

ONLINE GREETING CARD WEBSITE

BY

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A REPORT

SUBMITTED TO

Universiti Tunku Abdul Rahman

in partial fulfillment of the requirements

for the degree of

BACHELOR OF INFORMATION SYSTEMS (HONOURS) BUSINESS

INFORMATION SYSTEMS

Faculty of Information and Communication Technology

(Kampar Campus)

JUNE 2023

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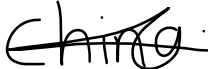
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ACKNOWLEDGEMENTS

I sincerely thank and appreciate my supervisor, Dr Suthashini a/p Subramaniam, who fully supported and believed in me. Her willingness to help and give suggestions for the project is greatly appreciated, and her generosity with her time is invaluable. I am genuinely grateful for her support and guidance.

In addition, I want to thank all my friends who have helped me and were willing to give me valuable advice on what they could contribute to my project. Finally, I must thank my family for the love, support, and constant encouragement they have given me throughout the course. With their help, I have been able to achieve such success. Their unwavering faith in me has always motivated and inspired me.

ABSTRACT

In a digital era where personal connections are often facilitated through virtual channels, the conventional practice of sending physical greeting cards has seen a decline. This project recognizes the burgeoning need for a modern, intuitive e-card sharing platform, striving to marry the warmth of personal connections with the convenience of digital technology. Grounded in the evolving preference for digital communication channels, this initiative heralds a significant shift in the manner in which individuals connect and express themselves, promising to create a vibrant and inclusive digital greeting space deeply resonant with Malaysia's rich cultural tapestry.

Setting itself apart in the current market, the project offers a plethora of unique features that foster deeper connections between individuals. It empowers users to craft highly personalized messages, offering customization options that are both user-friendly and deeply personal. This facet of the platform stands as a cornerstone, presenting a harmonious blend of personal touch and digital convenience, thereby addressing a notable gap in the current market.

One of the standout innovations in this project is the incorporation of email functionality, which significantly enhances the user experience by offering a direct and seamless channel for sharing e-cards. This feature not only makes sharing more straightforward but also fosters closer connections, thereby setting a new benchmark in the digital greeting card industry. Leveraging contemporary technologies, the project stands as a beacon of innovation, paving the way for more personalized digital interactions, and embodying a perfect amalgamation of innovation and tradition.

The project employs a robust methodology, leveraging modern technologies for a seamless user experience, symbolizing a new phase of personalized digital interactions. Despite developmental complexities, the project demonstrated adaptability, overcoming numerous challenges. Rigorous black box and unit testing methodologies ensure the platform's reliability and efficiency, promising a dependable and user-friendly platform.

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LIST OF ABBREVIATIONS

<i>WWF</i>	World Wildlife Fund
<i>SDLC</i>	System Development Life Cycle
<i>CSS</i>	Cascading Style Sheet
<i>CSV</i>	Comma-separated Values
<i>SQL</i>	Structured Query Language
<i>BLOB</i>	Binary Large Object

CHAPTER 1 Introduction

1.1 Project Background

Our lives are made up of events and celebrations where we can share our wishes, love, and feelings with our friends, family, and co-workers. These gatherings often create lasting memories, bring us closer together, and give us the opportunity to express our gratitude for one another. Greeting cards can be used to keep in touch with people and can also be seen as a form of art or a way to show how a person feel [1,2,3]. On such an important day, sending a card is a wonderful way to express our sentiments to those we care about. Whether it's a holiday, an anniversary, a birthday, or simply to show you care, sending a card allows us to create special moments that help define relationships and memories [4]. And if it's well-thought-out and has engaging messages, you'll have them completely captivated. Sending a card is a simple and effective way to show someone we appreciate them. It can let them know that we've put time and thought into creating something unique and meaningful for them. Moreover, sending a card is a great way to make people feel valued and appreciated. As a result, it's critical to consider the style of the cards select for special events and ensure that they reflect your emotions. However, finding a great greeting card, buying a stamp, and dropping it off in the mail was a hassle before the pandemic. The already challenging job of leaving home to locate, purchase, and send a card is now done much more so by the all-too-common delivery delays with snail mail. Sending and receiving greeting cards has never been simpler than with electronic cards. The breadth of options available matches the convenience of doing it without leaving the sofa. Now everyone won't have to settle for a mediocre card just because they need to quickly get it in the mail [5]. E-cards are similar to traditional postcards or greeting cards, but they are generated using digital media rather than paper or other conventional materials. This is the fundamental distinction between an e-card and a typical postcard or card.

1.2 Problem Statement

1. Insufficient festive occasion card options for Malaysian users in current greeting card systems.

The issue is that the current greeting card system does not provide enough possibilities for Malaysian consumers to browse through cards that are appropriate for various festival occasions. Due to Malaysia's wide racial and cultural makeup, there is a need for a system that caters specifically to the various holidays and occasions observed by Malaysians, such as Chinese New Year, Hari Raya Aidilfitri, Deepavali, Christmas, Thaipusam, and so on. Users will be able to simply search and select cards that are relevant to their cultural background and tastes. As a result, there is a need for a new greeting card system that caters to the special festive events observed in Malaysia.

2. Users may not be familiar with using the website to send greeting cards.

Only 7% of individuals polled admitted that they always send an electronic message rather than a traditional card, although the convenience of sending an electronic message can be attractive [6]. Some people become more complex when do modify the card electronically than doing it manually. When users use the online greeting site to send a card, they may get the website feature confused. This is because the website will have numerous features that enable users to customize the card. This lack of familiarity can make the website confusing [7], and users may struggle to navigate the features that allow them to customize their cards.

3. Senders facing limited e-card options need help finding the right one that suits their needs.

With only a limited selection of available e-cards, it can be difficult for senders to find the perfect one that expresses their message and sentiment in the way they had intended. This can be exceedingly inconvenient for people who would like to personalize their e-cards to match the recipient's tone and the emotion of the occasion. However, many services that provide free e-cards have a restricted variety and customizing choices. Customizing e-cards can provide a more meaningful and personal message than standard e-cards, allowing the sender to add a personal touch or create something unique.

1.3 Research Objectives

1. To study the current system and determine the target audience's needs and preferences for online greeting cards.

This research's first objective is to analyze the current online greeting card system thoroughly. It will require a thorough look at the features, design elements, and delivery options available on different online greeting card websites. The next stage is to determine the target demographic for these websites and learn about their online greeting card demands and preferences. This step lets potential users be surveyed to establish the types of occasions for which they regularly send greeting cards, such as birthdays, holidays, or special events. The survey will also gather information about the design elements users look for in a greeting card, such as pre-design templates, graphics, and font styles. The research can provide insights into the features and functionalities that online greeting card websites should offer to enhance customer satisfaction and loyalty by identifying the needs and preferences of the target audience.

2. To develop a user-friendly website with a diverse collection of free e-cards for users to easily send for various occasions.

One of the potential issues with existing online greeting card websites is that they can be difficult to navigate and use, frustrating users. As a result, one of the main objectives of this project is to develop a user-friendly website that is easy to use and navigate and provides a seamless experience for users. To achieve this objective, the website must be designed with the user in mind. This means that the website must be intuitive and easy to use, with clear navigation menus and buttons that are easy to find and use. The website must also be visually appealing, with attractive graphics, color schemes, and fonts that are easily read and visually pleasing. In addition to being user-friendly, the website will also need to offer a wide range of e-cards that users can choose from. This means that the website must provide a diverse range of card designs catering to a wide range of occasions, from birthdays and holidays to weddings and graduations. Finally, to make the website as accessible as possible, it will be important to offer free e-cards to users. This will allow users to send greeting cards to their friends and family without paying for the service, which can be a significant barrier for many people. By providing free e-

cards, the website can encourage more people to use the service, which can help to build a larger user base and increase customer loyalty over time. Overall, developing a user-friendly website with free e-cards is important, as it can help address some of the key challenges and frustrations that users currently face with online greeting card websites. By providing a seamless and easy-to-use experience, the website can build a loyal user base and establish itself as a leading provider of online greeting cards.

3. To develop greeting card sending website with personalization features.

The personalization features are crucial in making the greeting card website stand out from similar platforms. Users have unique preferences, and the website should allow them to create customized greeting cards that reflect their personalities and emotions. Personalization features could include various options such as adding personal messages, selecting unique designs, colors, and fonts, and scheduling the delivery. It is also important to ensure that the website offers a diverse selection of card templates and themes that cater to various occasions, such as birthdays, holidays, party, and more. Personalization features on a website should be easy to use, simple, and available to all users, no matter how technical they are. Clear instructions and easy navigation should be in place to guide users on how to personalize and send their greeting cards.

1.4 Project Scope

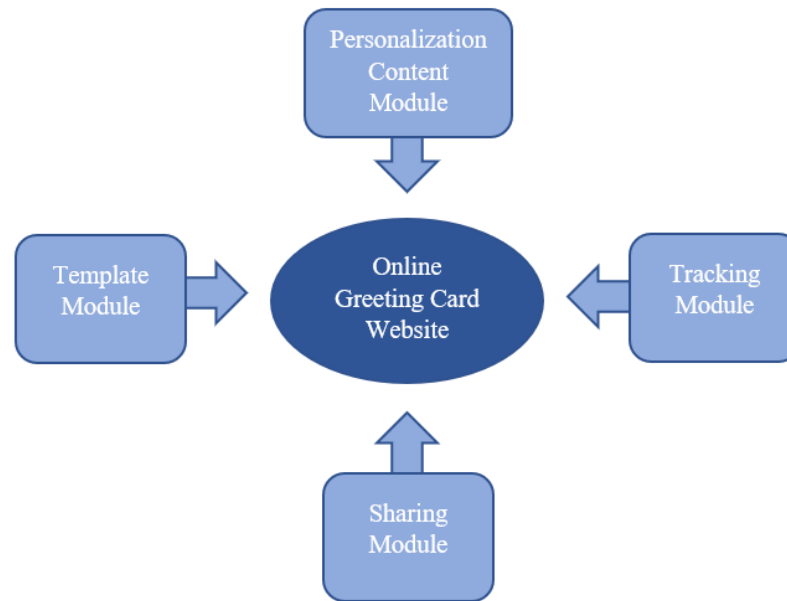


Figure 1.1 Structure Diagram for Proposed Project

Template Module

This module provides users with various pre-designed e-card templates such as birthdays, parties, festival, holidays, and more, each with various designs. The template will be according to the theme. The pre-designed templates save time and effort while allowing for a personal touch in the customization process. It can save time and ensure consistency in formatting and design across multiple files. Furthermore, pre-designed templates can be useful for those lacking design experience or creativity since they provide a starting point and inspiration for developing professional-looking papers.

Personalization Content Module

The personalized content module offers users the ability to create unique and personalized e-cards by including their own messages and images. It should be easy to add text on chosen templates to fit the user's needs and can send the e-card directly from the platform to the recipient's email. These features allow users to tailor their e-card to the recipient's preferences, adding a personal touch to the greeting.

Tracking Module

This module lets users check on the delivery status of their e-card, including confirmation that the recipient has received it. When the email is delivered to the recipient's inbox, the module should notify the user who sent the e-card. If the email fails to send, the module should additionally notify the user. Therefore, it can ensure that they reach their intended recipient in a timely manner. The module should include a dashboard so the admin may see the status of each e-card delivery, such as whether or not the email was delivered successfully.

Sharing Module

The sharing module is an important part of the online greeting card website. It gives users a variety of easy-to-use options for sending e-cards to other people. With features such as scheduled delivery and email, the module allows users to effortlessly share their e-cards. Furthermore, it allows senders to schedule the delivery of e-cards at specific dates and times, thereby ensuring that their greetings are received at the perfect moment. The email option is especially helpful because it lets users send their e-cards straight to the recipient's email address. This makes the process quick and easy. Additionally, the email option saves paper and postage costs which is beneficial for the environment as well as the user's wallet.

1.5 Impact, Significance and Contribution

The project aims to offer a service that can have a positive impact on people's lives by providing a more convenient and affordable way to stay connected with loved ones. With the increasing prevalence of digital communication, traditional greeting cards are becoming less popular, and people are turning to online means to express their sentiments. By providing a user-friendly platform for sending e-cards, it has the potential to improve the way people communicate and connect with each other. The ability to personalize and customize the e-cards can make the experience more meaningful and engaging, which can help foster stronger relationships and promote positive emotions.

Besides, this project is significant because it offers a unique value proposition to users that is not currently widely available. The ability to customize e-cards with personalized messages and design templates can make the experience more enjoyable

and memorable. Furthermore, the project has the potential to improve the overall user experience of sending e-cards by addressing the dissatisfaction that many people face with pre-existing text that cannot be edited. By providing a solution to this problem, this project can set itself apart from other e-card websites and offer a more valuable and attractive service to users.

The project can contribute to a more positive and connected society by providing a means for people to express their sentiments in a more personalized and meaningful way. In today's world, where people are increasingly reliant on digital communication, it is important to find ways to maintain human connections and emotions. By offering customizable options and improving the user experience, this project can help people stay connected with each other and express their emotions in a more authentic and heartfelt way. This can contribute to a more positive and supportive society where people feel valued and connected to each other.

Overall, the proposed project has the potential to have a significant impact, offer unique value to users, and make a valuable contribution to society. By addressing the needs and providing a user-friendly platform for sending e-cards, this project can potentially improve the way people communicate and connect with each other in the digital age.

CHAPTER 2 Literature Reviews

2.1 Review on Similar Website

Some websites are reviewed in this chapter, the website are CrossCards, Greetings Island, Open Me, Someecards, and World Wildlife Fund (WWF). The strengths and weaknesses of the websites are discussed and compared.

2.1.1 CrossCards

CrossCards is the most popular online Christian greeting card site. It offers a wide selection of cards for various occasions. It was rated highly in terms of perceived enjoyment, ease of use, and usefulness among Christian users. Senders may choose the ideal birthday, holiday, anniversary, love, or hilarious card among the hundreds available on this site [8]. The method for sending cards is no need to register a user's account for the site. When sending the card, senders must include the name, email address, and information of one or more recipients, as shown in figure 2.1. After that, figure 2.2 show that senders may consist of a message that will display below the e-card after it has been opened. It also needs to modify the wording of the email's subject line. In addition, it allows the sender to send it immediately or later. So, senders did not need to worry about it. The reason for the circumstance is that senders will receive an email notification when the site delivers the card and another email notification after the card is opened. There are good and bad points to every online platform. On the landing page for the card, users may come across several adverts, and their possibilities for personalization will be severely limited. This website did not let the customer edit the text on the existing cards. Besides, it will automatically add users to their email list before sending out any card users purchase. However, add users to the list without requesting them. The website may simplify unsubscribing, so users can unsubscribe if they feel the information is useless.

Figure 2.1 CrossCards Shipping Detail

Figure 2.2 CrossCards Shipping Detail

Strength of CrossCards:

1. Offers free e-cards for sending to one or more than one recipient.
2. Simple and user-friendly interface
3. No need to register a user's account for using it.
4. Time of sending is flexible because of the schedule option.
5. Two emails will send to sender which is when the card is sent from the site, and another after it is seen.

Weaknesses of CrossCards:

1. Multiple advertisements may be seen on the landing page for the card.
2. Personalization options are restricted.
3. Cannot find valuable assistance information on the website.

2.1.2 Greetings Island

Greetings Island's brand-new website allows users to construct free invites, announcements, greeting cards, and wedding invitations. It has a fantastic variety of e-cards for any occasion, from holidays to special events to daily greetings. Moreover, this software is quite simple to use. All left is to choose a template, upload an image, pick a typeface, pick a colour scheme, and enter some text. Based on figure 2.3, the unique function of this website is that it can edit the inside and the back of the card by adding photos or entering text. Besides, it can change the inside layout. When the user has done designing their customized e-card, they may print it, send it through email or link, or store it as a PDF [9]. Furthermore, this website enables recipients to send a thank you message instantly. Unfortunately, there are various disadvantages to using this website, including the fact that the card must be shipped promptly. In addition, it has no scheduling options and cannot send the card without a registered account.

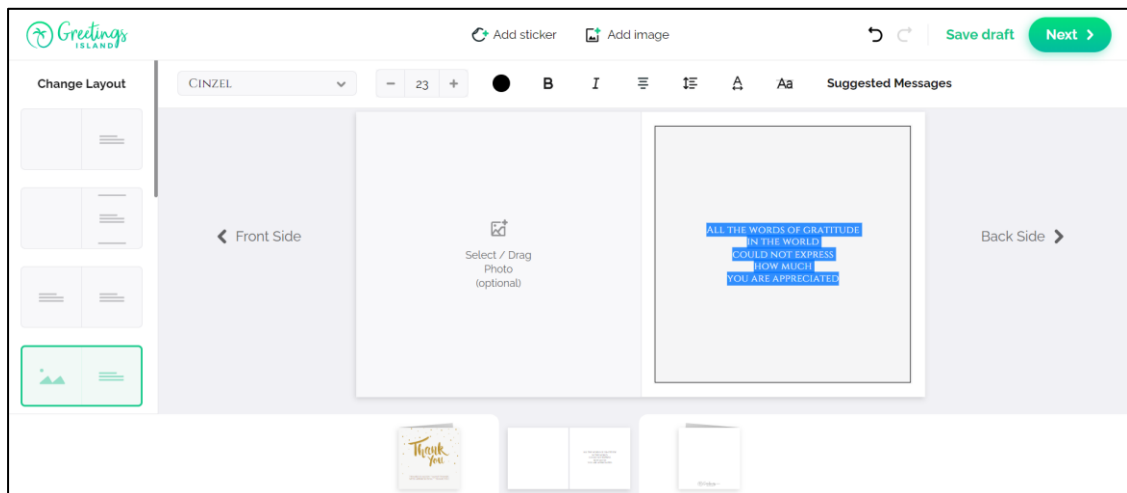


Figure 2.3 Greetings Island Customize Card Detail

Strength of Greetings Island:

1. Able to use the website with free and easy.
2. A wonderful wide variety of e-cards for all occasions, including holidays, special events, and everyday greetings.
3. Able to customize the inside and back of the card by adding images or text.
4. Allow user to print and send e-card through email or link, or store it as a PDF

5. Allow recipients to easily respond with a thank you card.

Weaknesses of Greetings Island:

1. There are no alternatives for pre-scheduling the e-card.
2. The card cannot be sent without a registered account.

2.1.3 Open Me

Free group e-cards are available on Open Me, allowing users to digitally pass a card around with loved ones or colleagues so that everyone may write a personal note before sending it to the receiver. Open Me lets users send free e-cards with cute artwork and vibrant colors. Find electronic greeting cards in various categories, including animals, food, funny nature, or photos, by searching by occasion or holiday. This website allows the user can send these greeting cards for free through email or Facebook. And it will enable a delay in the delivery of the electronic card if the senders want it to send after some time. So, it allows the senders to prepare schedules months or even years in advance is a possibility as show on figure 2.4. The website will confirm the card's delivery and opening by email. Therefore, senders can be reassured that the card has been sent to the recipients. However, it also has the same limitations as other review websites. For example, it must first register an account before sending the card. Moreover, there is only one place to enter some text, and this website cannot send a thank-you message to the receiver by email [10]. On this website, it only can send a thank-you message to post a reply on Facebook as shown in Figure 2.5. It cannot directly send back message on the website.

← BACK TO DELIVERY

ARRIVAL METHOD

How do you want to send this card?

SEND IMMEDIATELY

Note: We will send the card now. If you want your friends to sign your card before it's sent, then we recommend selecting "schedule in the future."

SCHEDULE IN THE FUTURE

Finished with arrival date?

Finish and send card

YOU ROCK!

You Rock

Design By Claire London

Figure 2.4 OpenMe Sending Method

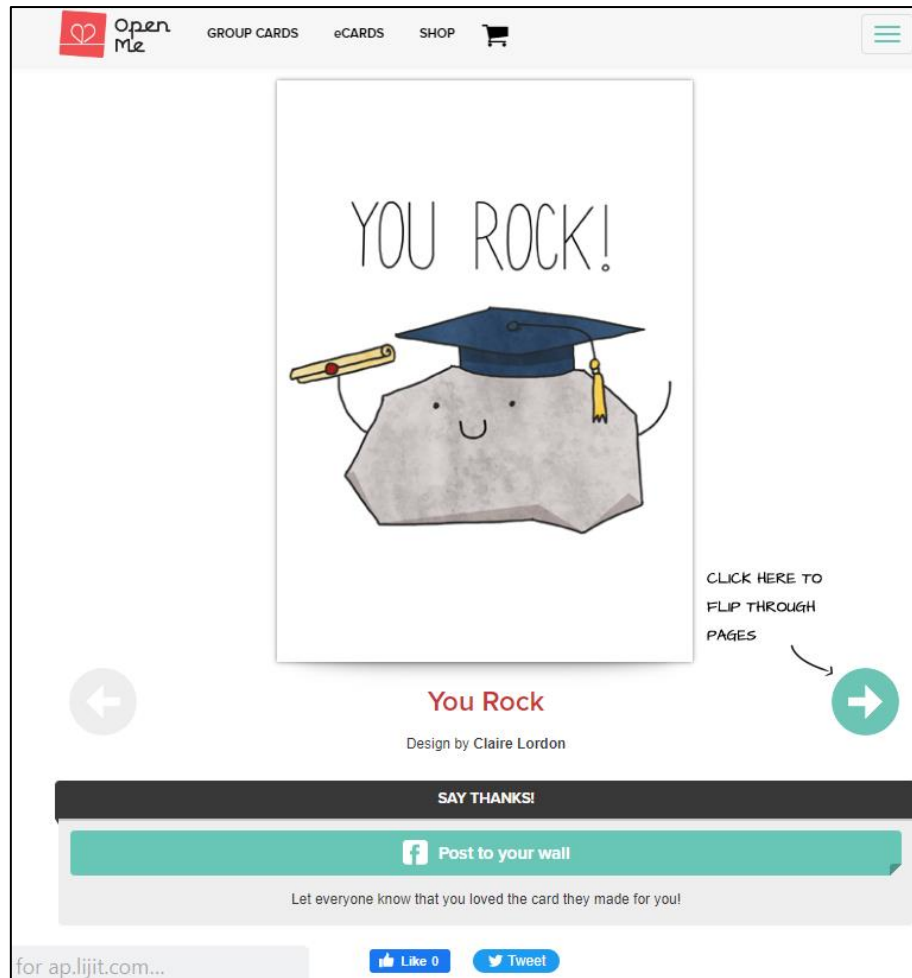


Figure 2.5 OpenMe Reply on Facebook

Strength of OpenMe:

1. Send free e-cards with cute artwork and vibrant colours through email or Facebook.
2. Enable a delay in the delivery card.
3. Receive emails when card is delivered and opened.

Weaknesses of OpenMe:

1. Sending e-cards requires register account.
2. Limited to edit card.
3. Send a thank-you message to post a reply on Facebook.

2.1.4 Someecards

Someecards began in 2006 as a unique spoken e-card service and has since evolved into one of the most frequently shared comedy brands on the Internet [11]. Their writing staff daily produces new e-cards, articles, and unique material. It delivers a one-of-a-

kind variety of free e-cards that include sarcastic, pencil-drawn characters in the manner of memes. These characters seem intent on communicating precisely what is going through their thinking. There is a large selection of prepared e-cards to choose it. However, users should be aware of the many downsides of this website, such as the inability to customize or design one's card and the subsequent need for manual sharing through links or email.



