB8IKNdlxBv5rTwOOs0E0vLefRoC2T8QAvD_BwE

[7]"MUMU Living Malaysia | Inspired Home Living," MUMU Living Malaysia | Inspired Home Living. https://mumuliving.com/

[8] "Contact US," Contact US. https://www.cassafurniture.my/

(Project II)

Trimester, Year: Y3T3	Study week no.: 2
Student Name & ID: Lam Zheng Xuan	
Supervisor: Lim Jit Theam	
Project Title: Aiture Furniture: Living In	novative
1. WORK DONE	
-Ask supervisor what things that need to do i	in fyn 2
This supervisor what things that need to do a	1, p 2
2. WORK TO BE DONE	
- self-learning about analytics tools that ca	nn be implement into the e-commerce
system	
3. PROBLEMS ENCOUNTERED	
-No problem	
4. SELF EVALUATION OF THE PROG	RESS
All the pregress are going fluently	
-All the progress are going fluently	
7	Type text here
	Type text field
Supervisor's signature	Student's signature

(Project II)

Trimester, Year: Y3T3	Study week no.: 4
Student Name & ID: Lam Zheng Xuan	
Supervisor: Lim Jit Theam	
Project Title: Aiture Furniture: Living In	novative
1. WORK DONE	
-Ask supervisor what things that need to do i	
	hat can be implement into the e-commerce
system	
2. WORK TO BE DONE	
T	L
-Implement analytics tools, matomo into t	ne e-commerce systems.
3. PROBLEMS ENCOUNTERED	
-cannot retrieve data from the e-commerc	e systems after implement matomo into
the systems	
4. SELF EVALUATION OF THE PROG	RESS
1., 1.00	
-a bit difficult to implement matomo into	the e-commerce systems
L	
	V

(Project II)

Trimester, Year: Y3T3	Study week no.: 6		
Student Name & ID: Lam Zheng Xuan			
Supervisor: Lim Jit Theam			
Project Title: Aiture Furniture: Living In	novative		
1. WORK DONE			
-Ask supervisor what things that need to do i			
l c	nat can be implement into the e-commerce		
system			
A WORK TO BE DONE			
2. WORK TO BE DONE			
-Implement analytics tools, google analytic	cs into the e-commerce systems.		
3. PROBLEMS ENCOUNTERED			
No problem			
-No problem			
A CELE EVALUATION OF THE PROCE	DE GG		
4. SELF EVALUATION OF THE PROG	KE55		
-All the progress are going fluently			
The the progress are going natively			
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Supervisor's signature	Student's signature		

(Project II)

Trimester, Year: Y3T3	Study week no.: 8	
Student Name & ID: Lam Zheng Xuan		
Supervisor: Lim Jit Theam		
Project Title: Aiture Furniture: Living Innovative		
1 WORK DONE		
1. WORK DONE -Ask supervisor what things that need to do i	n fun 2	
	nat can be implement into the e-commerce	
system	iat can be implement into the e-commerce	
-Done implement the google analytics tools	s into the e-commerce systems.	
1 0 0 0	·	
2. WORK TO BE DONE		
- self-learning about the seo tools that can	help to promote the e-commerce website.	
3. PROBLEMS ENCOUNTERED		
3.1 ROBELING ENCOCHIERED		
-No problem		
4. SELF EVALUATION OF THE PROGI	RESS	
-All the progress are going fluently		

Supervisor's signature

(Project II)

Trimester, Year: Y3T3	Study week no.: 10			
Student Name & ID: Lam Zheng Xuan				
Supervisor: Lim Jit Theam				
Project Title: Aiture Furniture: Living Innovative				
1. WORK DONE -Ask supervisor what things that need to do i -Done self-learning about analytics tools the system -Done implement the google analytics tools	nat can be implement into the e-commerce			
2. WORK TO BE DONE				
-Start doing the final year project report				
3. PROBLEMS ENCOUNTERED				
-No problem				
4. SELF EVALUATION OF THE PROGI	RESS			
-All the progress are going fluently				
Supervisor's signature	Student's signature			

(Project II)

Trimester, Year: Y3T3	Study week no.: 12	
Student Name & ID: Lam Zheng Xuan		
Supervisor: Lim Jit Theam		
Project Title: Aiture Furniture: Living In	novative	
1. WORK DONE		
-Ask supervisor what things that need to do i	• •	
· ·	nat can be implement into the e-commerce	
system		
-Done implement the google analytics tools		
-Done self-learning about the seo tools tha	t can help promote the e-commerce	
systems		
2. WORK TO BE DONE		
-make some amendment in fyp 2 report		
3. PROBLEMS ENCOUNTERED		
No pueblom		
-No problem		
4. SELF EVALUATION OF THE PROGRESS		
-All the progress are going fluently		

Supervisor's signature

PLAGIARISM CHECK RESULT

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2 SIMIL	% 1% ARITY INDEX INTERNET SOURCES	0% PUBLICATIONS	1% STUDENT PAPERS			
PRIMAR	Y SOURCES					
1	Submitted to Multimedia Student Paper	University	<1%			
2	socialscienceresearch.or	g	<1%			
3	Submitted to Laureate Ed Student Paper	ducation Inc.	<1%			
4	Submitted to Trident Uni Student Paper	versity Interna	tional <1%			
5	www.ijisae.org Internet Source		<1%			
6	community.intel.com Internet Source		<1%			
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Form Number: FM-IAD-005	Rev No.: 0	Effective Date: 01/10/2013	Page No.: 1of 1		



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Full Name(s) of Candidate(s)	Lam Zheng Xuan		
ID Number(s)	22ACB07555		
Programme / Course	IB		
Title of Final Year Project	Aiture Furniture: Living Innovative		
	•		
Similarity		Supervisor's Comments (Compulsory if parameters of originality exceeds the limits approved by UTAR)	
Overall similarity index: 2 %			
Similarity by source Internet Sources:1_	%		
Publications: 0 % Student Papers: 1 %			
Number of individual source more than 3% similarity: 0	es listed of		
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1	1.	
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Date:	10/09/2024	Date:
	Information Systems (Honours) Rusiness In	formation Systems

Bachelor of Information Systems (Honours) Business Information Systems Faculty of Information and Communication Technology (Kampar Campus), UTAR



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