Figure 2.6 Someecards Manual Sharing

Strength of Someecards:

1. Free e-cards with caustic, pencil-drawn meme characters.
2. Large selection of prepared e-cards to choose.

Weaknesses of Someecards:

1. Impossible to make any changes in the card.
2. Must use own email to send the card.

2.1.5 World Wildlife Fund (WWF)

The WWF offers free e-cards featuring lovely animals in their natural settings. There provide free greeting cards for all occasions and celebrations, including birthdays, friendships, love, gratitude, invitations, and announcements. These have their style and appeal to all the people, such as kids and adults. Senders may schedule their delivery for up to ten years into the future and send them to numerous people at once [12].

Unfortunately, users utilising this website will face several potential downsides, including the possibility that the website may send their messages slowly to their intended recipients. In addition, users could not change any text that may have previously existed on the image.

WWF

OUR WORK SPECIES PLACES ABOUT US HOW TO HELP

Send a Love & Friendship Ecard

Looking for a different ecard? [See all ecards.](#)

WWF

♥ I like you a ton.

© naturepl.com/David Fleetham/WWF

* Your Name:

First

Last

* Your Email:

Send me email about important conservation news and how I can help WWF protect the diversity of life on Earth.

Remember me. [What's this?](#)

* Send To:

Enter multiple addresses on separate lines or separate them with commas. There is a maximum of 10 email addresses allowed per delivery.

(Note: We respect your privacy and do not send unsolicited email to the addresses you enter. For further information, visit worldwildlife.org/privacy)

Subject:

Message:

Send message later

Nov 29 2022

SEND PREVIEW

Figure 2.7 WWF Shipping Detail

Strength of WWF:

1. Provides free e-cards of beautiful animals in their natural environments.
2. Allow several recipients to be sent at the same time.
3. Able to send immediately or later.

Weaknesses of WWF:

1. Unable to modify any pre-existing text on the image.
2. Take some time sending the card.

2.2 Comparison between Existing System and Proposed System*Table 2.1 Comparison between Existing System and Proposed System*

	CrossCards	Greetings Island	Open Me	Someecards	World Wildlife Fund (WWF)	Proposed Online Greeting Card Website
Offer free e-cards	✓	✓	✓	✓	✓	✓
Personalize cards' content	✗	✓	✗	✗	✗	✓
Able to send for one or more than one recipient	✓	✓	✓	✓	✓	✓
Scheduled sending	✓	✗	✓	✓	✓	✓
Receive emails when card is delivered and opened	✓	✓	✓	✗	✗	✓
Recipients can send a thank you card back	✓	✓	✗	✗	✗	✓

CHAPTER 3 Proposed Method/Approach

3.1 Methodology

A methodology is a structured strategy to applying the System Development Life Cycle (SDLC). SDLC methodology is a way to plan, analysis, design, and implement the software applications [13]. It is a set of rules that helps make sure that software development projects are finished on time, on budget, and to the quality standards that are needed. The planning, analysis, design, and implementation phases are common parts of the SDLC methodology. Each phase is made to meet certain goals and deliverables. The following diagram illustrates the typical stages that are involved in the SDLC method:

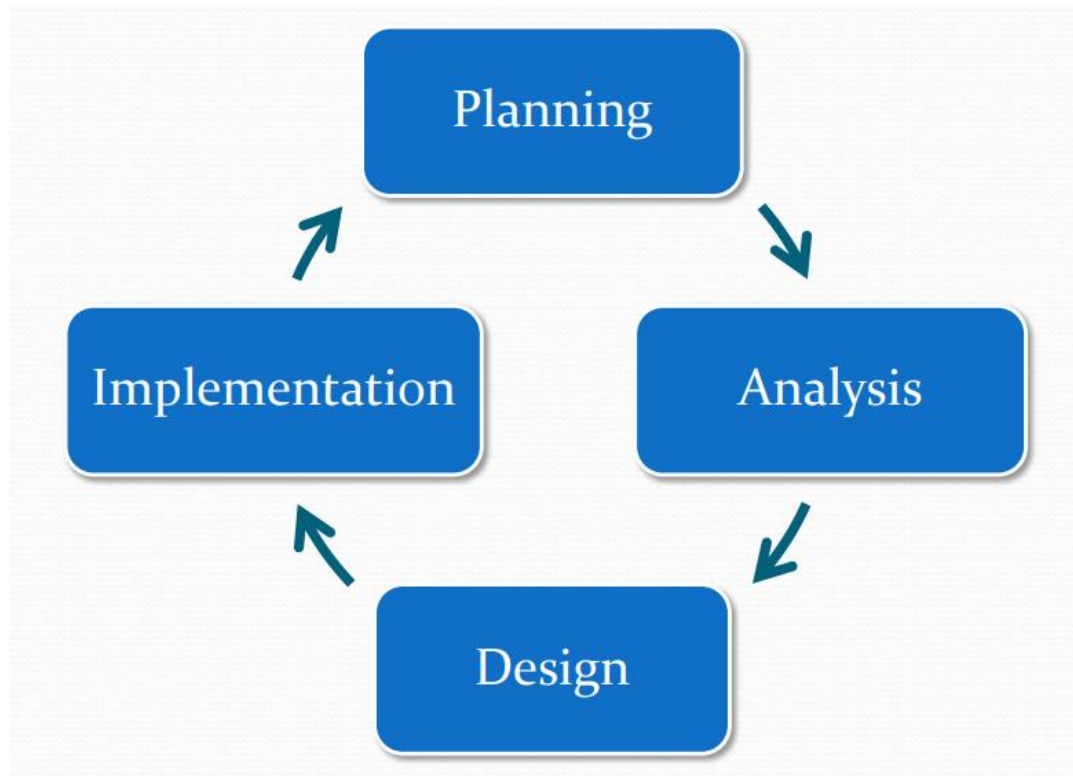


Figure 3.1 System Development Life Cycle (SDLC)

In the planning phase, the project developers need to specify the project scope, aims, and criteria. During the analysis phase, they need to thoroughly analyses the requirements and creates a comprehensive functional specification for new system. The system developer must design the interface and layout of the system during the design phase. Also, provide comprehensive explanations of how it works and what features it has. During the SDLC's final phase, implementation, the system is constructed,

evaluated, and installed at the client's location. If the system runs smoothly on the client site, the system is set for launch.

The selection of the suitable SDLC method is one of the most important factors affecting the final outcome of a project. If the incorrect SDLC methodology is selected, either the project will fail or more time and money will be required in the development phase than initially planned. Research on appropriate SDLC methodologies for the system is required prior to making a final decision on which SDLC approach will be used. The appropriate SDLC method for the system needs to be studied before a final decision is made on which SDLC method to use.

3.1.1 Waterfall Development

The waterfall development is one of the first category of systems development methodologies. In this methodology, it is essential that each step be finished before moving on to the next one. Since it is exceedingly difficult to go backward, this methodology is best suited for small projects. Therefore, the project requirement must be very clearly else the developer has to start from the beginning. Plus, this methodology is not appropriate for big or complicated projects.

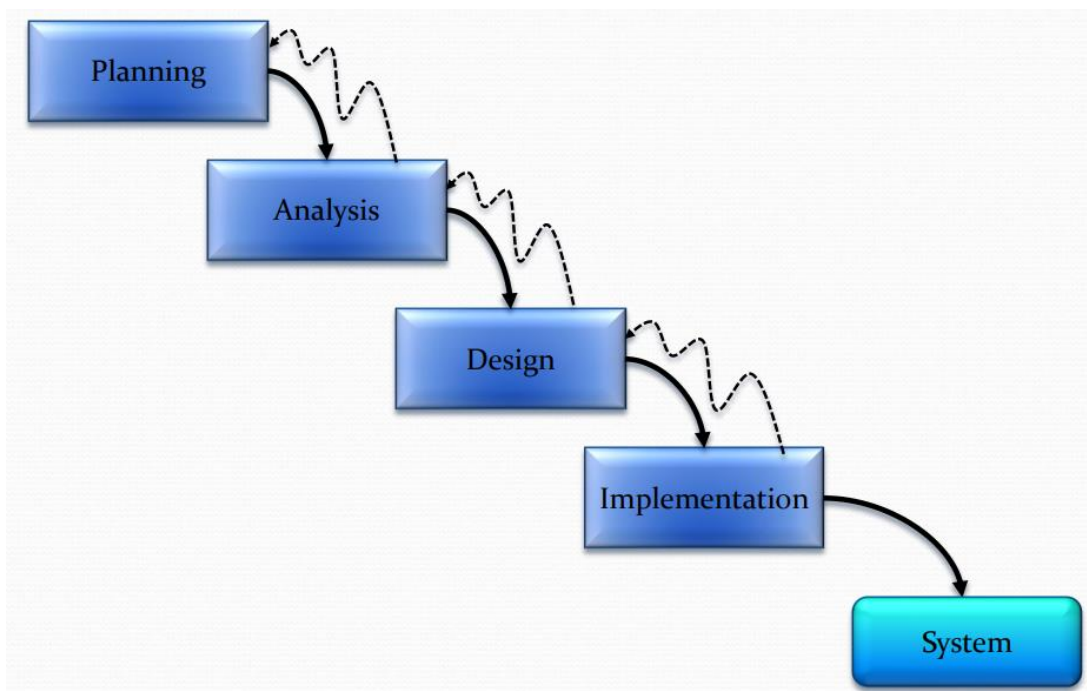


Figure 3.2 Waterfall Development

3.1.2 Phased Development

In phased development, the entire system is divided towards smaller, more manageable pieces. The analysis phase determines the overarching system idea. The requirements will be classified into a number of versions. The first version includes the most essential and basic requirements. After version 1 is implemented, the system developer will move on to version 2. Further analysis was conducted based on past requirements and merged with new ideas. The phased development methodology is appropriate for complicated system. Besides, it allows developer to split it up a system into multiple versions, allowing to release the first version of the software to users quicker. Users' feedback on the first version will help and guide the development of the next version. It allows for the modification, enhancement, and adjust of features past to their next version. So, it is very helpful for short deadlines project. However, the system that is initially delivered to the user does not cover all of the features that may create issues for the users.

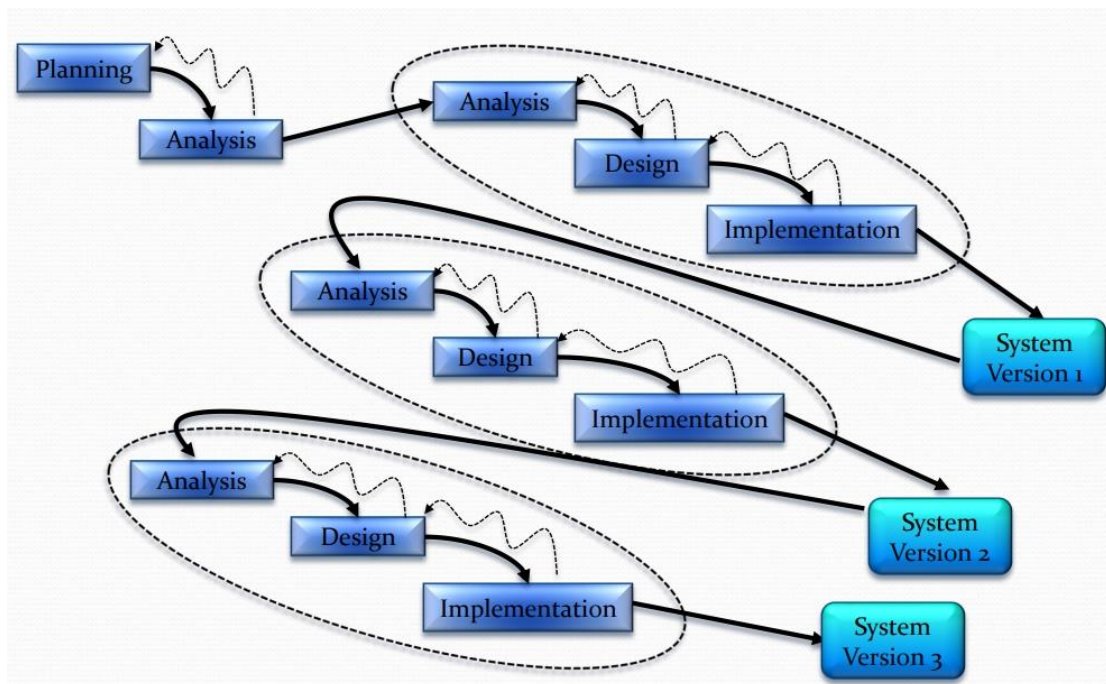


Figure 3.3 Phase Development

3.1.3 Prototyping

Prototyping-based methodologies cycle through analysis, design, and implementation until the system is finished. Analysis, development, and implementation are all done concurrently in prototyping to begin creating a software prototype. Once the prototype can satisfy the user requirements, the developer will begin coding and developing the final version of the product. It is useful when the user specification is unclear. Furthermore, prototyping is good for limited timelines. However, if the prototype does not fulfill the requirements that users have, the developer must keep improving their prototype until it does meet their requirements. It will require additional time and money to develop the prototype.

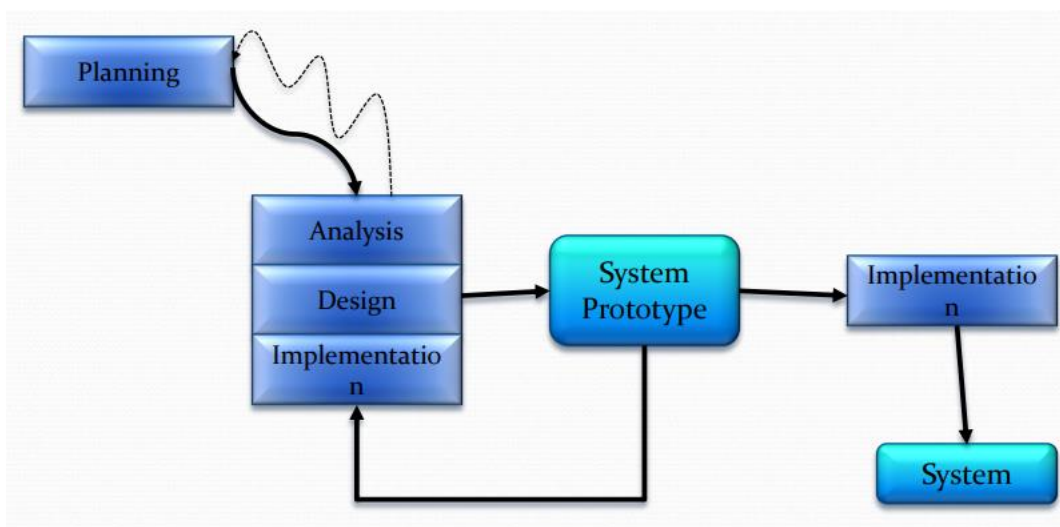


Figure 3.4 Prototyping

3.1.4 Comparison Methodology

Table 3.1 Comparison Methodology

<i>Ability to Develop Systems</i>	<i>Waterfall</i>	<i>Phased</i>	<i>Prototyping</i>
With Unclear User Requirement	Poor	Good	Excellent
With Unfamiliar Technology	Poor	Good	Poor
That are Complex	Good	Good	Poor
With Short Time Schedule	Poor	Excellent	Excellent

3.1.5 Chosen Methodology - Prototyping

After compare and analysis different methodology by consideration on variety factors including project size, difficulty, cost, schedule, and technology. A **prototype** with the basic functions of the system can be developed rapidly and delivered promptly to potential users, prototyping methodology will be appropriate for developing the Online Greeting Card Website. Aside from that, system prototypes allow developers to show end users how the system functions. If end users realize that something should be added to the existing system, developers can begin work on another version. To sum it up, using prototyping methodology allows developers to handle and implement systems more easily, and it is appropriate for projects with uncertain customer needs and a limited time timeline.

Prototyping technique is divided into four stages: planning, analysis, design, and implementation. It will cover all four stages of the Prototyping methodology's goals.

3.1.5.1 Phase I – Planning Phase

The primary objectives of this task are to:

- Identify problem statement
- Establish the scope of the project
- Outline the goals of the project

Planning is a critical phase of every project since it allows developers to determine whether the project is worthwhile for development. In this phase, researching the project background is the important step. From the research, developers will have a better understanding of the issues with the current system, including who is affected by those issues and why it is necessary to find a solution to those issues. The next process involves developing the Online Greeting Card Website's issue statement, project scope, and project goals. At this phase, a weekly meeting with the supervisor is required. This phase results in the creation of a preliminary report that includes the backdrop, problem description, project scope, and project goals of Online Greeting Card Website. By surveying potential users is a crucial step in determining the scope and feasibility of the project. The survey should be intended to collect data on the particular occasions for which users send greeting cards, such as birthdays, holidays, and special events. It could also inquire about how often users send cards for each occasion.

3.1.5.2 Phase II – Analysis Phase

The primary objectives of this task are to:

- Benchmark the project.
- Identify project innovation and contribution.
- Identify the technologies and software used.
- Compare the chosen methodology.

The initial task that has to be complete in the analysis phase is to choose three different systems that will serve as the model for our project's benchmarking. The objective of benchmarking is to expose its strengths and weaknesses. Next, we need to do is to review the similar system and figure out where the innovations and contributions are. Developers should prioritize this work to increase the system's functionality. The next task is to determine and study the technologies and software that will be used in the development project. Before moving on to the design phase, choose multiple SDLC approaches to compare and choose one to use in the development project. It is essential at this stage to meet with supervisor once each week. The report from the preceding step will be revised and updated as the result of this phase.

3.1.5.3 Phase III – Design Phase

The primary objectives of this task are to:

- Identify the system's impact, importance, and contribution
- Describe the method that was selected
- Create Gantt chart
- Design databases (ERD)
- Create diagrams (Use case and Activity diagram)
- Create prototype

The primary purpose during the design phase is to determine the project's impact, significance, and contribution. The following task is to clarify on the chosen methodology. The developer was required to explain the tasks needed in each step of the selected approach. The third step is to develop a Gantt chart for the current and coming semesters. The next step is to build the database, which entails determining all of the entities required by the system, the attributes inside each entity, and the

connections between each entity. After that, a use case diagram must be created to illustrate the functions that end users may execute. Before proceeding with prototype design, developers must submit a project proposal to the supervisor. The project proposal includes every data in the preliminary report and the material in the design phase, such as the impact, contribution, importance, database design, use case diagrams and all required project diagrams.

3.1.5.4 Phase IV – Implementation

The primary objectives of this task are to:

- Code the system
- Develop a test plan
- Create a user manual
- Test the system
- Demonstration the system
- Present the final project

The implementation phase is considered the most challenging task among the four phases. The first step is coding and connecting the database to the prototype created during the design phase. Once the coding and database connection is completed, a test plan and user guides should be created. The test plan outlines the types of testing required and how the system will be tested, while the user guides provide end users with instructions on how to use the Online Greeting Card Website. Suppose the prototype fails to meet the user requirements during system testing. In that case, it may need to go through the analysis, design, and implementation phases until it passes and is accepted by the supervisor. Once the prototype is successfully tested and accepted, a final version of the Online Greeting Card Website will be developed and demonstrated to end users.

3.2 Technology Involved

3.2.1 Hardware Requirements

A computer is used as part of the project's hardware. A computer was provided for the creation of a website. Computers can quickly read through lengthy, coded manuals to create and maintain a successful website.

Table 3.2 Specifications of laptop

Description	Specifications
Model	Acer Swift SF514-54T
Processor	Intel Core i5-1035G1
Operating System	Windows 10
Graphic	UHD Graphics LPDDR4
Memory	8GB RAM
Storage	512 GB

3.2.2 Software Requirements

In order to develop this project needed variety of different technologies and pieces of software. These tools include the PHP programming language, java script, MySQL, and Cascading Style Sheets (CSS).

3.2.2.1 PHP Programming Language



Figure 3.5 PHP Programming Language Logo

The Online Greeting Card Website will be created using PHP Programming Language, a widely used scripting language that's well-suited for web development. Since this is a web-based project, PHP is the language of choice. PHP is known for being fast, flexible, and practical [14]. Moreover, PHP is an open-source programming language, which means that the source code is freely available for anyone to access and use for their website development purposes. Another benefit of PHP is its platform independence, making it usable on various operating systems such as Windows and Linux. This project will utilize PHP for all web-based system functions. It can connect to database to access, update or modify the data.

3.2.2.2 Java Script



Figure 3.6 Java Script Programming Language Logo

JavaScript is a computer language which is frequently utilized to create web pages. It is a client-side scripting language, meaning the source code is processed by the client's website rather than the web server [15]. JavaScript may work independently of the web server. This project uses a JavaScript file to verify the user input. A warning dialogue box will show if the data entered by users is incorrect. This verification clearly defined set that the data entered by users is accurate and valid, decreasing the probability of errors and enhancing the overall user experience. Furthermore, this method can aid in preventing security attacks or data loss caused by the incorrect entry.

3.2.2.3 CSS



Figure 3.7 CSS Logo

CSS is an abbreviation for Cascading Style Sheet, which refers to a web page that combines numerous sources in a particular order of priority when style elements conflict. This programming language enables developers to construct text layouts and format a website's design. CSS will be utilized to design the interface for this project's whole web-based system. It separates the content from the presentation, simplifying, maintaining, and updating the website's appearance. Additionally, CSS can enhance the efficacy of a website by reducing its launch time. CSS also provides a wide range of styling options that can help improve the overall user experience and make the website more visually appealing to visitors. This can lead to increased engagement and better conversion rates for organizations.

3.2.2.3 Xampp Web server



Figure 3.8 Xampp Logo

The Online Greeting Card Website necessitates a web server to operate, particularly during the testing phase after project development. The Xampp web server, a lightweight Apache distribution, is selected for this purpose as it enables the creation of a local web server for testing [16]. Xampp, which stands for Cross Platform, Apache, MySQL, PHP, and Perl, is a feasible option for developers to test their web-based systems, and it is compatible with various operating systems, including Linux, Mac, and Windows [17]. Given that the developers have opted for the MySQL database and PHP programming language to develop the Online Greeting Card Website, Xampp is a suitable choice as the website's web server.

3.2.2.4 PhpMyAdmin



Figure 3.9 phpMyAdmin Logo

PhpMyAdmin is a free web-based administration tool for MySQL databases developed in PHP. It allows users to perform common database management duties like managing users, tables, databases, columns, and relations. One of PhpMyAdmin's standout features is its ability to generate graphics of database layouts in various forms, allowing users to easily visualise the structure of their databases. It also enables users to import data from CSV and SQL files. It includes predefined functions for converting data into various formats, such as showing BLOB data as an image or a download link. Furthermore, PhpMyAdmin can manage numerous servers, making it a versatile and efficient tool for managing MySQL databases.

3.3 User Requirement Gathering

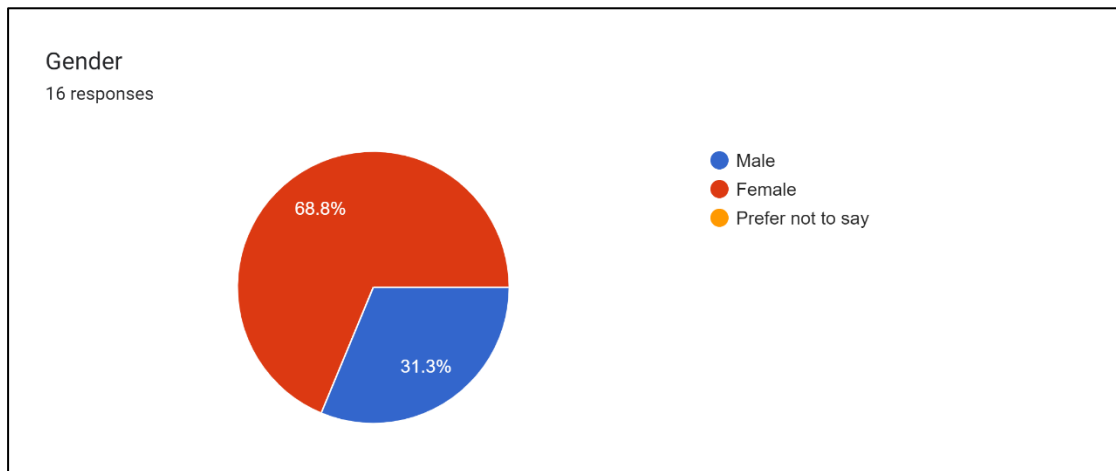


Figure 3.10 Gender of Respondents

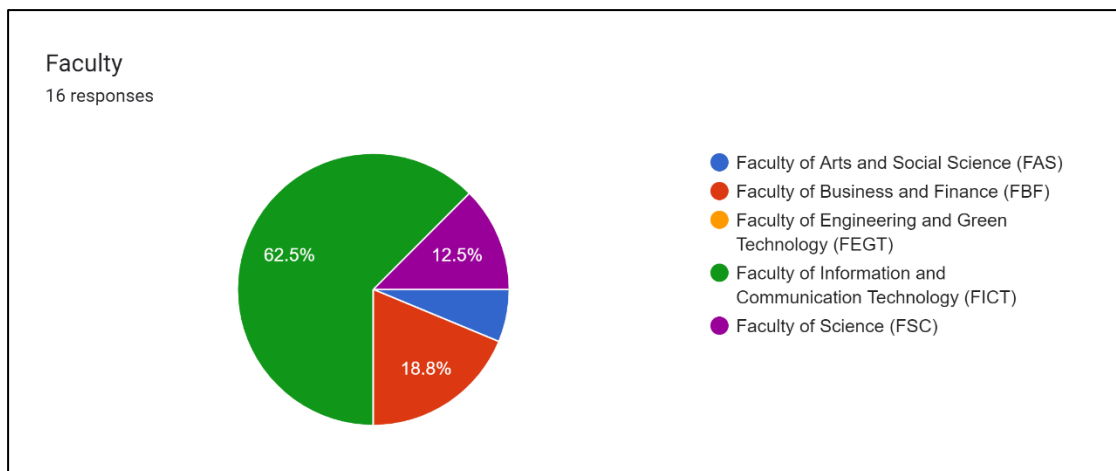


Figure 3.11 Faculty of Respondents

This survey to gather user requirements for an online greeting card website, and received responses from a total of 16 individuals. Among the respondents, 11 (68.8%) were female and 5 (31.3%) were male. The survey was distributed across various faculties, with the majority of respondents coming from the Faculty of Information and Communication Technology (62.5%), followed by the Faculty of Business and Finance (18.8%), Faculty of Science (12.5%) and the Faculty of Arts and Social Science (6.3%).

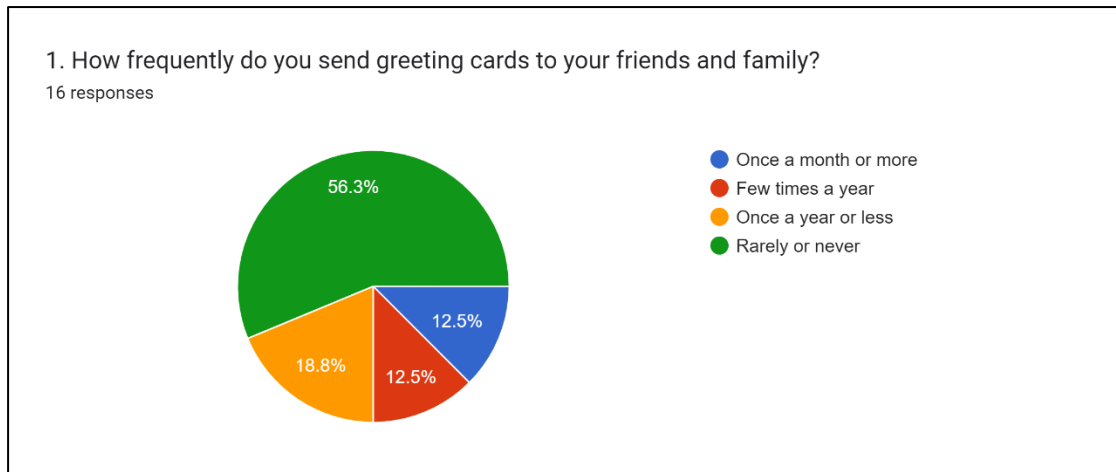


Figure 3.12 Frequency of Respondents Sending Greeting Card

Figure 3.12 shows that most respondents rarely or never send greeting cards to their peers and family. 56.3% of respondents said they rarely or never send greeting cards, implying that this group may not place a high value on mailing greeting cards or may have other ways of communicating with their loved ones. 18.8% of respondents said they send greeting cards once a year or less. This group of people may regard greeting cards as an occasional gesture rather than a standard method of communication. 12.5% of respondents said they send greeting cards a few times a year, while another 12.5% said they send them once a month or more. These people may place a more excellent value on sending greeting cards and see them as a means to maintain or strengthen relationships with loved ones. Overall, the data indicate that while sending greeting cards may not be a regular activity for everyone, a significant percentage of people value this gesture and see it as an important way to connect with their friends and family. This information can determine the intended audience for a greeting card.

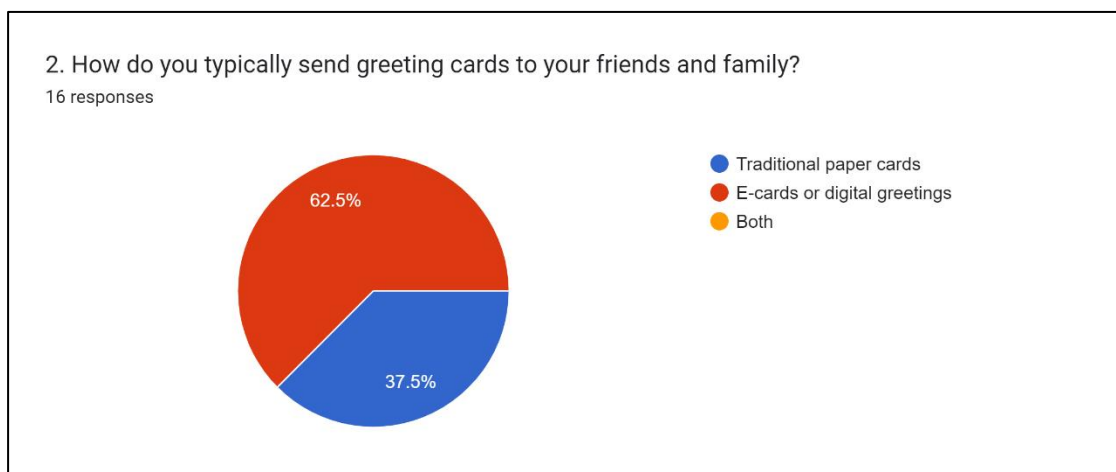


Figure 3.13 Methods of Greeting Card Sending

The above data shows that many respondents (62.5%) send greeting cards to their friends and family via e-cards, while 37.5% favour traditional greeting cards. This demonstrates a distinct preference for electronic greeting cards over traditional greeting cards. Because of their convenience, ease of use, and ability to be sent immediately and delivered directly to the recipient's inbox, e-cards are becoming increasingly popular. On the other hand, traditional greeting cards necessitate more effort and time to buy, write, and send but are often perceived as more personal and meaningful by some.

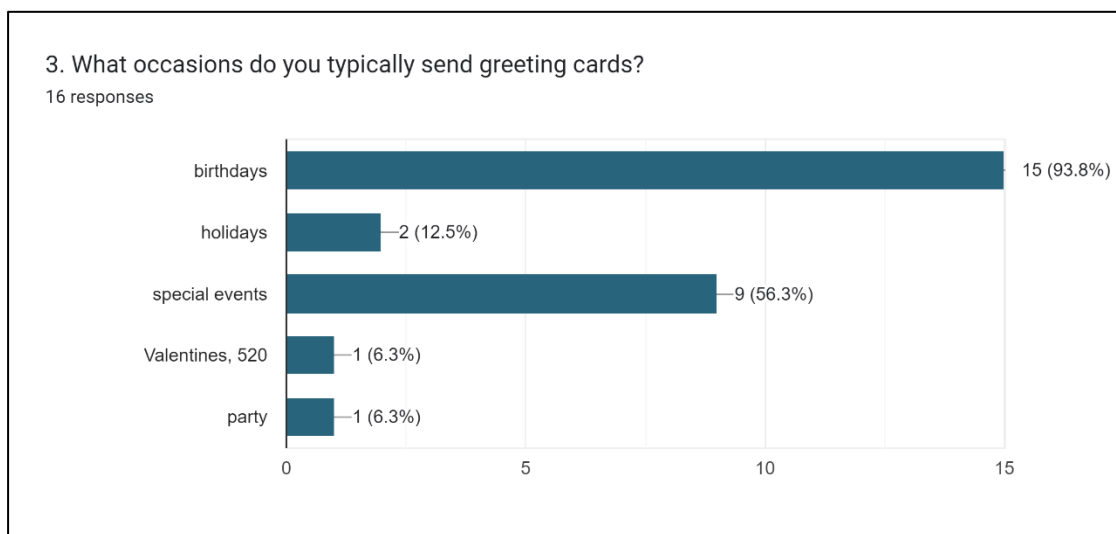


Figure 3.14 Analyzing Greeting Card Occasions

Based on the responses data, birthdays are the most frequent occasion for sending greeting cards, with 93.8% of respondents indicating that they do so regularly. Special events were also every day, with 56.3% of respondents saying they send cards for such occasions. This is most likely because birthdays are a significant milestone and a time to celebrate, and mailing a card is a way to show someone that you care and are thinking of them on their special day. Furthermore, because birthdays are a recurring event, individuals may have more opportunities to send cards for this occasion than others. Furthermore, the low proportion of respondents who said they send cards to parties indicates that greeting cards are not a typical or expected gift for this occasion. Other types of celebration, such as bringing food or drinks, maybe more prevalent at parties.

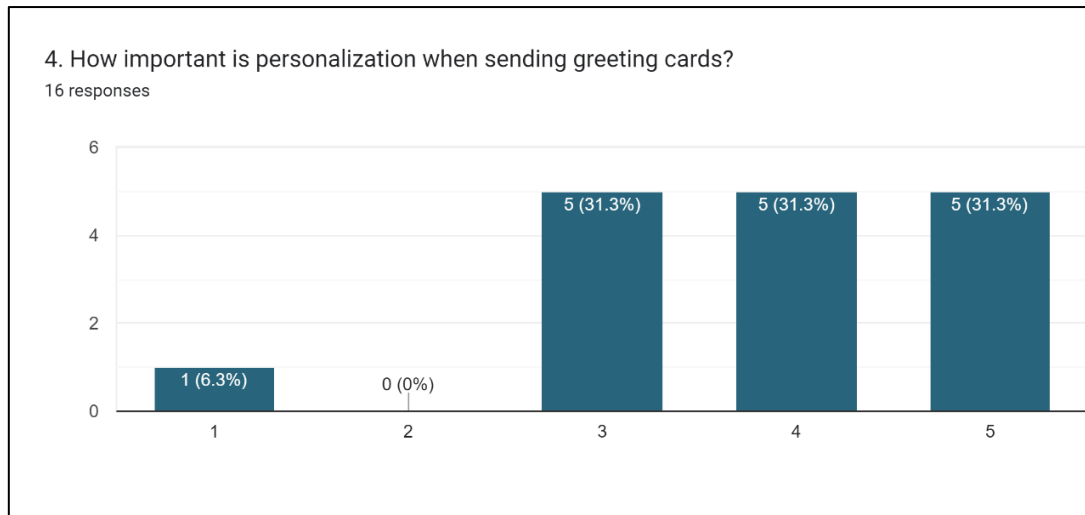


Figure 3.15 Importance of Personalization in Greeting Cards

Based on figure 3.15, personalization appears somewhat essential when sending greeting cards. The majority of respondents, 31.3%, rated the importance of personalization as 3 out of 5, indicating that it is somewhat essential but not a critical factor. An equal proportion of respondents rated the importance of customization as 4 out of 5 and 5 out of 5, indicating that personalization is essential for some people when sending greeting cards. Only 8.3% of respondents offered a 1 out of 5, showing they do not value personalization when sending greeting cards. Surprisingly, no respondents offered a rating of 2 out of 5, indicating that most people prefer personalized greeting cards. These findings suggest that personalization is essential to many people when sending greeting cards, but it may not be necessary for everyone. Taking the time to personalize a greeting card with a thoughtful note or unique touch may be appreciated by the recipient and can help make the card more meaningful and memorable.

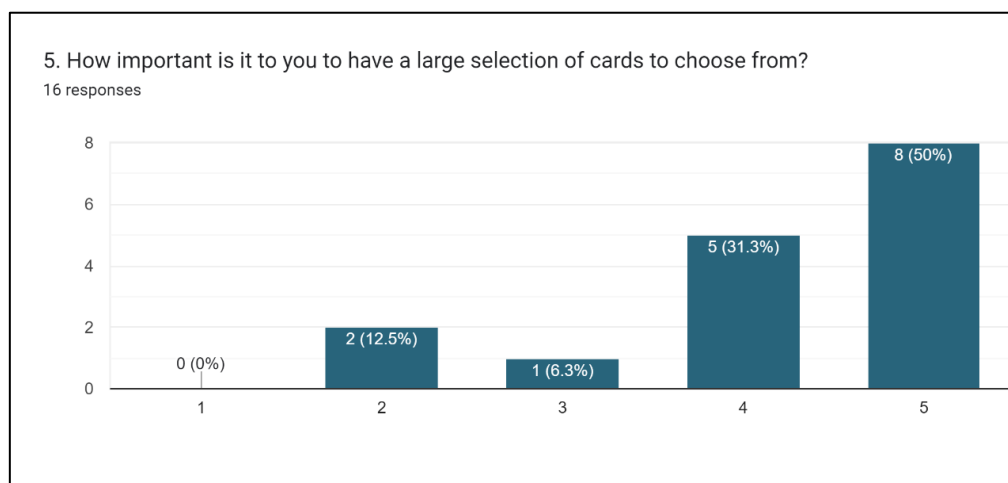


Figure 3.16 Analyzing the Impact of Selection on Greeting Card

Based to figure 3.16, having a large selection of cards to choose from is essential to the majority of respondents. 50% of respondents rated the significance of choice as 5 out of 5, indicating that having a wide variety of cards is very important to them. 31.3% of respondents rated 4 out of 5, indicating that selection is essential but not critical when selecting a greeting card. 12.5% of respondents rated 2 out of 5, meaning that when choosing a greeting card, the selection is not especially essential to them. Finally, 6.3% of respondents rated 1 out of 5, suggesting that when selecting a greeting card, the selection is unimportant to them. Overall, these findings indicate that having a large selection of cards is essential for most people when selecting a greeting card. Offering a wide range of card choices can help consumers find a card that meets their needs and preferences and may be a deciding factor in sending e-cards.

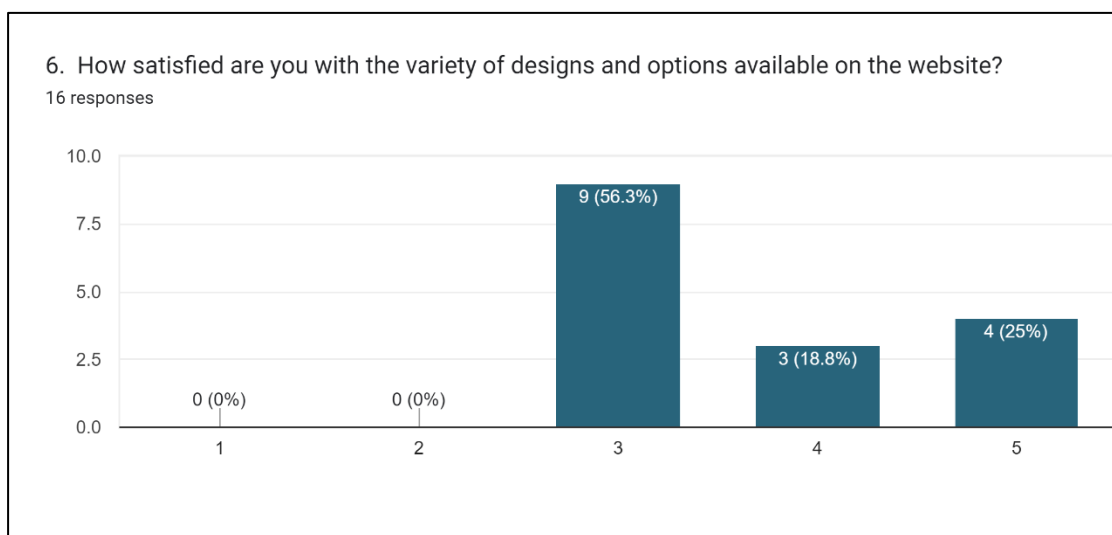


Figure 3.17 Examining Customer Satisfaction with Greeting Card Website Variety

According to the data, respondents are usually pleased with the variety of designs and options available on the website. 56.3% of respondents rated the website's design and options as 3 out of 5, indicating moderate satisfaction. 18.8% of respondents rated the website's design and options as 4 out of 5, indicating high satisfaction. 25% of respondents rated the website's design and options as 5 out of 5, indicating a very high degree of satisfaction. Overall, these findings suggest that, while the website meets the requirements of most respondents, there may be room for improvement in offering more variety and options. However, the fact that a quarter of respondents rated the current selection as 5 out of 5 suggests that some users are delighted. This information could

help the website find areas for improvement and make changes to satisfy the needs of its users better.

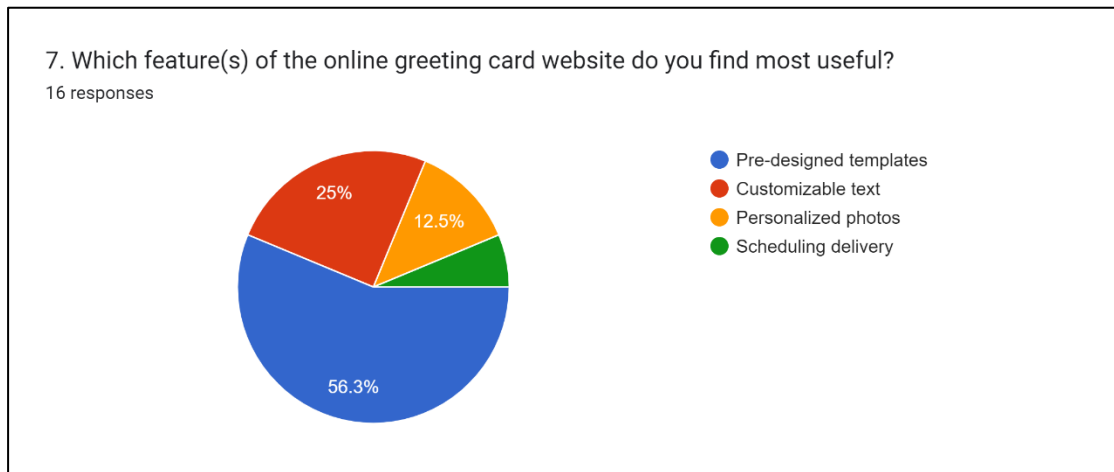


Figure 3.18 Identifying the Key Features of Greeting Card Websites

Figure 3.18 shows respondents consider pre-designed templates the most helpful element of online greeting card websites. Pre-designed templates are deemed the most valuable element by 56.3% of respondents. This indicates that users value having a variety of pre-made designs, which can save time and make creating and sending a greeting card more practical. According to 25% of respondents, the most helpful feature is customizable text. This demonstrates that users value the ability to personalize their greeting cards, such as by including a personalized note or changing the font and layout. Customized photos are deemed the most helpful element by 12.5% of respondents. This indicates that users value the ability to add their own pictures to greeting cards, which can make the card more meaningful and personalized. Finally, 6.3% of respondents believe that the most helpful feature is the ability to schedule delivery. Users value the ability to plan and ensure that their greeting cards reach on time, such as for birthdays or holidays.

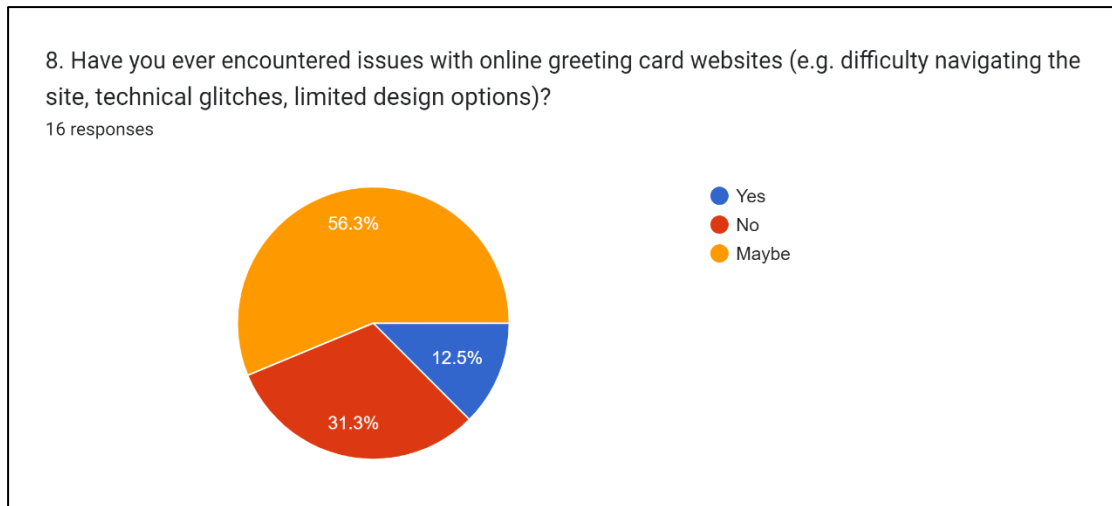


Figure 3.19 Exploring the User Experience of Online Greeting Card Websites

Figure 3.19 shows many respondents have had problems with online greeting card websites. When asked if they had previously experienced problems, 56.3% said "maybe." This indicates that some usability or technical problems on online greeting card websites are not uncommon, but they are also not universal. 31.3% of respondents said "no," suggesting they had no problems with online greeting card websites. This is a positive result because it indicates that many users can easily use online greeting card websites. 12.5% of respondents chose "yes," suggesting they had problems with online greeting card websites. This indicates that some aspects of online greeting card websites could be improved, such as website navigation, technical stability, or design options.

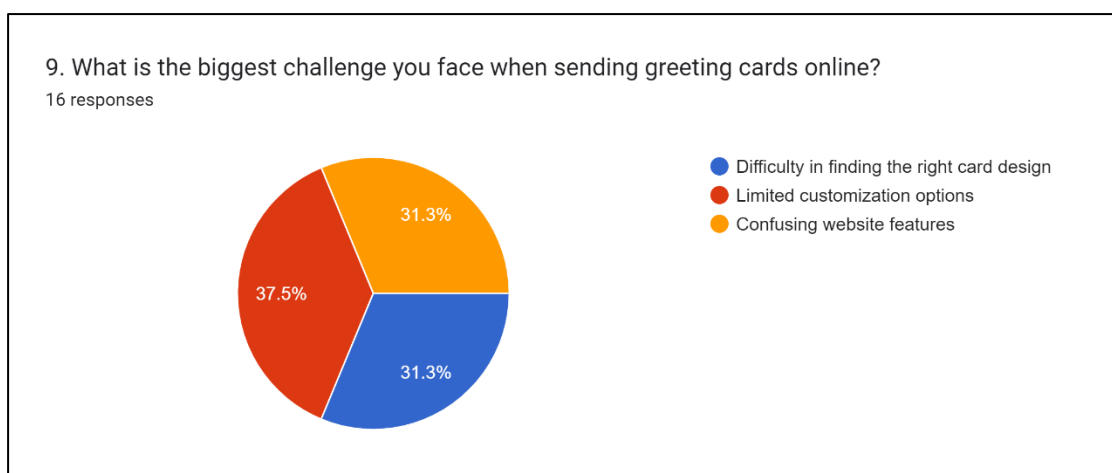


Figure 3.20 Challenges Faced When Sending Greeting Cards

The responses show that the most difficult challenge encountered when sending greeting cards online varies by the respondent. However, most respondents (37.5%) were constrained by limited customization options, and a substantial number (31.3%)

struggled to find the right card design. Another 31.3% had to deal with perplexing website features. Overall, the data indicates that to improve the user experience. Online greeting card websites could improve their customization options, design search filters, and website usability.

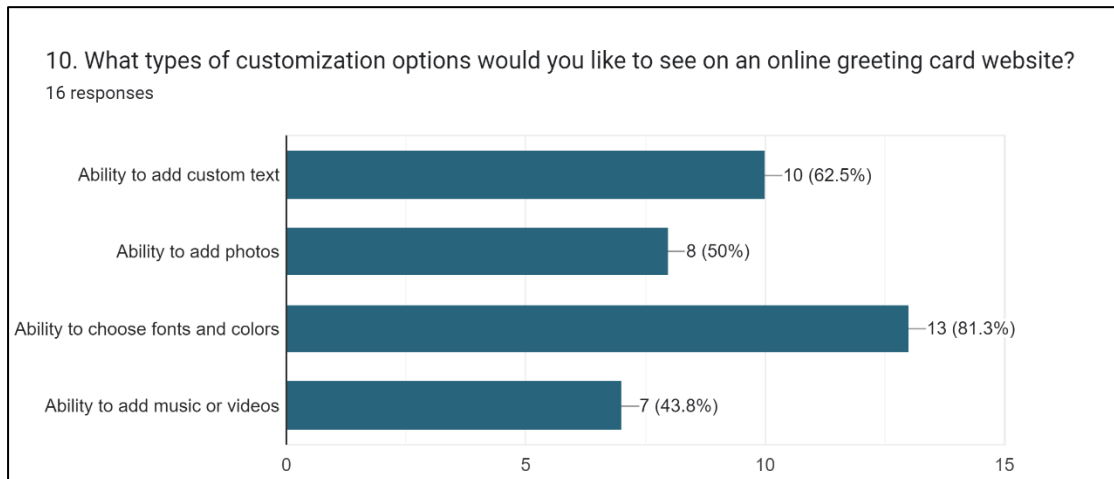


Figure 3.21 Preferred Customization Options for Online Greeting Card Website

Participants could choose multiple options for this question, providing multiple-choice responses. Based on the participants' responses, it can be seen that the ability to choose fonts and colours was the most frequently selected customization option, with 81.3% of the participants choosing this option. The ability to add custom text was the second most popular choice, selected by 62.5% of participants. Adding pictures was chosen by 50% of the participants, placing it third in popularity. Finally, with 43.8% of participants choosing it, adding music or videos was the least popular choice. According to the data, participants value the ability to customize text, fonts, and colours on online greeting cards, with photos also being a popular choice. However, adding music or videos was less essential to the participants.

3.3.1 Requirements Specification

The requirements form the proposed system was categorized into functional and non-functional requirements.

3.3.1.1 Functional Requirements

These are the compulsory functional requirements on the Online Greeting Card Website describe that what system can do and the features it should have in order to meet the needs of the user.

1. Allow existing users to log in and new users to register account with unique email and password.
2. Allow user to view various of the pre-design template card.
3. Allow user to customize design on the card.
4. Allow user to review finish designed card.
5. Allow user to send the card via email.
6. Allow user to view their sending history.
7. Allow user to fill up the sender's name and email and the information for the recipients.
8. Allow user to schedule the date for sending the card.
9. Allow admin to upload the e-card based on the category.
10. Allow admin to delete or unavailable the cards from the system.
11. Allow admin to view and manage email, password, sending history of user accounts.
12. Allow admin to announce the new cad's info on the website.
13. Generate an email notification to the user when the card is sent or opened from the recipient.

3.3.1.2 Non-Functional Requirements

These are requirements that specify how the system should perform or operate, rather than what it should do.

Usability:

1. The website must be user-friendly, with a simple and consistent user interface that allows users to have a better experience and a sense of 'ease of use,' particularly for new users.
2. When the input data is irrelevant or incorrect, the website must be able to show an error message.

Availability:

1. The website must be accessible whenever and whenever the user has an internet connection.

Security:

1. The website must prevent unauthorized access to the system.
2. The website should be able to periodically back up the data to safeguard against data loss.

Performance:

1. There must be no lag time between the user clicking a link and seeing the result on the website

3.4 Timeline

3.4.1 Timeline – FYP1

Table 3.3 Project 1’s Gantt Chart

Activity	Period													
	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12	W13	W14
1. INTRODUCTION														
Project Background														
Problem Statement														
Research Objectives														
Project Scope														
Impact, Significance and Contribution														
2. LITERATURE REVIEWS														
Review on Similar Website														
Compare Similar Systems														
3. PROPOSED METHOD/APPROACH														

System Design														
Timeline														
Future Development Plan														
4. CONCLUSION														
Design Prototype														
Finalize FYP1 Report														
Test Prototype														
FYP1 Demonstration														

3.4.2 Timeline – FYP2

Table 3.15 Project 2’s Gantt Chart

Activity	Period													
	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12	W13	W14
1. Development Phase														
Develop each module	█	█	█	█										
Fix Bugs	█	█	█	█	█									
2. Implementation Phase														
Deliver to Target User						█	█							
Collect Feedback						█	█	█						
Fix Bugs and Enhance System								█	█	█				
Testing the System									█	█	█			
3. Evaluation Phase														
Evaluate the System											█	█	█	
Further Enhancement											█	█	█	
Submission of the System														█

CHAPTER 4 System Design

4.1 Site Map

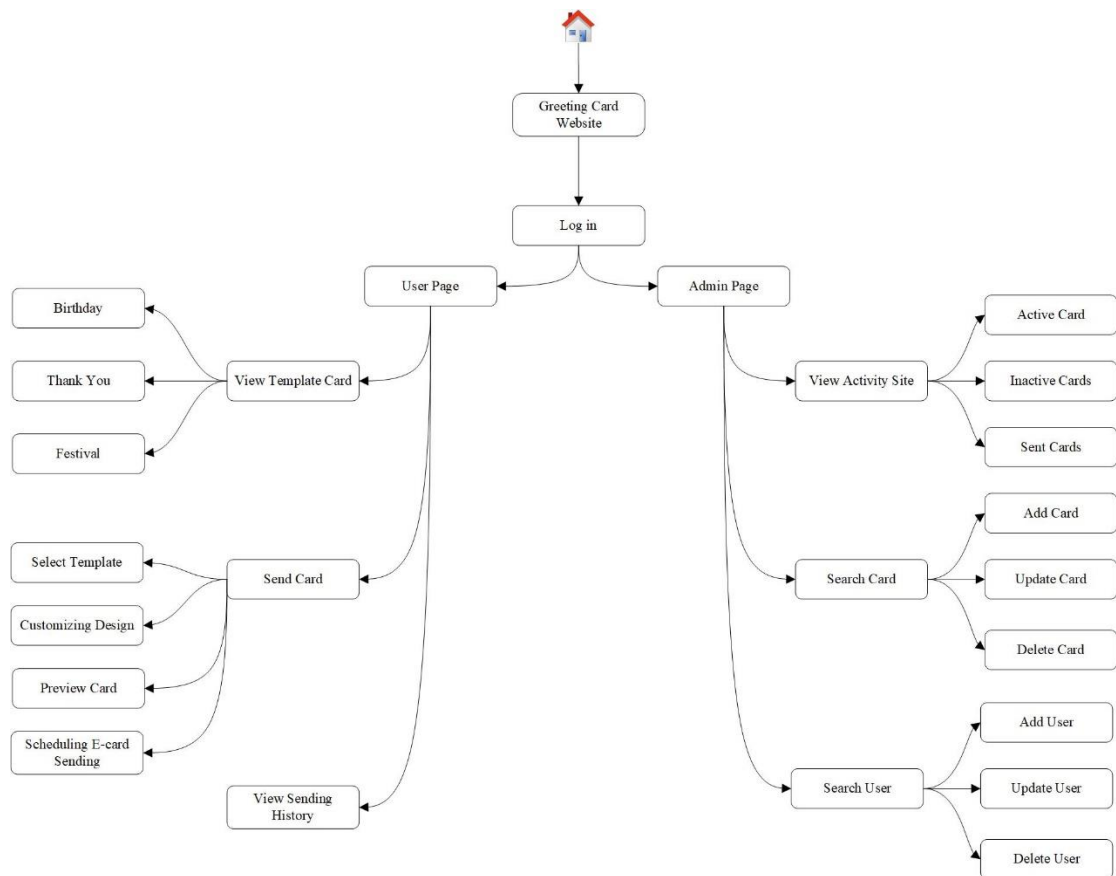


Figure 4.1 Site Map of Online Greeting Card Website

The site map is a visual representation of the website's structure and content, which includes its main and sub-pages with their respective URLs. When a user wants to use the system, they may do so by logging in using their existing account information. After logging in, the user may enter to user page to see a list of all cards available for borrowing that the admin maintains. Users may customise and send the card to their recipients in the user panel and see their sending history. Conversely, the admin panel provides access to features necessary for website management. Admin may handle all parts of the e-card system using the admin panel. Admin may browse a list of all accessible e-cards, ordered by category, and execute actions such as updating, deleting, or removing certain e-cards from the website for maintenance or other reasons. In addition, the dashboard displays the total number of active and inactive cards, and the total number of cards that users have sent. Moreover, the admin panel has a user list, which enables administrators to create new user accounts, modify existing ones, or

remove existing ones. Because of these features, the e-card system can be simply maintained and kept up to date, ensuring that the experience will be consistent for users and administrators.

4.2 Block Diagram

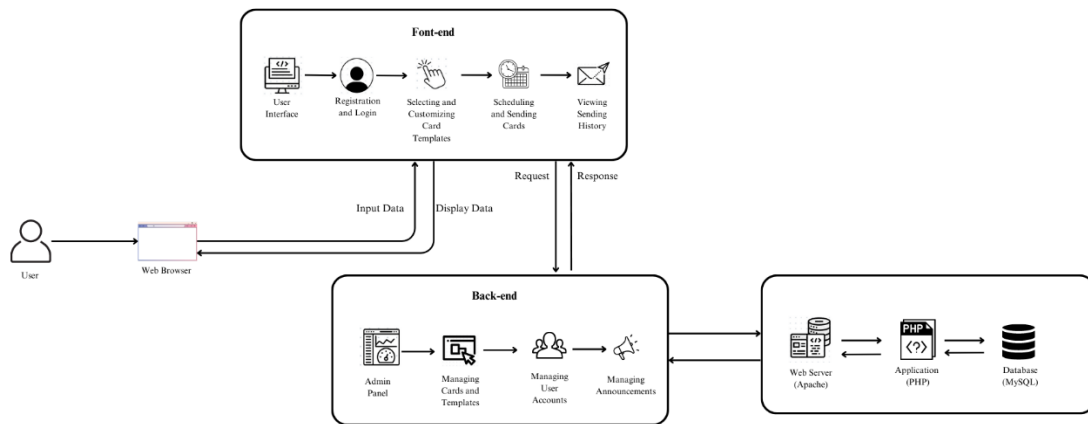


Figure 4.2 Block Diagram of Online Greeting Card Website

In a web application, the front-end is responsible for interacting with the user via the web browser, while the back-end manages server-side processing and data storage. The front-end and back-end communication occurs through HTTP requests and responses. The User Interface section in the block diagram represents the front-end, which includes the web browser and the user's interactions with the website. The back-end comprises include the Web Server (Apache), Application Server (PHP), and Database Server (MySQL).

When the user interacts with the website, the browser sends HTTP requests to the Web Server, which forwards the request to the Application Server for processing. The Application Server generates an appropriate response, which is returned to the Web Server and displayed to the user via the browser. In the admin panel, requests made by the admin user will be handled by the web server (Apache) and the application server (PHP). The admin user can manage user accounts, e-cards, and website announcements. The PHP application server processes the admin user's actions and communicates with the web server to generate the appropriate responses. The web server then returns these responses to the admin user's browser to display the results. The database server stores all data related to user accounts, e-cards, and website announcements. The PHP application server interacts with the database server to retrieve and update this data based on the admin user's actions.

4.3 Use Case Diagram

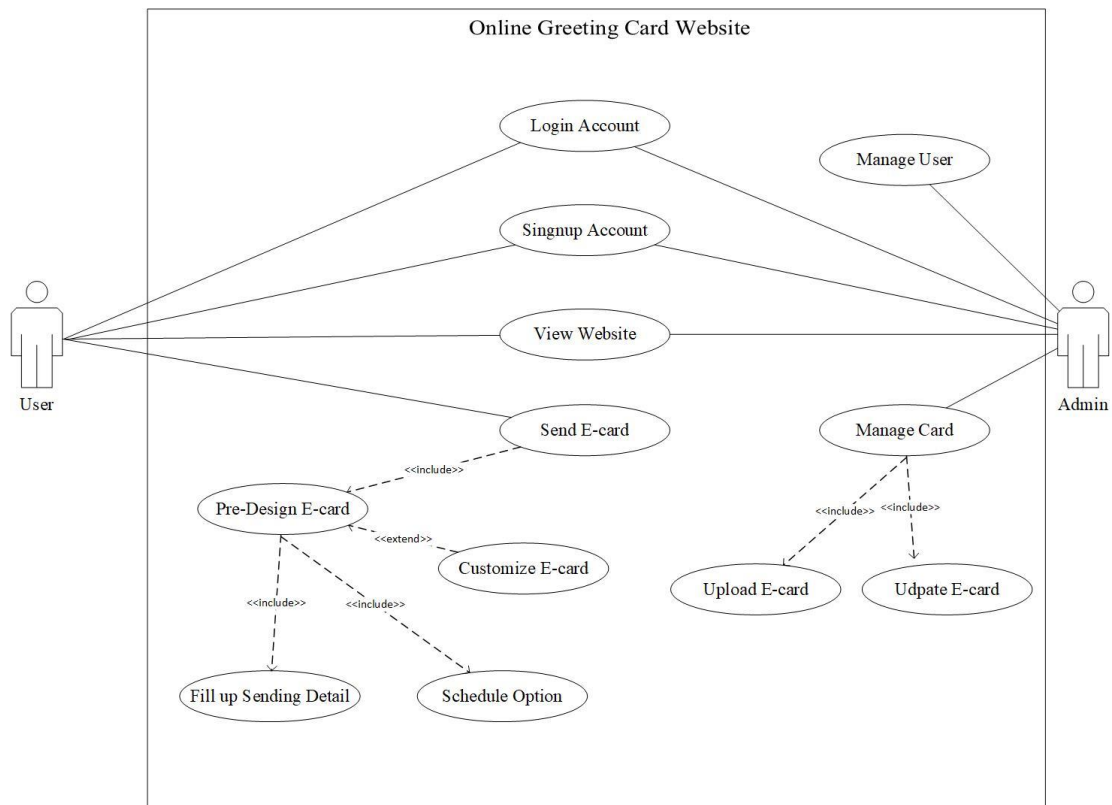


Figure 4.3 Use case diagram of Online Greeting Card Website

The use case diagram briefly describes what user and admin can do on the website. Each group has access to different parts of the website and various functionalities. Users can perform basic actions such as login in, signing up for an account, and viewing the website. Users can act by selecting a card to send to the recipient. Once a card is selected, it can be sent directly to the recipient without modifications. Additionally, users can customize the card by adding a personal message. After designing the card, users must fill out the sending details and decide whether to send it directly to the recipient or schedule it later via email. Following that, the admin manages the user account by viewing the list of registered users, deleting or disabling accounts, and modifying user information such as username, password, and email. Moreover, the admin manages the e-card by viewing a list of all available e-cards and performing actions such as editing, deleting, or making certain e-cards unavailable on the website. Admin can upload new cards with an image and add card descriptions for the e-card based on the category.

4.3.1 Login Account – Use Case Description

Table 4.1 Login Account – Use Case Description

Use Case Name	Login Account
Purpose	To allow user login to their account in this website
Actor	User
Normal Flow of Events	<ol style="list-style-type: none"> 1. User inputs the correct email address and password. 2. System will check the validity of entered user email and password. 3. Once the user information is properly confirmed, the system will redirect to the user's main page.
Alternate Flows	<p>When user selects the "Create Account"</p> <p>The system will direct the user to the registration page, where they may create an account.</p>

4.3.2 Login Account – Activity Diagram

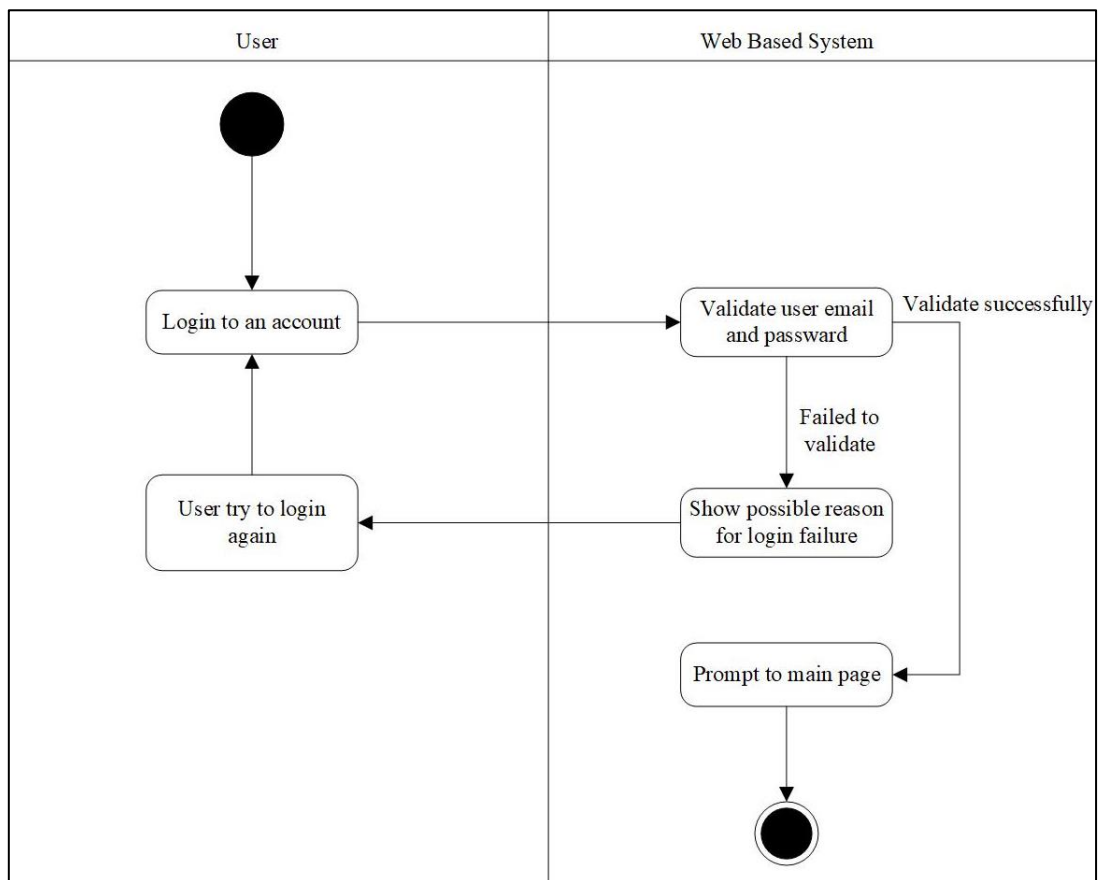


Figure 4.4 Login Account – Activity Diagram

The login activity flow is shown in the activity diagram. When a user accesses the system, the system displays the login screen, prompting the user to log in. The system will verify the user's email and password when they input them to log in to their account. If the user enters incorrect information, the system will display a small popup window stating that the user is inputting incorrect information or if another cause for login failure exists. Once the email address and password are valid, the system will redirect the user to the website's home page.

4.3.3 Register Account – Use Case Description*Table 4.2 Register Account – Use Case Description*

Use Case Name	Register Account
Purpose	To allow user to register a new account in this website
Actor	User
Normal Flow of Events	<ol style="list-style-type: none"> 1. User accurately fills all required information. 2. The information submitted by the user will be stored in database system. 3. If the user's account creation was successful, the system will navigate them to the main page.
Alternate Flows	none

4.3.4 Register Account – Activity Diagram

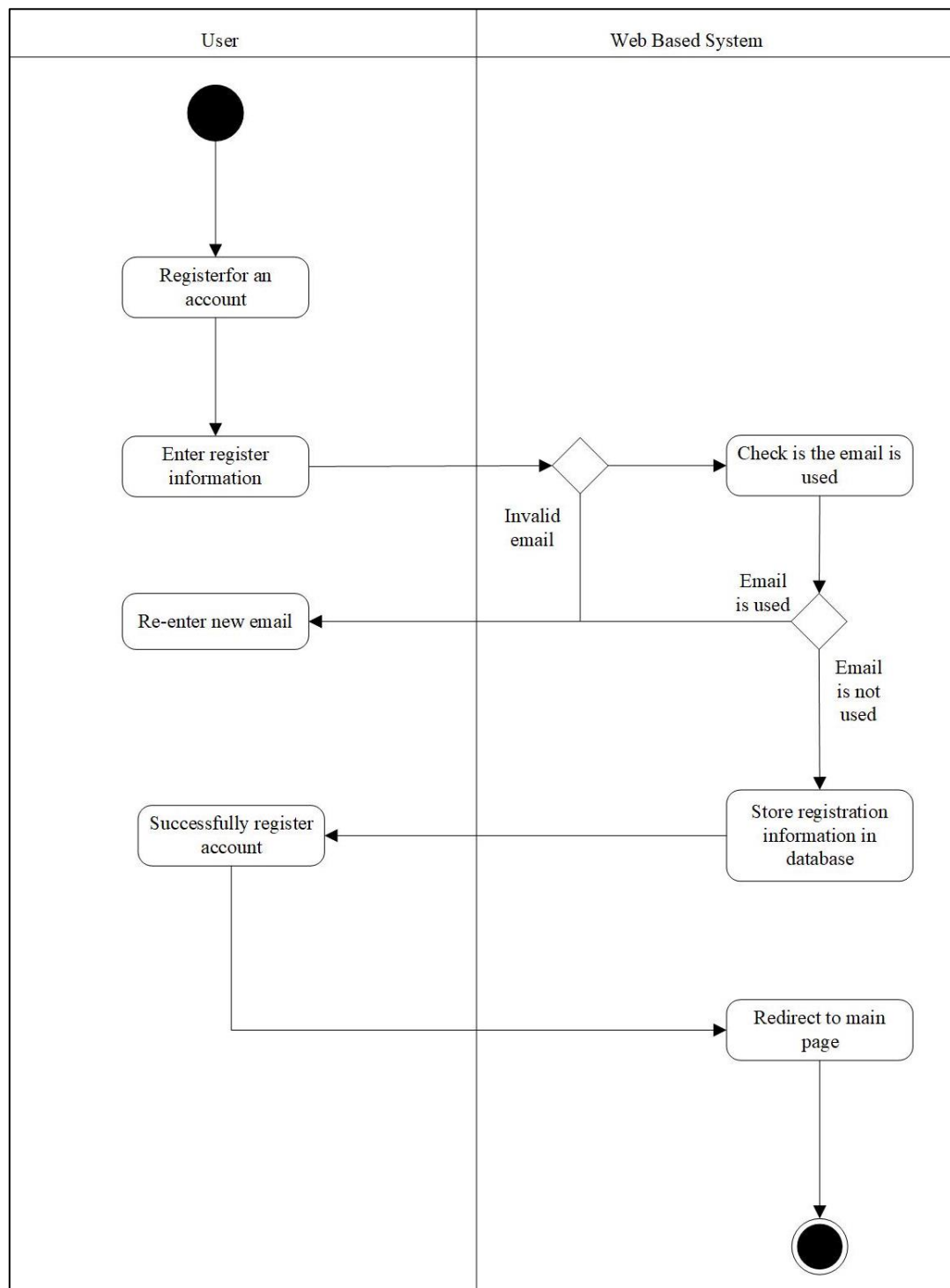


Figure 4.5 Register Account – Activity Diagram

The preceding workflow depicts the user's account registration process. When a user creates an account, they must provide their accurate email address and other information, such as name, contact and password, so that the system can verify whether or not the email address is already in use. If the user's email address is already in use,

they must create a new one. After users successfully create an account, their details are saved in the MySQL database under system administration.

4.3.5 Send E-card – Use Case Description

Table 4.3 Send E-card – Use Case Description

Use Case Name	Send E-card
Purpose	To allow user to select a pre-design e-card for sending to the recipient.
Actor	User
Normal Flow of Events	<p>The system will display the available different type of card on the display.</p> <p>When user select a template and click on send the e-card.</p> <p>System will show the selected card detail in the new page.</p> <p>If the user clicks on the "Direct Send" button.</p> <ol style="list-style-type: none"> 1) User will need to fill in the address details such as the sender and recipient name and email address. 2) User can select the option to schedule the date for sending the card or send it immediately. 3) User click send e-card for sending the card to the recipient. 4) System generates an email notification to the user when the card is sent. 5) Recipient receives an email containing a link to view the e-card. 6) Recipient clicks on the link to view the e-card. 7) System generates an email notification to the user when the recipient opens the e-card. 8) User can view their sending history and the status of the sent e-cards in their account.
Alternate Flows	<p>If the user clicks on the "Customize" button.</p> <p>The system will show the customize text box for the user to add personalize on the card content before moving to the fill in the address detail's part.</p>

4.3.6 Send E-card – Activity Diagram

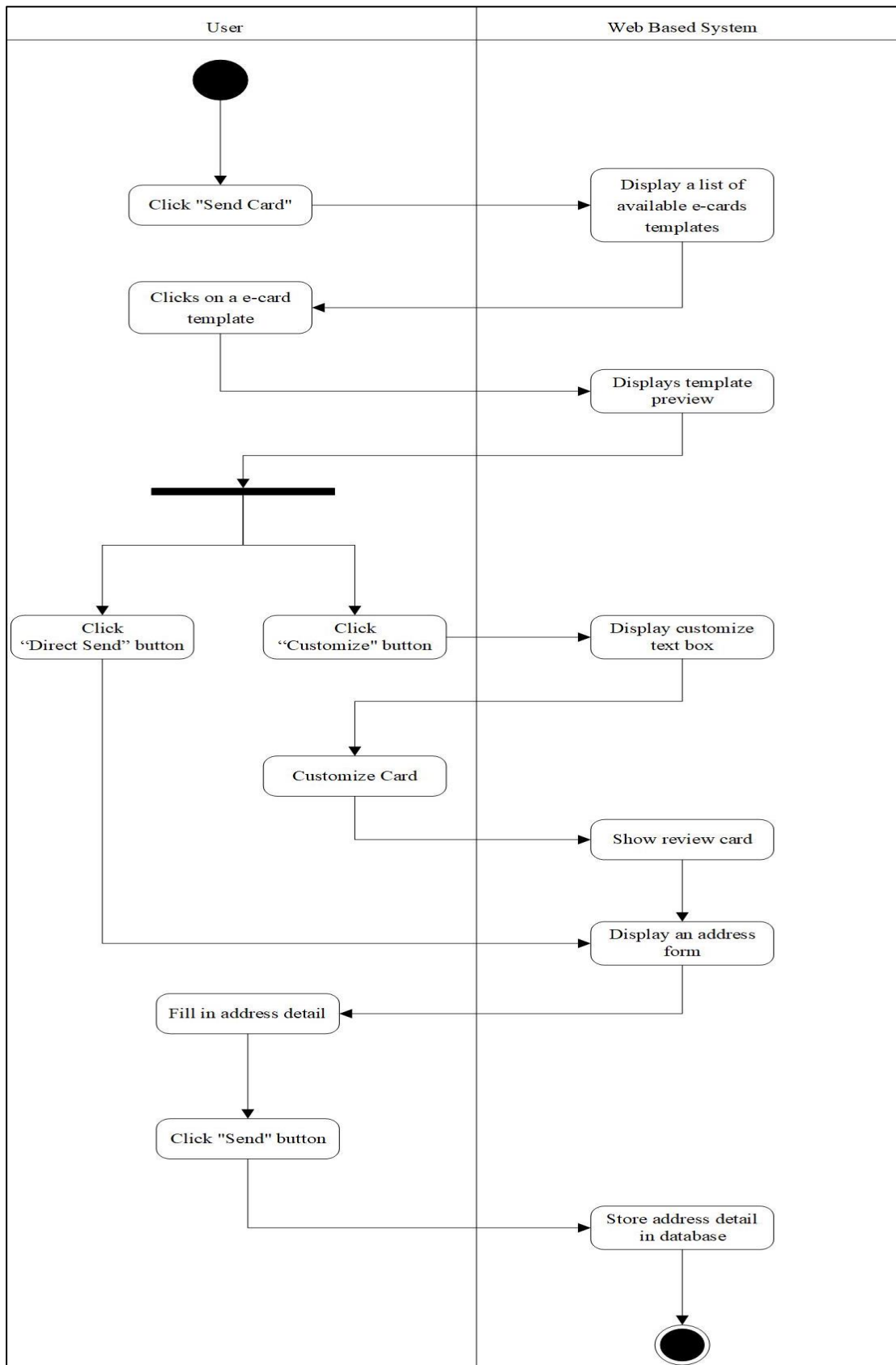


Figure 4.6 Send E-card – Activity Diagram

The preceding workflow demonstrates the user sending a card process. The system will display the pre-designed templates when a user clicks on send card. The user can then choose a card. The technology will allow you to send the e-card without customising the content. If the user wants to add some text to the card, he or she can click the customise button, and the system will display a customised text box. After designing the card, the user can preview it before adding personal details such as the sender's name and email address. The user can also set a specified date for sending the card. Finally, the user can email the card to the receiver, who will be notified when the card is sent and opened.

4.3.7 Manage E-card – Use Case Description

Table 4.4 Manage E-card – Use Case Description

Use Case Name	Manage E-card
Purpose	To allow admin to upload new or updated options for users to choose from when sending a greeting card.
Actor	Admin
Normal Flow of Events	<p>Admin logs into the admin site and navigates to the "Mange E-card" section.</p> <p>When admin wants to “add” new card</p> <ol style="list-style-type: none"> 1) Admin needs to upload an image and add card description for the e-card based on the category. <p>When admin want to “update” an existing card</p> <ol style="list-style-type: none"> 1) Admin needs to click “Edit” button on the selected card. 2) System will show the selected card information detail. 3) Admin can modify the card detail or delete it. <p>When admin wants to make certain e-cards inaccessible on the website for maintenance or other reasons</p> <ol style="list-style-type: none"> 1) Admin can click on the "Unavailable" button next to the selected e-card.

	<p>2) The system removes the selected e-card from the website until the admin marks it as available again.</p> <p>After making changes, the manager can save them, and the e-card will be changed or added to the website.</p>
Alternate Flows	none

4.3.8 Manage E-card – Activity Diagram

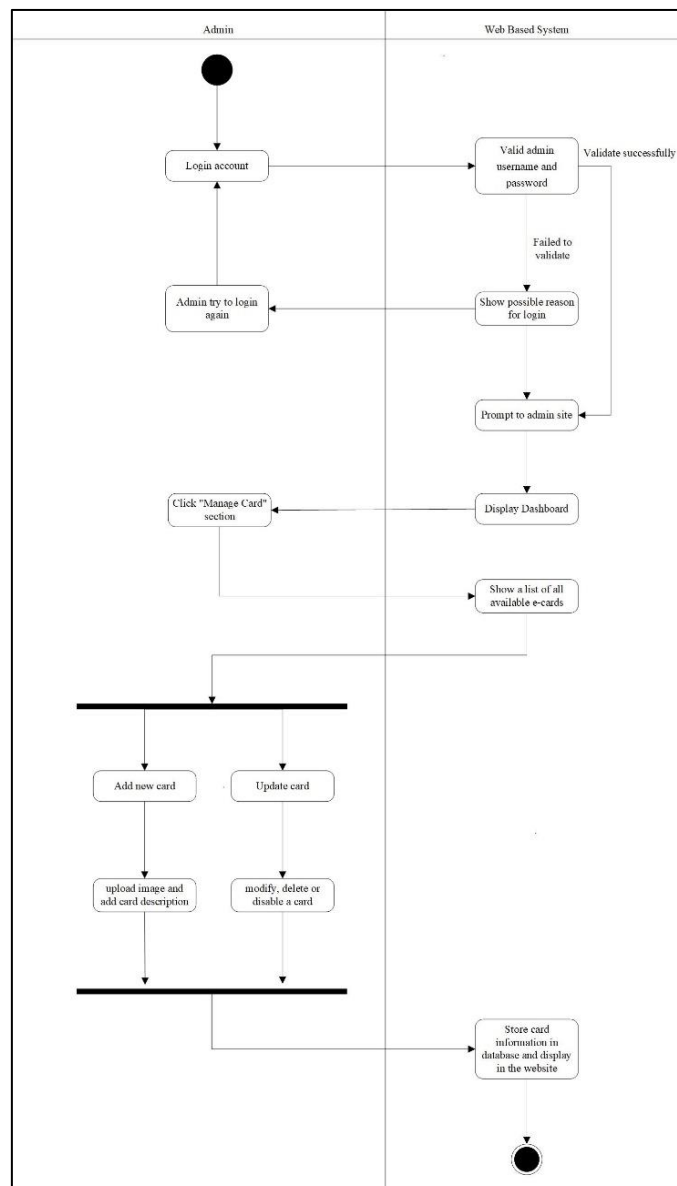


Figure 4.7 Manage E-card – Activity Diagram

The above workflow illustrates the admin manage e-card method. The admin begins by logging into the site's admin area and navigating to the "Manage E-card" section. The

admin may then browse a list of all accessible e-cards and take actions such as updating, removing, or making particular e-cards unavailable on the website for maintenance or other reasons. When creating a new e-card, the admin must go to the "Upload E-card" area and submit a picture and provide a card description depending on the category. To change an existing card, the administrator must click the "Edit" button on the chosen card and alter or remove its data as required. Once the admin has made modifications, they may save them, and the e-card will be successfully updated or added to the website. The admin may also make certain e-cards inaccessible on the website for maintenance or other reasons by going to the "Manage E-card" area and choosing the specific e-card to be unavailable. The webpage will then be updated to reflect the modifications made by the system.

4.3.9 Manage User – Use Case Description

Table 4.5 Manage User– Use Case Description

Use Case Name	Manage User
Purpose	To allow admin to have control over the user accounts on the website.
Actor	Admin
Normal Flow of Events	<ol style="list-style-type: none"> 1. Admin logs into the admin site. 2. Admin navigates to the "Manage Users" section. 3. System displays a list of registered users. 4. Admin selects a user from the list. 5. Admin can perform several actions such as edit user details or delete user. <p>When admin selects the "Edit User Details" option</p> <ol style="list-style-type: none"> 1) System displays a form that the admin can use to modify the user's information such as username, email, or password. <p>When admin selects the "Delete User" option</p> <ol style="list-style-type: none"> 1) System asks for confirmation before deleting the user's account.
Alternate Flows	none

4.3.10 Manage User – Activity Diagram

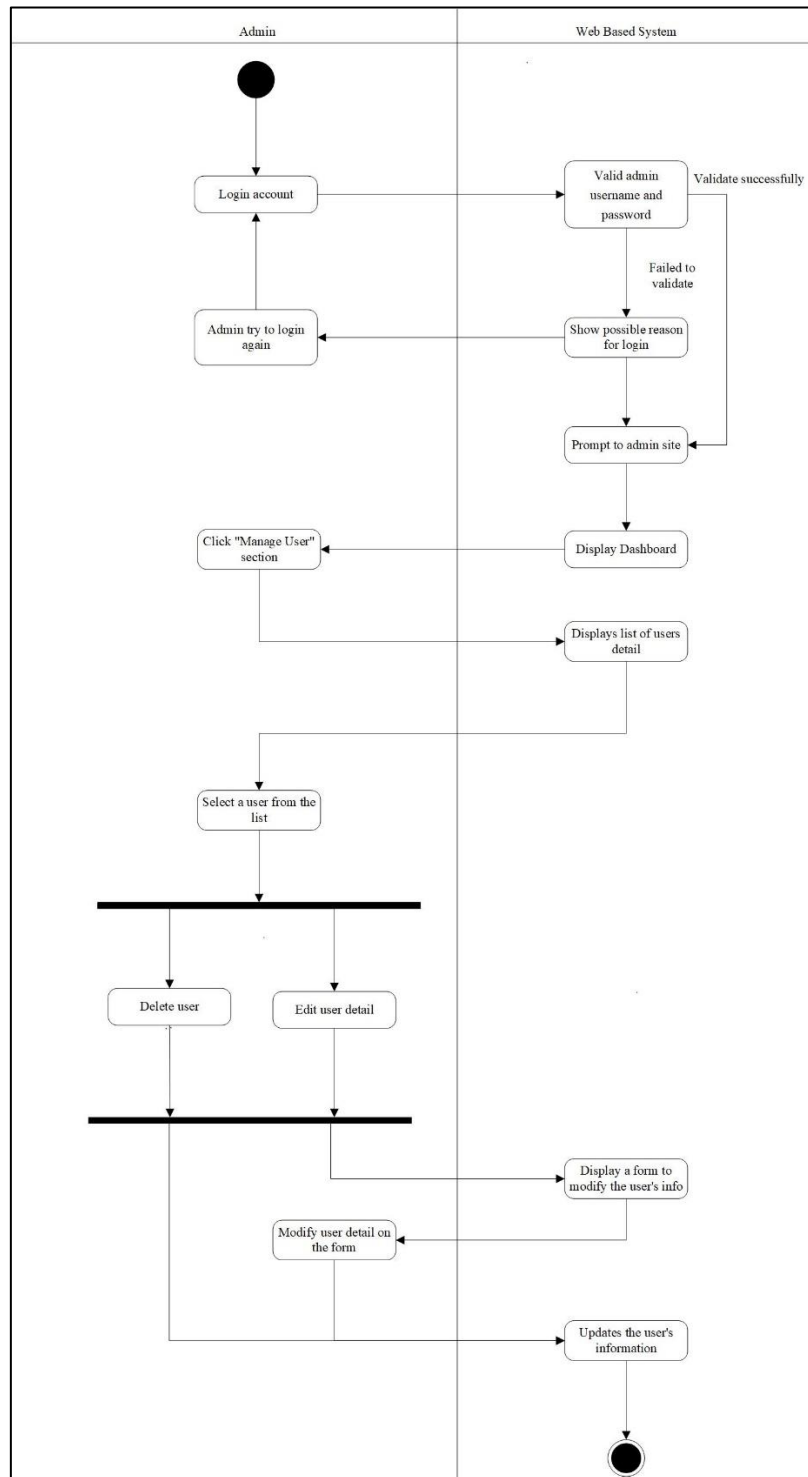


Figure 4.8 Manage User– Activity Diagram

The above process shows how the admin manages the user workflow. The admin logs into the site's admin area and navigates to the "Manage User" section. The admin can see a list of registered users and their information, such as email address, name, and

password. Admin can change their account, such as changing their email address, resetting their password, or deleting it. After that, the admin will save the modifications, and the system will immediately update the user's information.

4.4 Entity Relationship Diagram

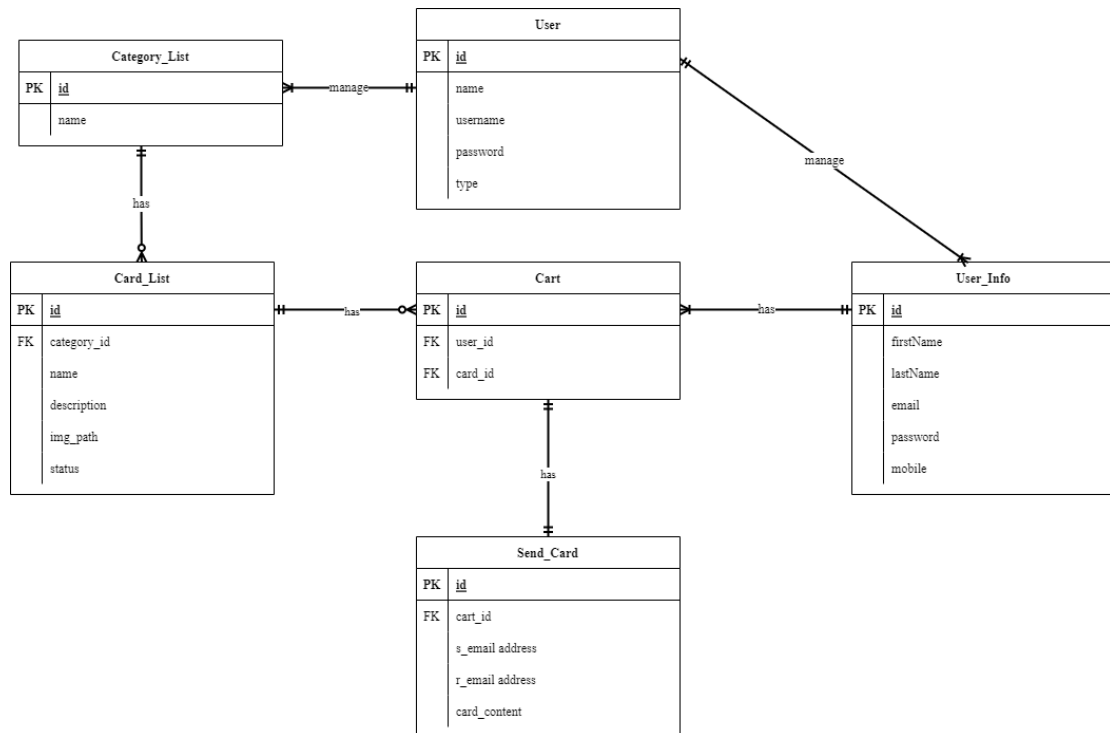


Figure 4.9 Entity Relationship Diagram

The above diagram shows the major entities and their relationships within the scope of the Online Greeting Card Website. There are six entity tables included in the diagram. The 'users' table is for authentication and access control purposes on the admin site, ensuring that only authorized users can access sensitive information or perform specific actions on the site. One user can manage one or many user info. Each user can manage one or more category lists, while one category list is only managed by one user at the same time. Each category list will have zero to many card list, one card list only belonging to one category.

While the 'user_info' table is for storing additional personal information about the users who use the online greeting card website to send customized cards to their loved ones. When a user selects a card to send, the system stores the relevant information in the cart. Each cart can contain only one card, while a card can be added to zero or more carts. Additionally, each user can have one or more carts, and each cart is associated with one user only. Once the user has selected the desired cards and added

them to the cart, the system uses the cart information to send the cards with personalized messages to the recipients. It's important to note that each cart information will only be used to send one card.

Entity: User Info

Table 4.6 Data Dictionary for User Info Entity

Attribute	Description	Data Type	PK or FK	Null
id	Unique identification for user information	int	PK	No
first_name	User first name	varchar		No
last_name	User last name	varchar		No
email	User email	varchar		No
password	User password	varchar		No
mobile	User mobile phone	varchar		No

Entity: User

Table 4.7 Data Dictionary for User Entity

Attribute	Description	Data Type	PK or FK	Null
id	Unique identification for user	int	PK	No
name	User name	varchar		No
username	User username	text		No
password	User password	varchar		No
type	User role or level of access	tinyint		No

Entity: Category List*Table 4.8 Data Dictionary for Category List Entity*

Attribute	Description	Data Type	PK or FK	Null
id	Unique identification for category	int	PK	No
name	Category name	text		No

Entity: Card List*Table 4.9 Data Dictionary for Card List Entity*

Attribute	Description	Data Type	PK or FK	Null
id	Unique identification for card	int	PK	No
category_id	Unique identification for category	int	FK	No
name	Card name	text		No
description	Card description	text		No
img_path	Card image path	text		No
status	Card status	tinyint		No

Entity: Cart*Table 4.10 Data Dictionary for Cart List Entity*

Attribute	Description	Data Type	PK or FK	Null
id	Unique identification for card add to the cart	int	PK	No
user_id	Unique identification for the user	int	FK	No
card_id	Unique identification for the card	text		No

Entity: Send Card*Table 4.11 Data Dictionary for Send Card List Entity*

Attribute	Description	Data Type	PK or FK	Null
id	Unique identification for send card	int	PK	No
cart_id	Unique identification for the cart	int	FK	No
s_email address	Sender email address	text		No
r_email address	Recipient email address	text		No
card_content	Add card content	text		No

CHAPTER 5 System Implementation

5.1 Hardware Setup

To ensure optimal performance and functionality of the Online Greeting Card Website, certain hardware specifications are recommended for users' devices. The following are the minimum hardware requirements:

1. **Processor:**

- Intel® Pentium® 4 or AMD Athlon® 64 processor

These processors are capable of handling the computational tasks required by the website's functionality. While modern processors are recommended for better performance, these older processors meet the minimum requirements.

2. **RAM (Random Access Memory):**

- 512 MB of RAM

Adequate RAM is essential for smooth navigation and interaction with the website. Users should have at least 512 MB of RAM to ensure responsiveness.

3. **Hard-Disk Space:**

- 1 GB of available hard-disk space for installation

Users need sufficient storage space for installing the necessary software components and files related to the website. Additionally, some additional free space may be required during the installation process. Note that the website cannot be installed on removable flash storage devices.

4. **Display:**

- 1280 x 800 display with 16-bit graphics adapter

A display resolution of 1280 x 800 pixels with a 16-bit graphics adapter is recommended for optimal viewing of the website's content and graphics.

5. **Optical Drive:**

- DVD-ROM drive

A DVD-ROM drive is necessary for reading installation discs and other media as required by the website or associated software.

These hardware requirements ensure that users' devices are capable of running the Online Greeting Card Website and experiencing its features without significant

performance issues. While these are the minimum requirements, users with more advanced hardware configurations may enjoy even better performance.

5.2 Software Setup

To ensure that users can access and interact with the Online Greeting Card Website seamlessly, it's essential to set up the required software components. The following software components and configurations are necessary:

1. **Web Browser:**

Users need a modern web browser to access the website. We recommend using the latest versions of popular browsers such as:

- Google Chrome
- Mozilla Firefox
- Apple Safari
- Microsoft Edge

Ensuring that users have an up-to-date web browser helps in achieving optimal website compatibility and performance.

2. **Local Web Server:**

To host and serve the Online Greeting Card Website locally for development and testing purposes, you'll need to set up a local web server. We recommend using XAMPP, a widely-used solution that includes:

- Apache: The web server software.
- MySQL: The database management system.
- PHP: The server-side scripting language.

You can download XAMPP from the official website <https://apachefriends.org> and follow the installation instructions as outlined in Chapter 5, Section 5.3.

3. **Source Code:**

Download the provided source code zip file for the Online Greeting Card Website from the designated source. The source code contains all the necessary files and scripts to run the website.

4. **Database Management Tool:**

For managing the website's database, you should have a database management tool installed. We recommend using PHPMyAdmin, a user-friendly web-based administration tool for MySQL databases. PHPMyAdmin is typically included with

XAMPP. You can access it by visiting <http://localhost/phpmyadmin> after starting your local web server.

5. Text Editor or Integrated Development Environment (IDE):

While not mandatory, having a text editor or IDE can be beneficial for developers who wish to modify or customize the website's source code. Some popular options include Visual Studio Code, Sublime Text, or PhpStorm.

Once these software components are set up and configured correctly, users can navigate to the website using their web browser, and the website will be served locally from the XAMPP web server. Database management and code modifications, if necessary, can be performed using PHPMYAdmin and a text editor or IDE.

By following these software setup instructions, users and developers can create a stable and efficient environment for accessing and working with the Online Greeting Card Website. This ensures a smooth user experience and facilitates further development and customization if needed.

5.3 Setting and Configuration

To access and use the Online Greeting Card Website, users and developers need to configure the software components correctly. This section provides a detailed guide on how to set up and configure the necessary components for a smooth experience.

Setting Up XAMPP and Server Configuration:

1. Download and Install XAMPP:

- Download XAMPP from the official website <https://apachefriends.org>.



Figure 5.1 Xampp Installation Guide

- Double-click the downloaded installer to initiate the installation.

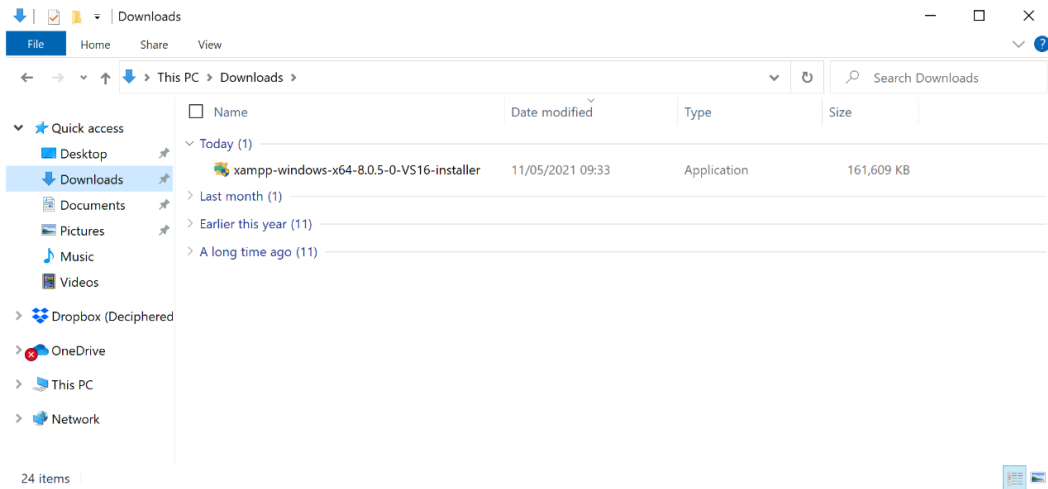


Figure 5.2 Xampp Installation Guide

- Choose a location to install XAMPP. The installation destination is important as the project files will be copied there later. Click "Next" after selecting a destination.

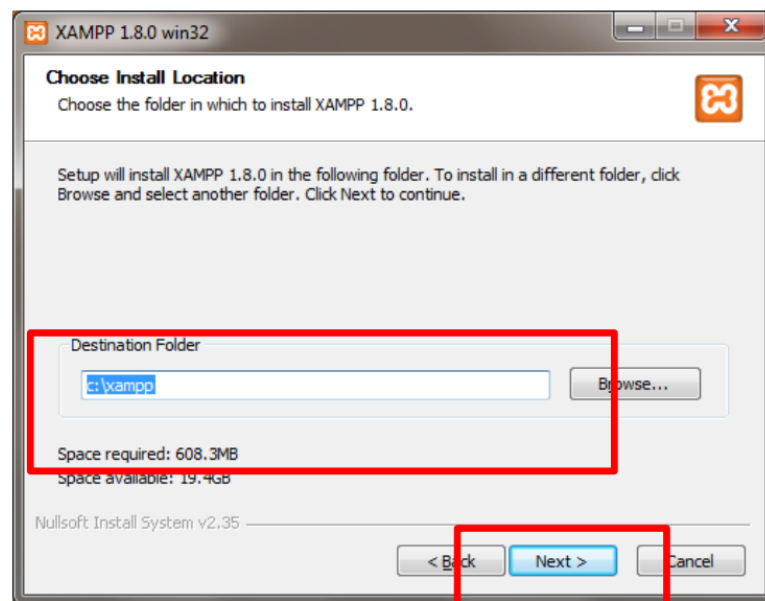


Figure 5.3 Xampp Installation Guide

- Select all checkboxes during installation and click "Install".

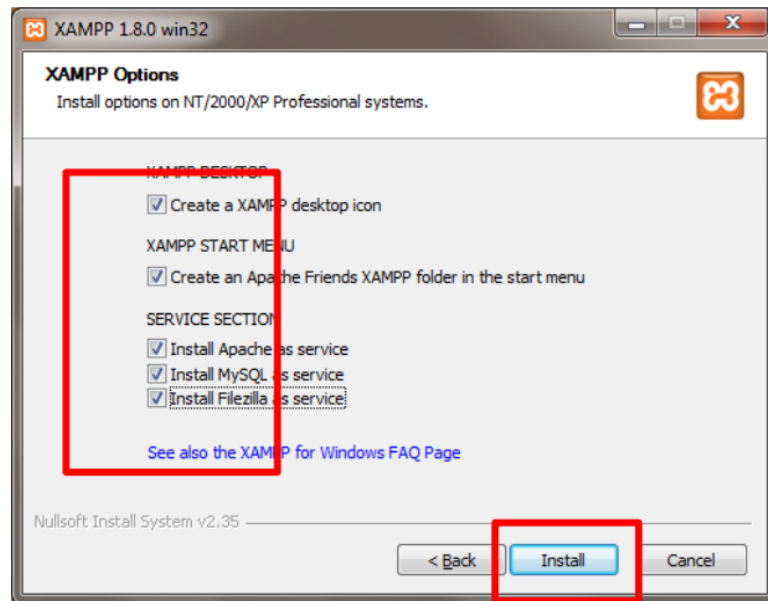


Figure 5.4 Xampp Installation Guide

- After successful installation, search for "XAMPP" and open the XAMPP Control Panel.

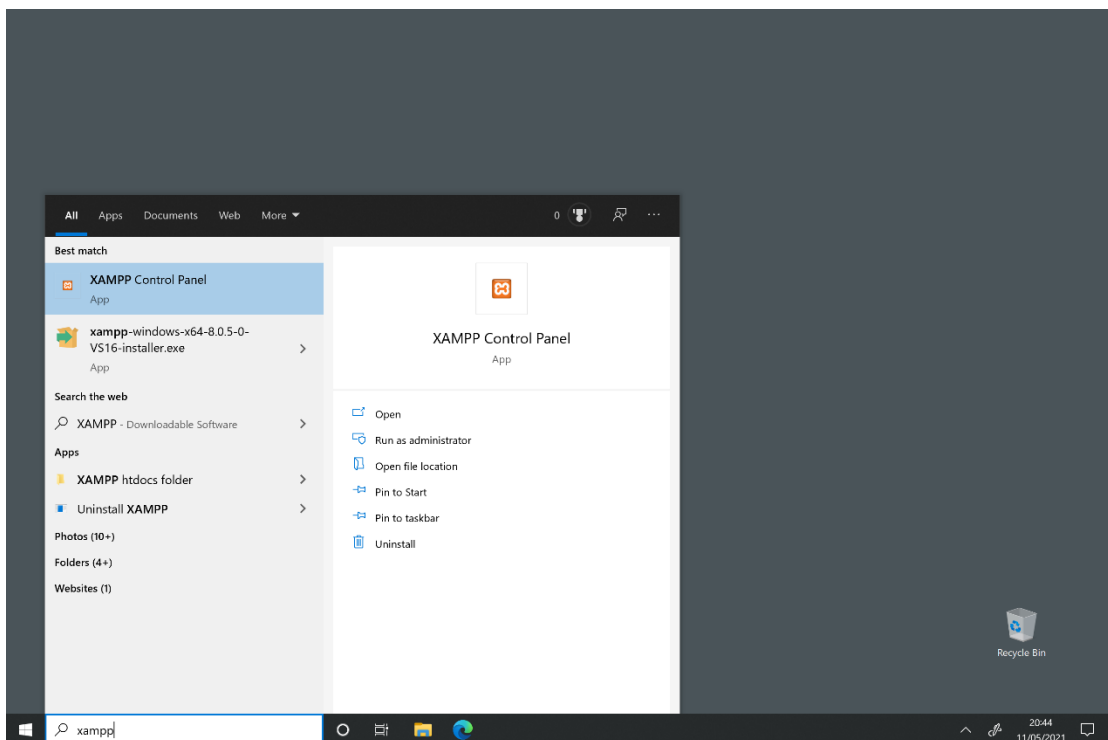


Figure 5.5 Xampp Installation Guide

- Start both the Apache and MySQL services.

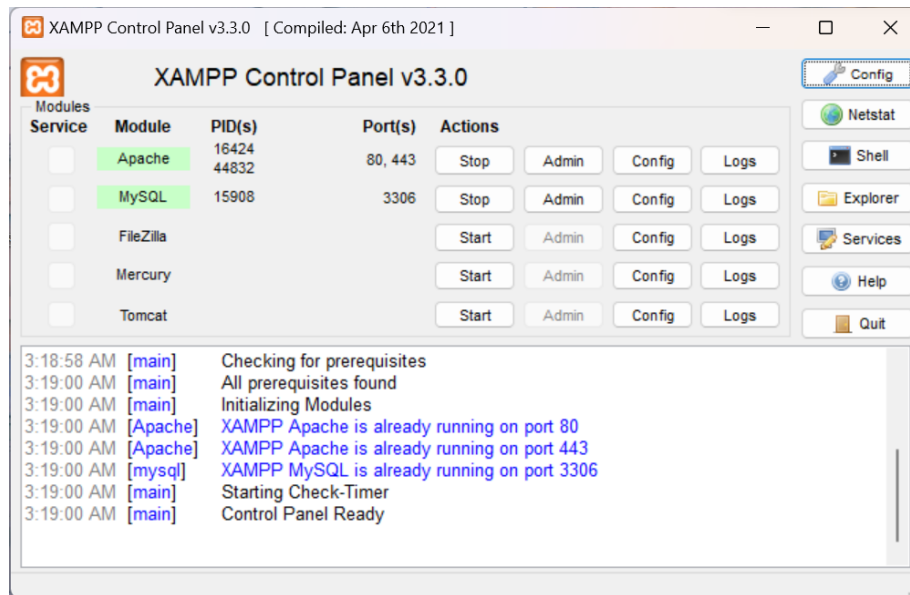


Figure 5.6 Xampp Installation Guide

Website Source Code Setup:

1. Download and Extract the Source Code:

- Download the provided source code zip file for the Online Greeting Card Website.
- Extract the contents of the zip file to a location of your choice on your computer.

2. Copy the Source Code to XAMPP's "htdocs" Directory:

- Locate the "htdocs" directory within your XAMPP installation directory (e.g., `C:\xampp\htdocs` on Windows).
- Copy the extracted source code folder and paste it into the "htdocs" directory. This directory serves as the web server's root folder.

Database Configuration:

1. Access PHPMyAdmin:

- Open a web browser and navigate to <http://localhost/phpmyadmin>.

2. Create a Database:

- In PHPMyAdmin, create a new database named "greetingcard_db" by following these steps:

- Click on the "Databases" tab.
- Enter "greetingcard_db" in the "Create database" field and click "Create."

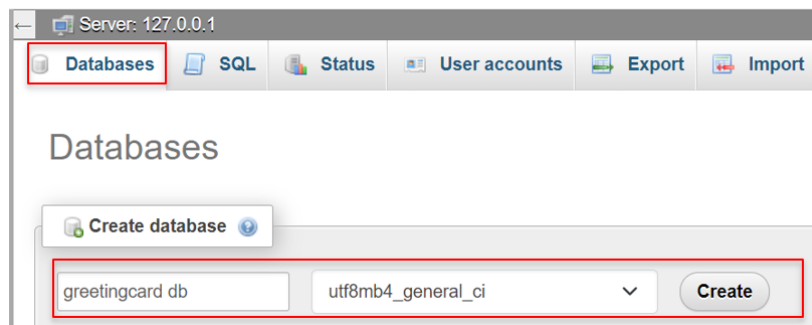


Figure 5.7 Creating a Database

3. Import SQL Data:

- Import the SQL data from the provided file "greetingcard_db.sql," which is located in the database folder of the extracted source code. Use PHPMyAdmin's import feature to do this.

Accessing the Online Greeting Card Website:

1. Browse the Website:

- Open a web browser and go to <http://localhost/greetingcard/>.
- You will be directed to the home page of the Online Greeting Card Website (Figure 5.8).

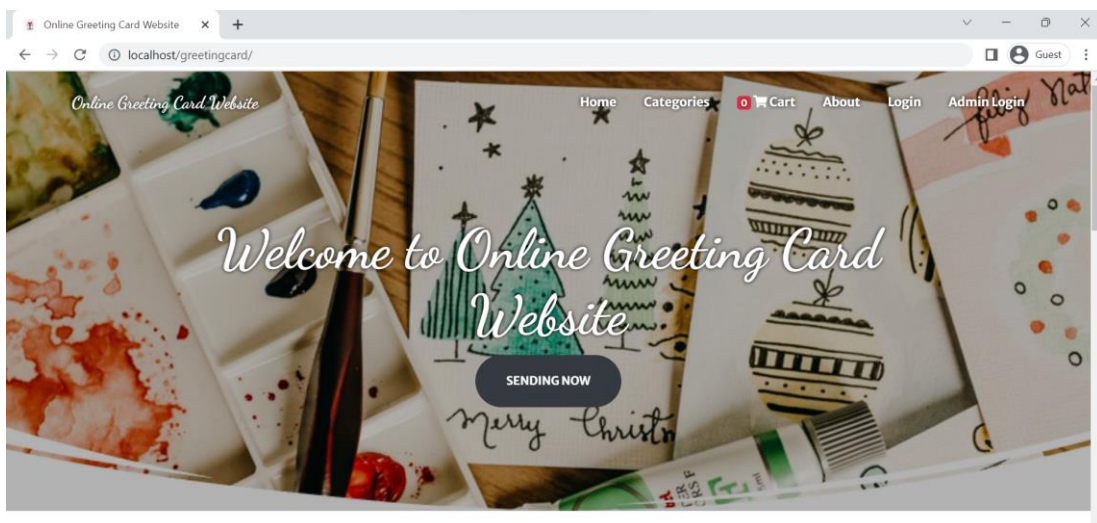


Figure 5.8 Homepage

5.4 Screenshot of the System Implementation

5.4.1 User Site

Upon arrival at the system's homepage, users are greeted with a selection of available cards. This initial page primarily serves as a welcome screen that offers a glimpse into what the website has to offer. It transitions seamlessly to the login screen, depicted in Figure 5.9, an essential step that unveils the website's primary function - the ability to send greeting cards.

Once logged in, users can enjoy the added convenience of securely saving their name and email details, facilitating a smoother card-sending process. This retained information serves to expedite any future card-sending activities, promoting efficiency and ease of use. Furthermore, users retain the freedom to peruse and explore the website's additional features at their leisure.

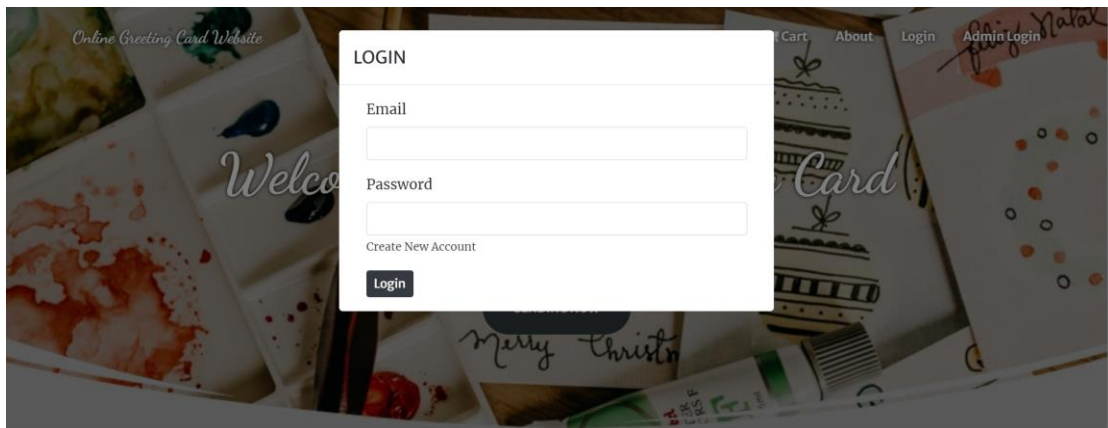


Figure 5.9 Login Form

This step involves a verification process where the user's email and password are scrutinized. Should the user input incorrect details, the system is programmed to alert them through a small popup message. This message indicates the occurrence of an error, either due to incorrect input or other potential issues hindering the login process, as illustrated in Figure 5.10.

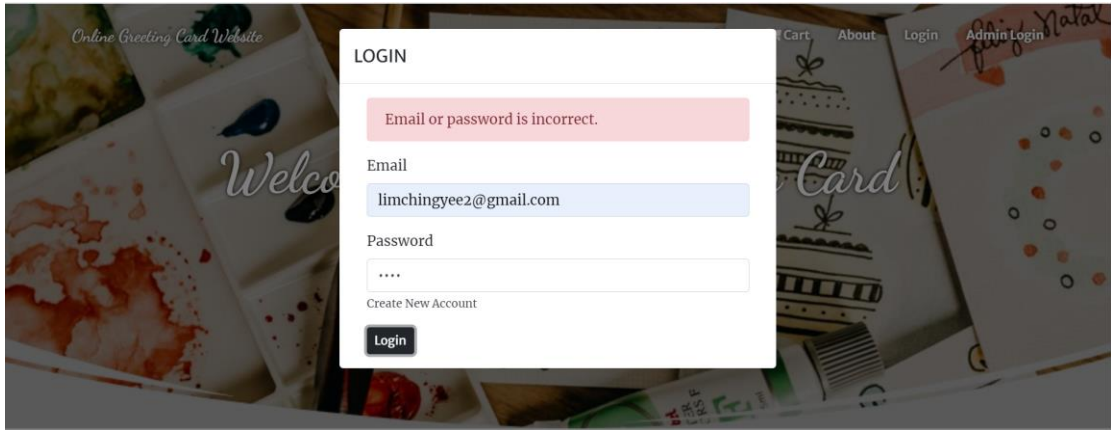


Figure 5.10 Incorrect Input

If the entered email address and password are accurate, the system will retain the user's details, enhancing the experience and expediting future interactions on the website (Figure 5.11).



Figure 5.11 Successful Login

To create a new account, users are required to click on the 'Create New Account' option, as illustrated in Figure 5.12.

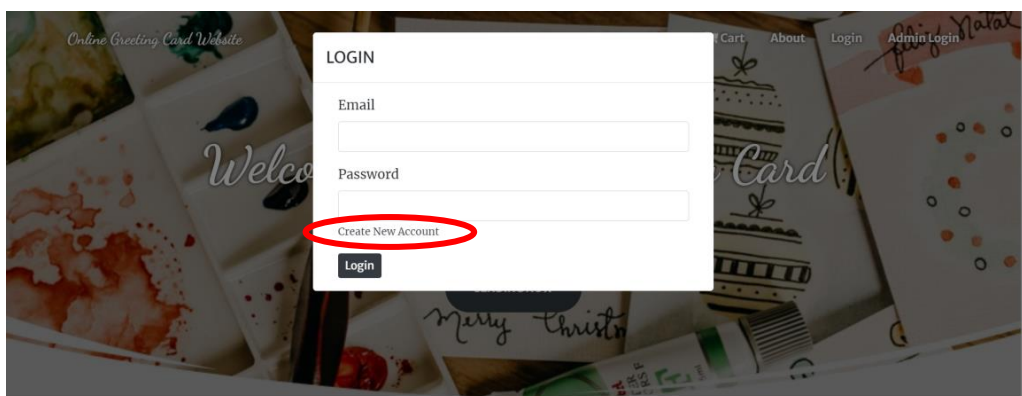
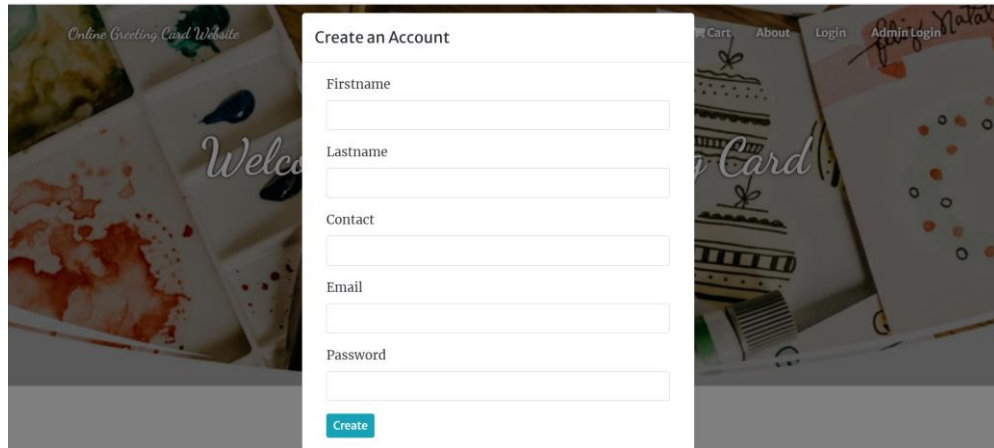


Figure 5.12 Create New Account

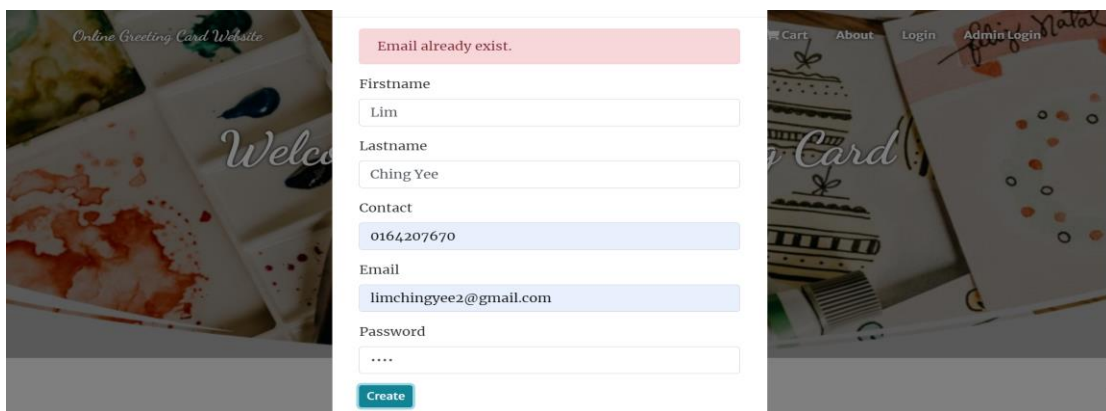
During the account creation process, users are prompted to furnish detailed and accurate information including their email address, name, contact details, and a secure password (Figure 5.13). This is a necessary step to facilitate system verification regarding the uniqueness of the email address being used.



The screenshot shows a web page titled 'Online Greeting Card Website' with a 'Create an Account' form. The form has the following fields: Firstname, Lastname, Contact, Email, and Password. A blue 'Create' button is located at the bottom of the form. The background of the page features various greeting cards, including one with the word 'Welcome' and another with 'Happy Natal'.

Figure 5.13 Create New Account Form

In instances where the email address is already registered within the system (Figure 5.14), users will be guided to employ a different email address to proceed with the account creation.



The screenshot shows the same 'Create an Account' form as in Figure 5.13, but with an error message 'Email already exist.' displayed at the top in a pink box. The form fields are filled with the following information: Firstname: Lim, Lastname: Ching Yee, Contact: 0164207670, Email: limchingyee2@gmail.com, and Password: A blue 'Create' button is at the bottom.

Figure 5.14 Email Already Exist

After users successfully create an account, the user's details are securely stored in the MySQL database, accessible for system administration perusal (Figure 5.15). And the user's account creation was successful, the system will navigate them to the main page (Figure 5.16). When user want to start sending e-card just click on the 'Sending Now' button.

user_id	first_name	last_name	email	password	mobile
1	Mark	Cooper	mcooper@mail.com	\$2y\$10\$Z.LYi0zrDsrCYgU1e7yCOKn1IbREGbUclpSvqkBOOP...	0912345698
2	Lim	ChingYee	limchingyee2@gmail.com	\$2y\$10\$izgnexvAqBGRGaTITa5OzeX14bkYcJwUHGP7VIAQ...	0164207870
6	Sin	Ran	lsyee0212@gmail.com	\$2y\$10\$KqLvpzIHpGF3hbcky6WGFa7LMFXzcmhwmmCDjBmU4T2...	0128338121

Figure 5.15 Save User Detail in MySQL



Figure 5.16 Create New Account

The system conveniently showcases an array of categories for users to browse through, each displayed in Figure 5.17. Users are encouraged to select a category that piques their interest, which then triggers the system to present a gallery of pre-designed template cards specific to the chosen category, as captured in Figure 5.18.

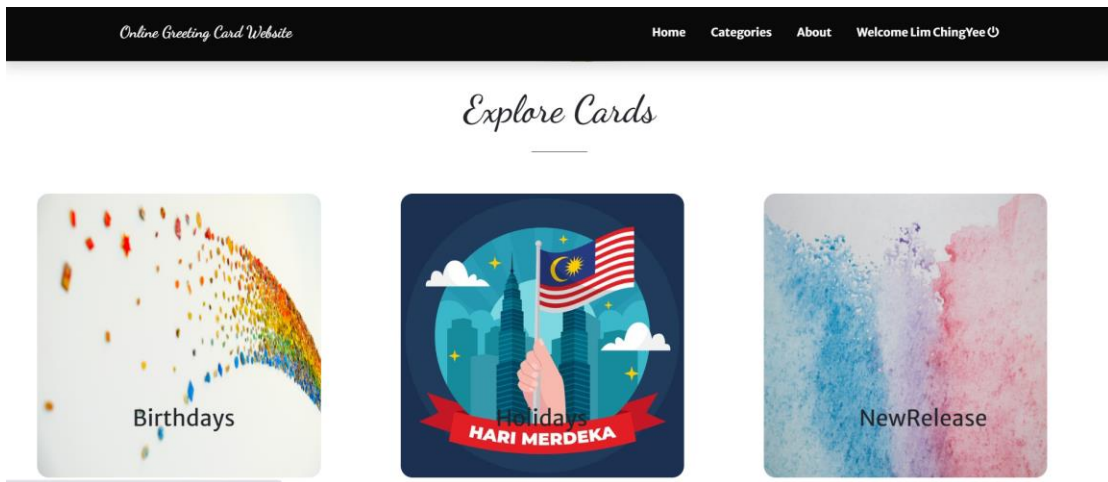


Figure 5.17 Card Categories



Figure 5.18 Viewing Specific Category Cards

In this section, users can access detailed information pertaining to each card within the selected category (Figure 5.19). The content, dimensions, and other pertinent details of the cards are systematically displayed for user convenience.

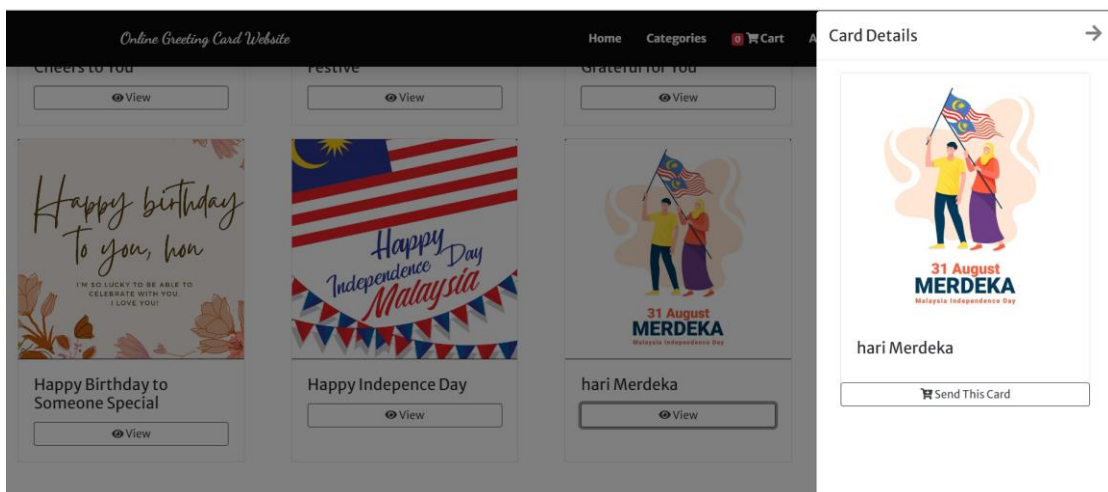


Figure 5.19 Cards Detail

Here, users are facilitated with options to tailor the chosen card according to their preferences (Figure 5.20). Before proceeding to send the card, users can preview the customizations they have made, ensuring that the card aligns with their expectations.

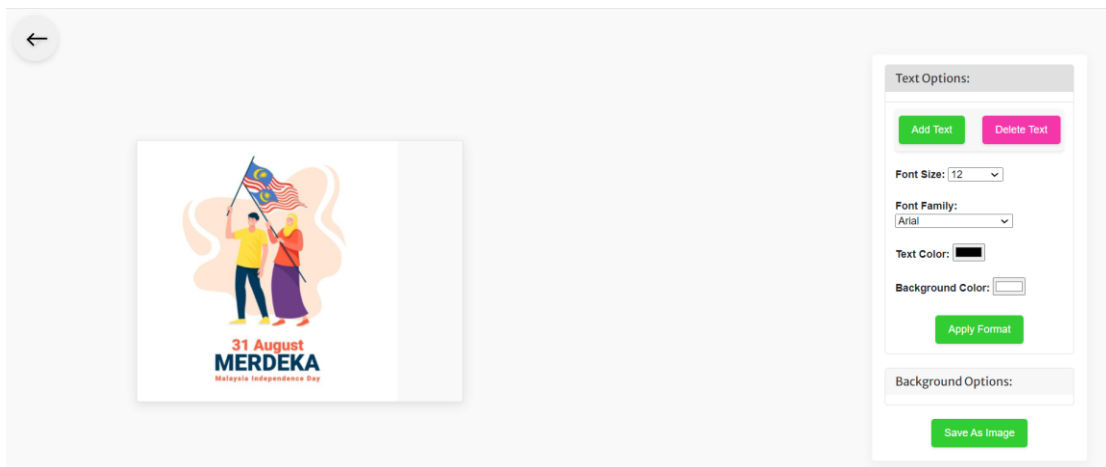


Figure 5.20 Personalize and Preview Selected Card

In the below figure, users can modify the cards in various ways:

1. **Add Text (Figure 5.21):** In this section, users are introduced to the functionality of adding new textual elements to the card. By simply clicking, users can initiate the addition of new text, facilitating the process of annotating and personalizing their cards.

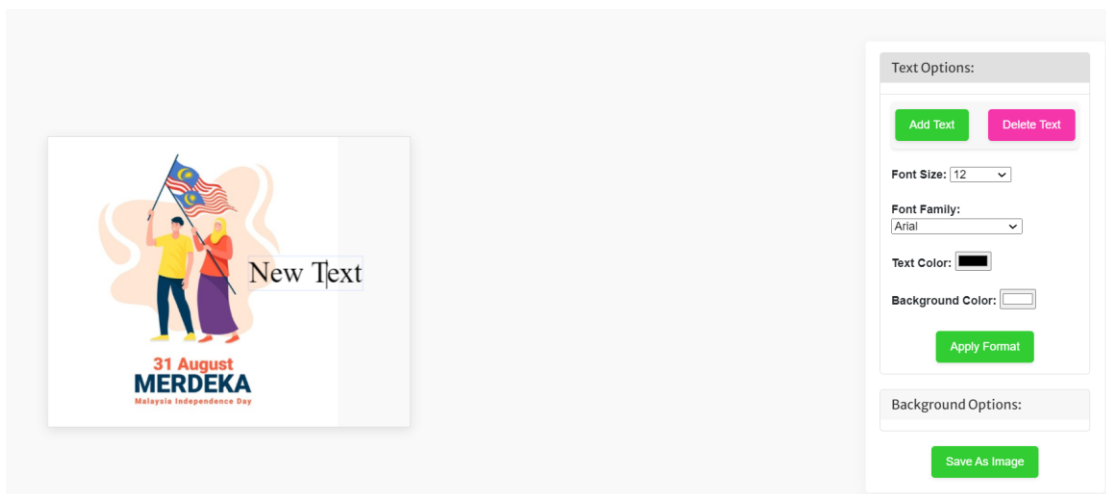


Figure 5.21 Adding Text to the Cards

2. **Edit Text (Figure 5.22):** This figure illustrates the feature that allows users to edit existing text on the card. A simple click on the text transforms it into an editable field, making the process of editing both intuitive and quick.

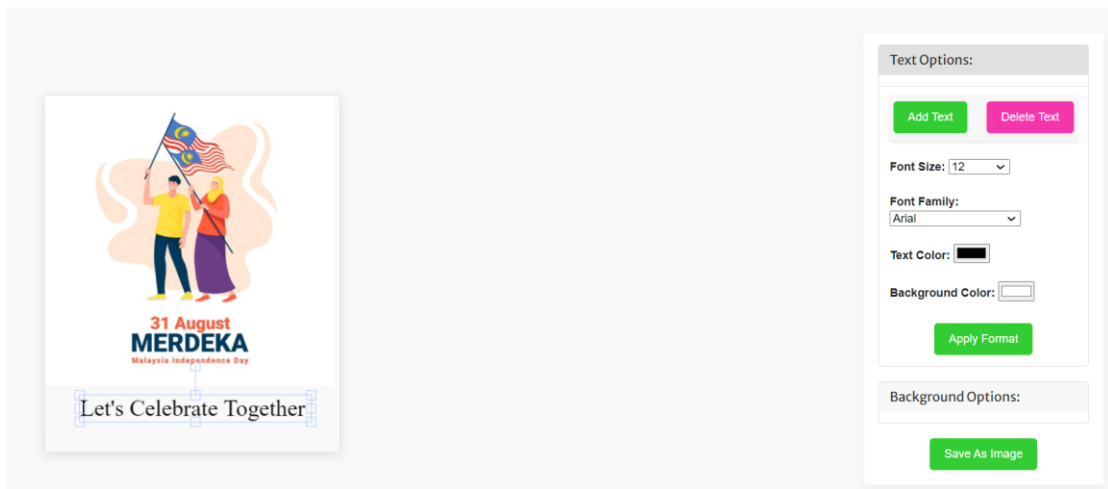


Figure 5.22 Editing Text in the Cards

3. **Format Text (Figure 5.23):** Here, users are provided with options to customize the appearance of the text, changing attributes such as font size and style, text color, and background color, enhancing the visual appeal and readability of the text on the card.

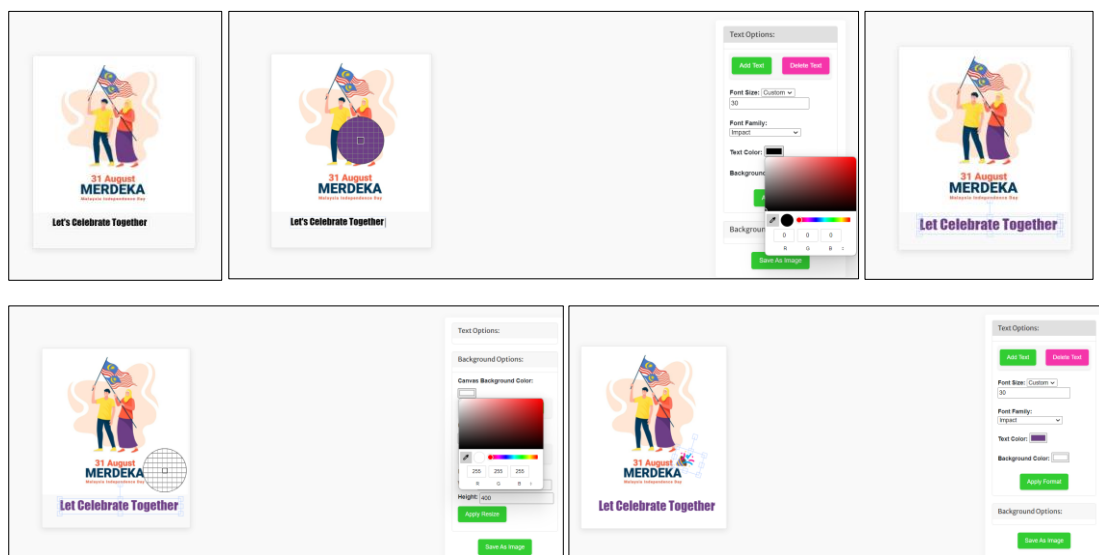


Figure 5.23 Text Formatting Options

4. **Delete Text:** Users can select any text and remove it by pressing the 'Delete Text' button.

In this section, users are given the flexibility to modify the dimensions of both the card and text sections, ensuring a personalized and optimized display. The resizing can be done through the following methods:

1. **Manual Resizing (Figure 5.24):** This method allows users to intuitively resize elements by clicking and dragging the corners or edges. This hands-on approach provides direct control over the size and aspect ratio of the card and text sections.

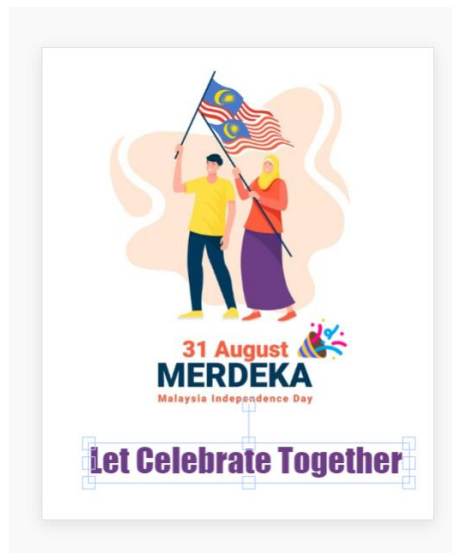


Figure 5.24 Manual Resizing the Card and Text Sections

2. **Defined Resizing (Figure 5.25):** For users seeking precision, this method is ideal. Here, users can specify the exact dimensions they desire by entering the values in the provided fields. This ensures that the resizing is done to exact specifications, providing a more controlled customization experience.

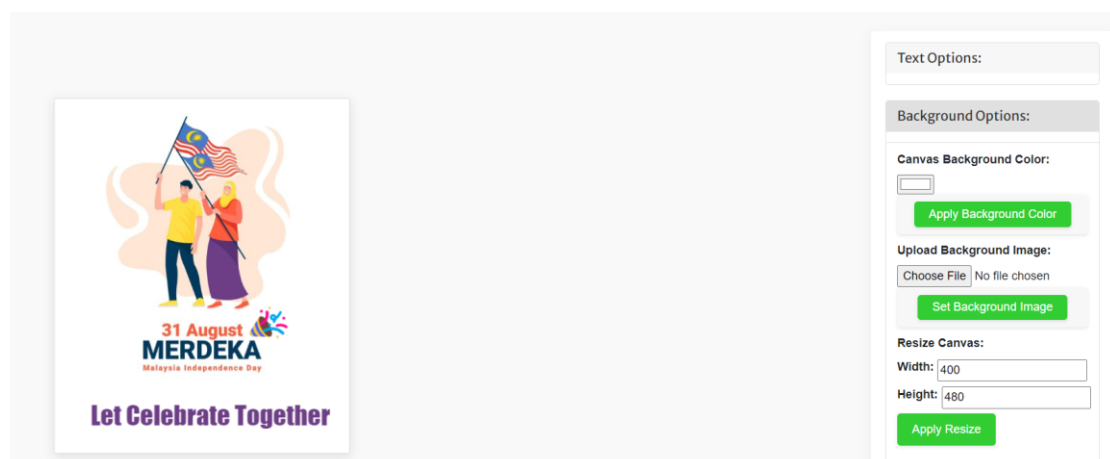


Figure 5.25 Defined Resizing the Card and Text Sections

After finish edit the selected card, users can save their creation, which is a crucial step before forwarding it to the recipient. The system promptly acknowledges the successful saving of the image, providing users with immediate feedback and assurance that their creation has been securely stored, as captured in Figure 5.26.

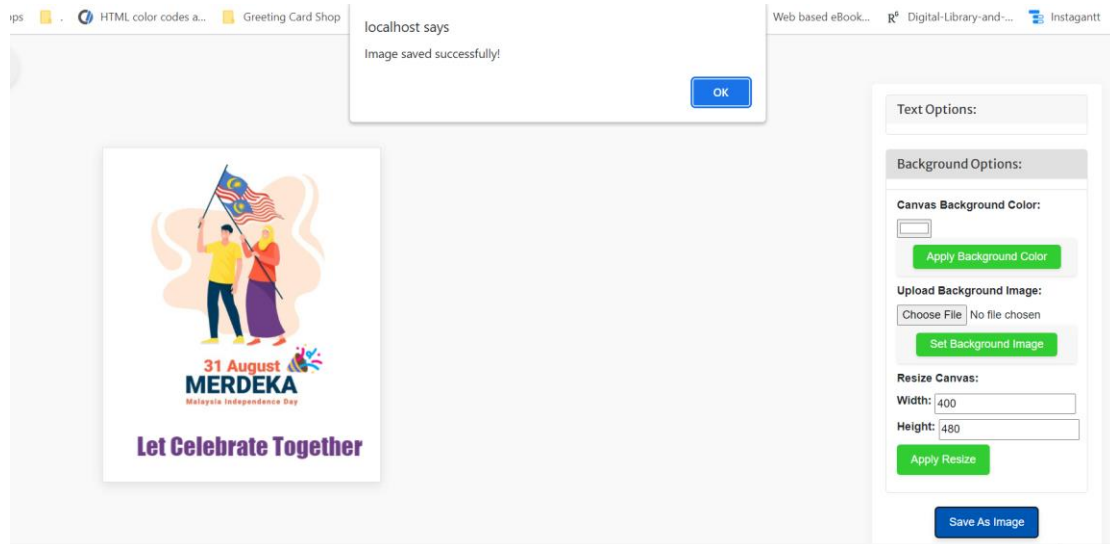


Figure 5.26 Notification of Successful Image Saving

Before progressing to the submission stage, the system engages the users with a confirmation dialogue (Figure 5.27). This step is quintessential as it serves dual purposes:

1. **Ensuring User Satisfaction:** It offers a moment for users to affirm that they are content with their customization and are ready to proceed to the sending phase.
2. **Preventing Unintended Submissions:** It acts as a safeguard against accidental submissions, allowing users to retain control over the sending process. If the user selects 'Cancel', they can seamlessly return to the editing phase to further refine their card. Conversely, opting for 'OK' signifies their readiness to transition to the sending step, cementing their decision and moving forward in the process.

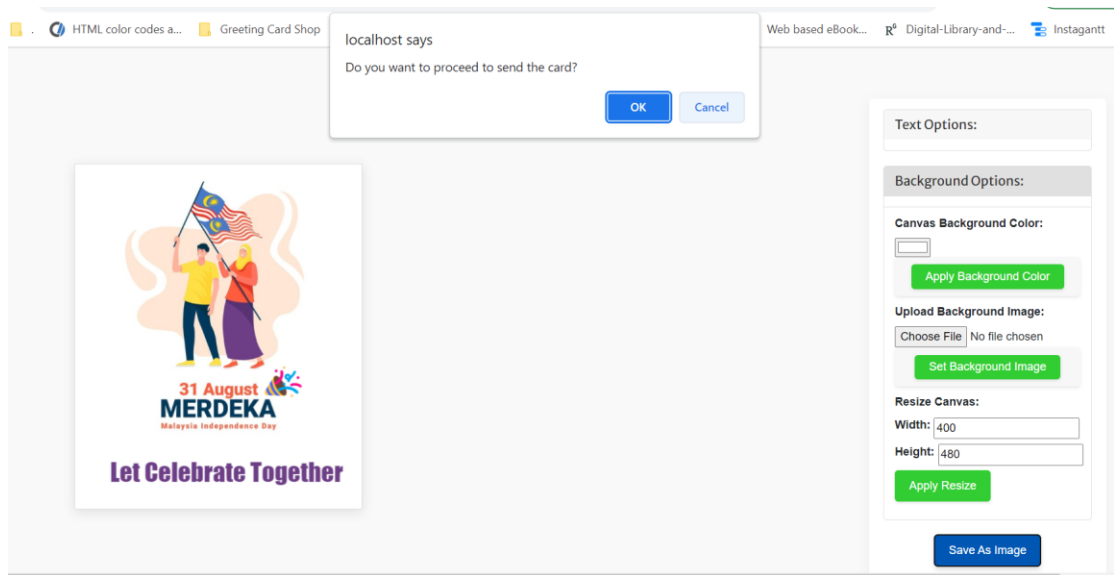


Figure 5.27 Submission Confirmation Dialogue

As users navigate to the card sending stage, the system smartly retrieves the sender's details linked with their user ID, notably their name and email address, as captured in Figure 5.28. This automated retrieval not only ensures accuracy but also significantly expedites the sending process, providing a seamless user experience.

[Go Back to Editor](#)

Enter Your Information:

Your Name

From

To

Message

Delivery Option

Figure 5.28 Automatic Retrieval of Sender's Details

In this sending the card step (Figure 5.29), the sender is required to furnish pertinent details to facilitate the card's dispatch:

1. **Recipient Details:** The sender must input the email addresses of one or more intended recipients. This step emphasizes the verification of the entered email addresses to prevent any misdirection.
2. **Message Composition:** Alongside the recipient details, the sender is encouraged to pen a personalized message. This message, a blend of the sender's sentiments and wishes, will adorn the space below the e-card, granting a personal touch to the digital greeting.

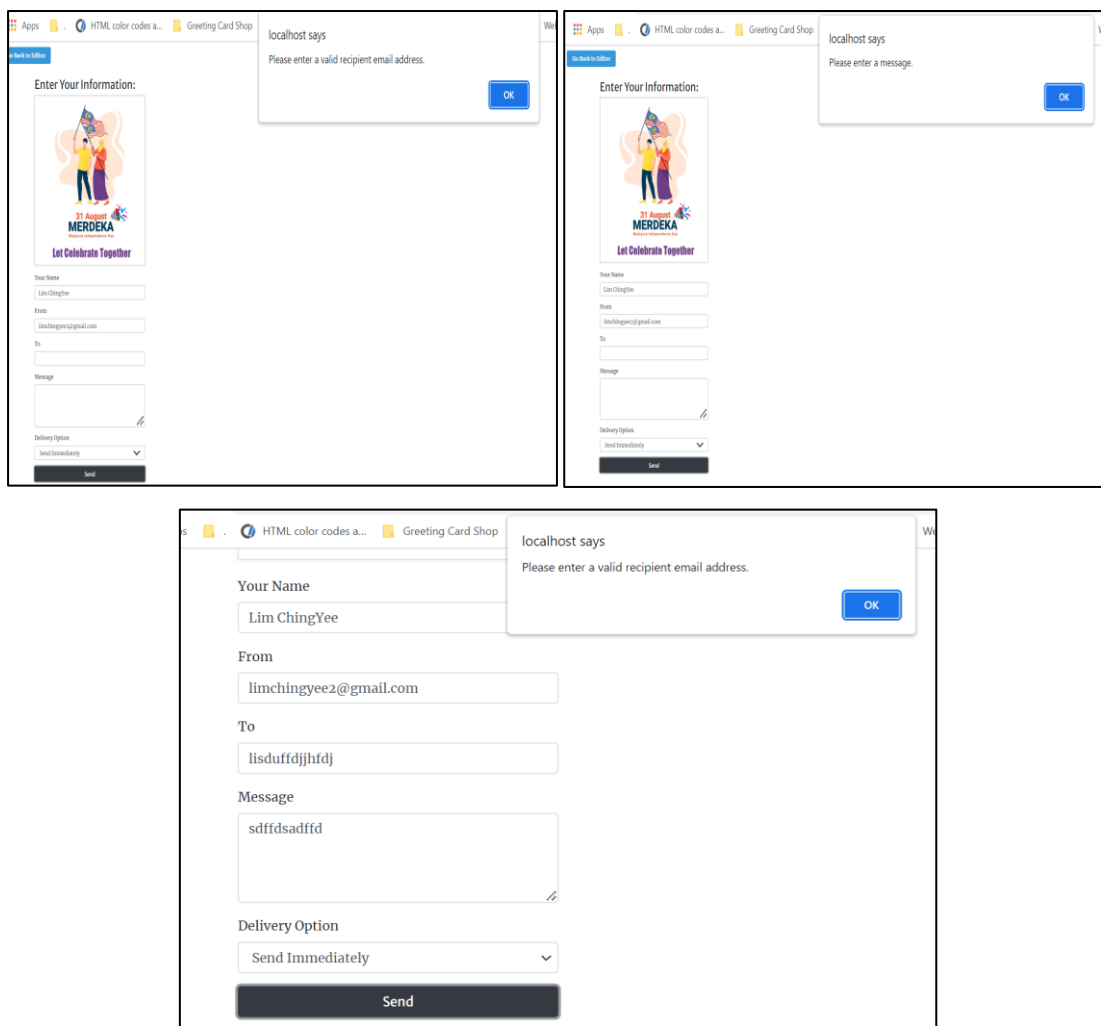


Figure 5.29 Inputting Recipient Details and Composing Message

To enhance user convenience, the system presents an option to schedule the card sending, be it for immediate dispatch or for a later time. This scheduling flexibility ensures that users can time their greetings perfectly, without fretting about missing important occasions or dates. They can simply set it up in advance and let the system take care of the timely delivery (Figure 5.30).

Figure 5.30 Scheduling the Card Sending

Upon clicking the 'Submit' button, the card is sent to the recipient's email address as specified in the earlier step, as shown in Figure 5.31. The recipient is greeted with a heartfelt digital card that embodies both the sender's choice of visuals and their personal message.

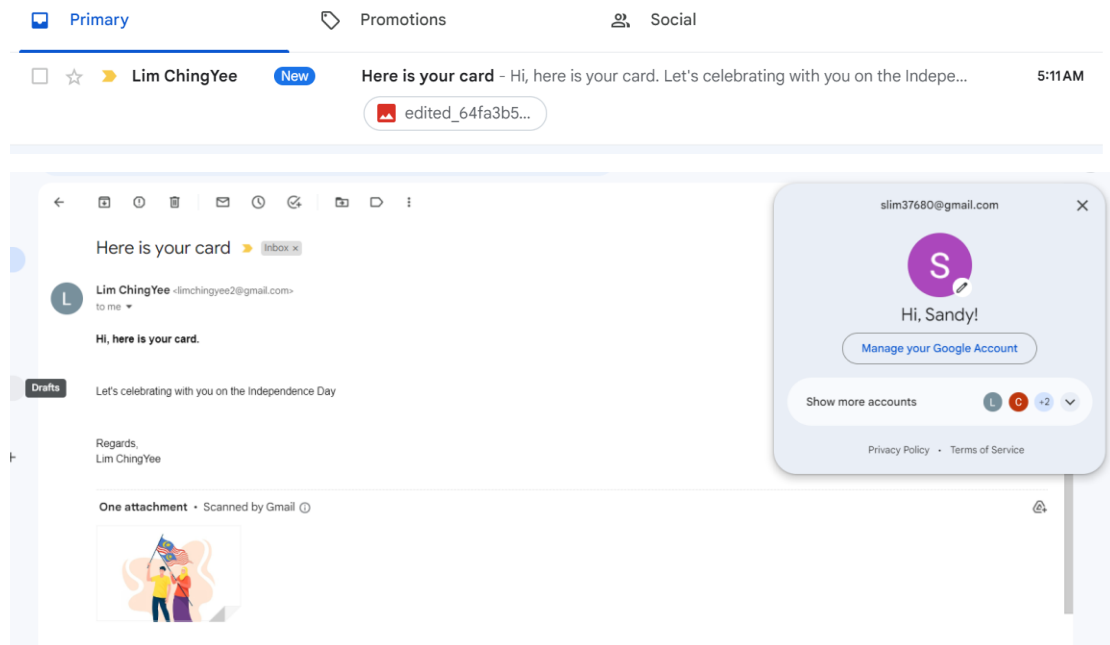


Figure 5.31 Recipient's View of the Received Card and Message

When the user opts to further personalize their chosen card, an additional level of customization is available through the feature of uploading a unique background image, thus transforming the standard card into a more personal, heartfelt greeting. Users can simply click the “Upload Background Image” button to select an image from their device (Figure 5.32).

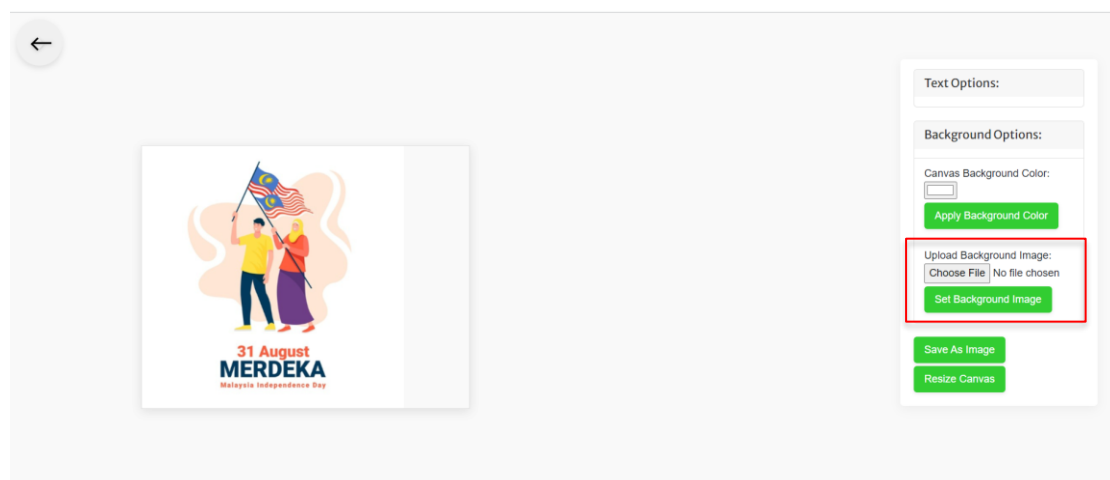


Figure 5.32 Background Image Upload and Customization

Once uploaded, the new image is set as the card's background (Figure 5.33). Users have the flexibility to adjust the image to fit the canvas appropriately, ensuring that the new background integrates well with the existing elements of the card.

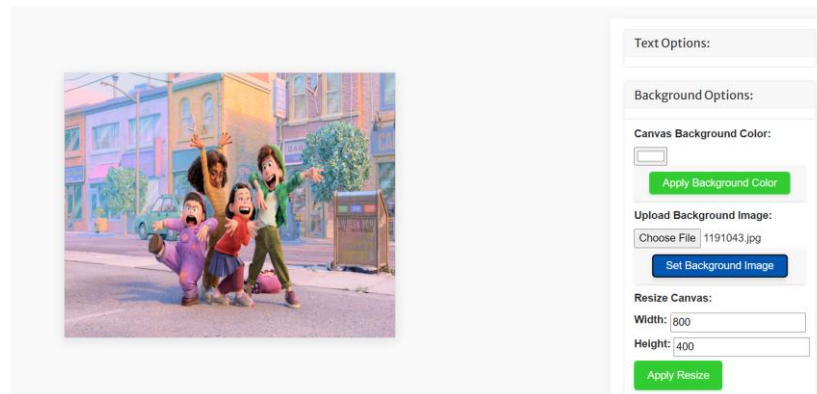



Figure 5.33 Background Image Upload and Customization

After applying the custom background image, users can preview the card to ensure it meets their expectations. If satisfied, they can proceed to save the card, and the new background image will be incorporated into the saved card data, ready for sending. Upon clicking the 'Submit' button, users initiate the sending process. The system will prompt users to enter the recipient's email address and a personalized message if desired. Users can then confirm the details and send the card (Figure 5.34).

Enter Your Information:



Your Name

From

To

Message

Delivery Option

Figure 5.34 Sending Process Confirmation

Once the card has been sent, both the sender and the recipient will receive email notifications. The sender will receive a confirmation receipt indicating that the card has been successfully sent to the recipient. Simultaneously, the recipient will receive an email containing the personalized card and any accompanying message (Figure 5.35).

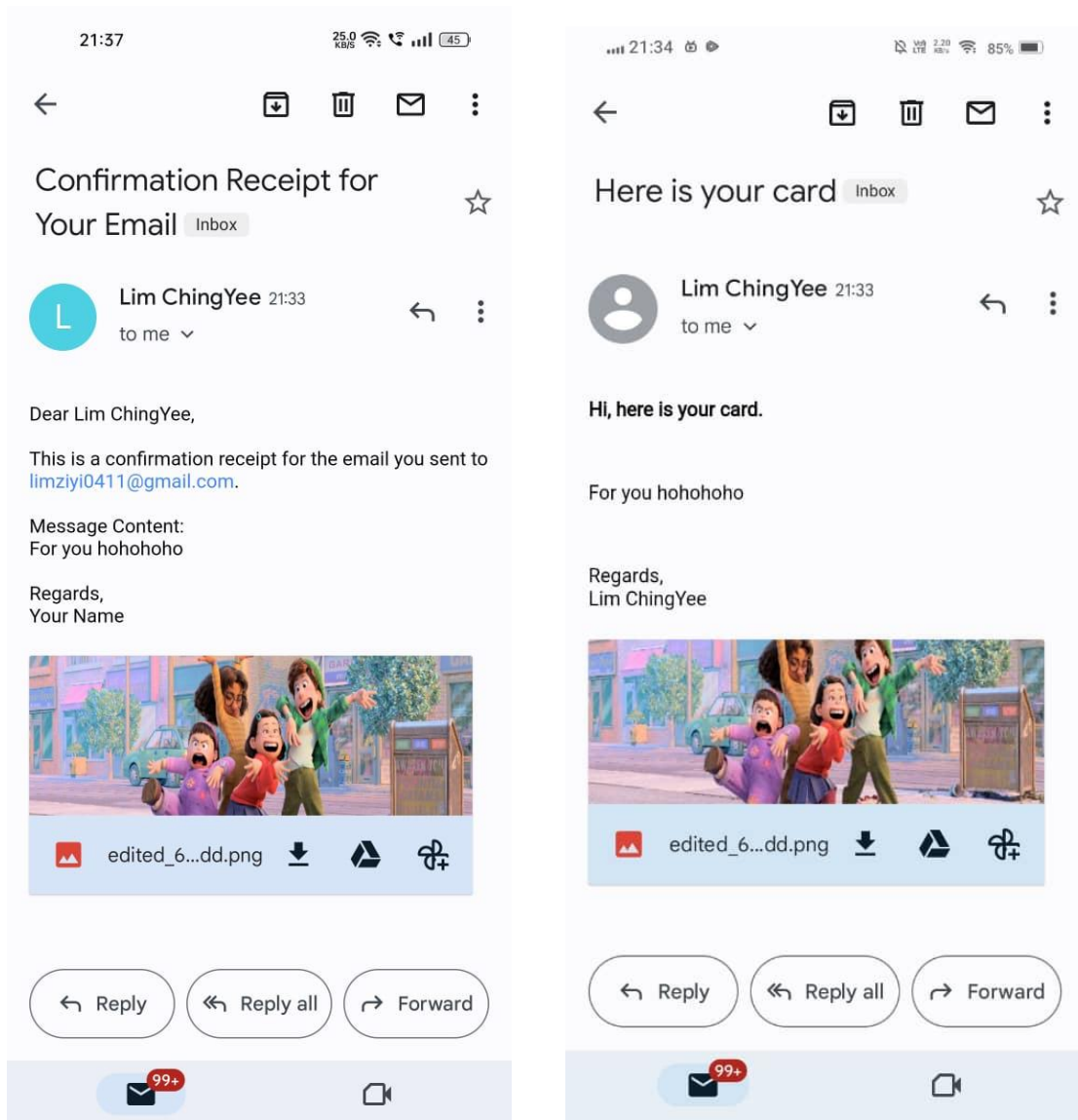


Figure 5.35 Email Receive for Sender and Recipient

5.4.2 Admin Site

Transitioning from the user site, we venture into the comprehensive environment of the Admin Site, a space distinctly crafted to streamline the management and administration of the e-card platform. This pivot in our journey is initiated by clicking the admin link located at the top navbar, an action captured in Figure 5.36.

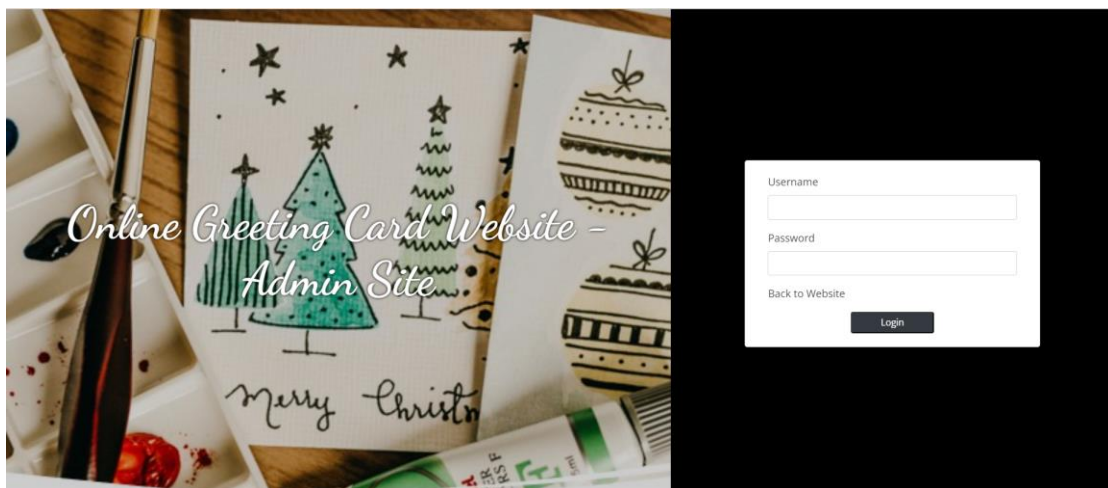


Figure 5.36 Admin Site Access

Upon successful login, both admin and staff members are greeted with a user-friendly interface that allows for seamless navigation across various functionalities available at the Admin Site. To explore further, they can use the nav bar button, a transition neatly illustrated in Figure 5.37 and Figure 5.38.

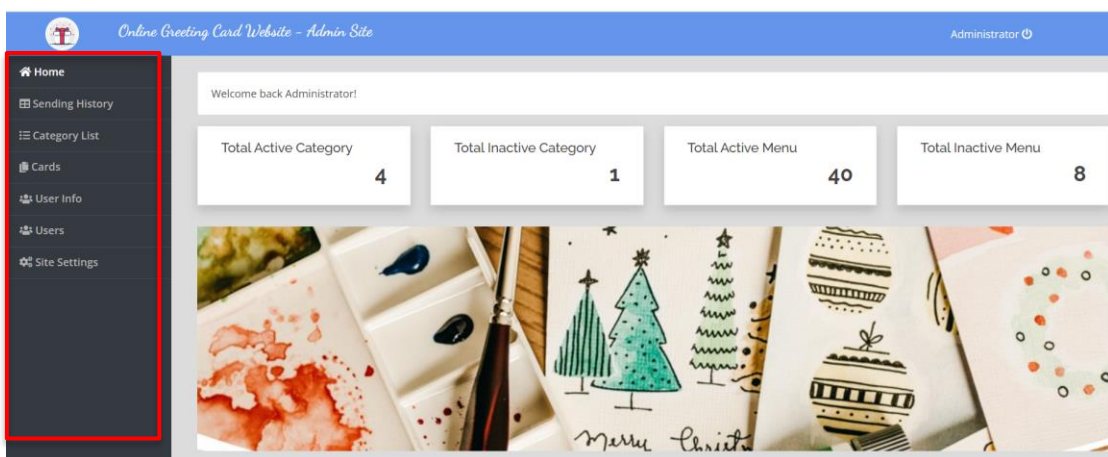


Figure 5.37 Admin Site Navigation for Admin

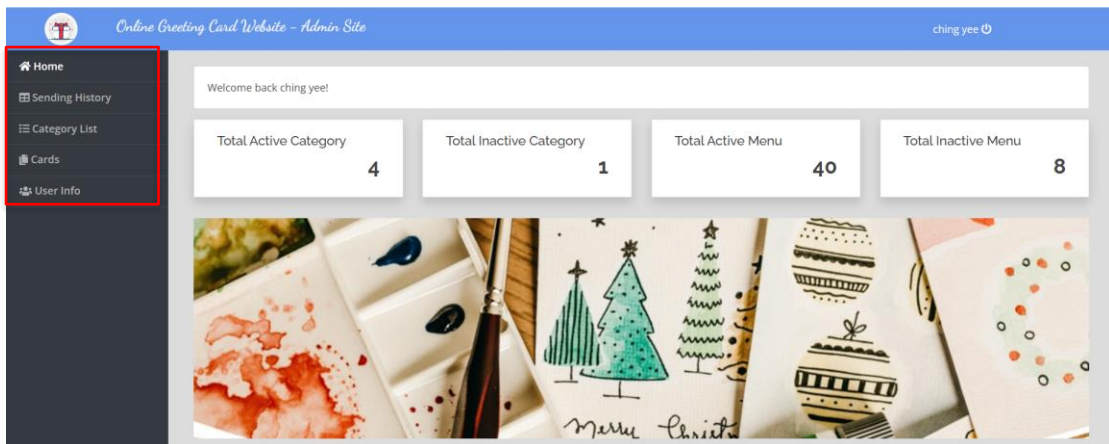


Figure 5.38 Admin Site Navigation for Staff

In the administrative portal, the staff and admin have varying levels of access, reflecting their roles and responsibilities in maintaining the platform. The site grants them the tools necessary to oversee and manage the various aspects of the system efficiently, creating a harmonious balance between user satisfaction and operational efficacy.

Within the fortified confines of the admin site, individuals assigned with admin or staff roles have at their disposal a range of functionalities that streamline the operational workflow of the platform. Let us navigate through these features in greater detail.

Upon initiating their journey at the admin site, they encounter a meticulously designed dashboard that offers a panoramic view of the ongoing activities and statistics related to the e-card system, all at a glance, as demonstrated in Figure 5.39.

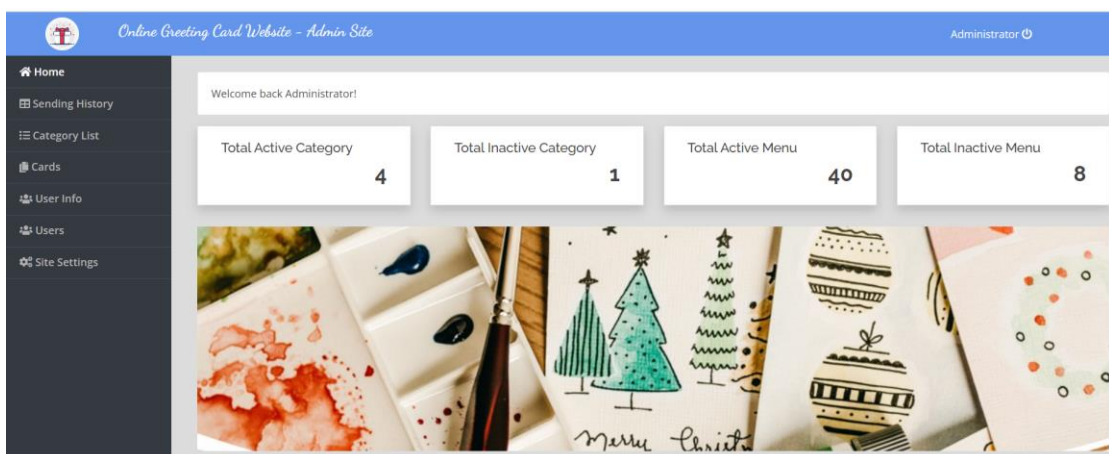


Figure 5.39 Admin Dashboard Overview

Navigating further, the admin has the privilege to oversee the registered users, a critical task to ensure the authenticity and security of the user base. This role involves managing user details, including their email addresses, names, and password configurations. Any modifications made here are instantly updated in the system database, enhancing real-time management capabilities. This operation is captured vividly in Figure 5.40.

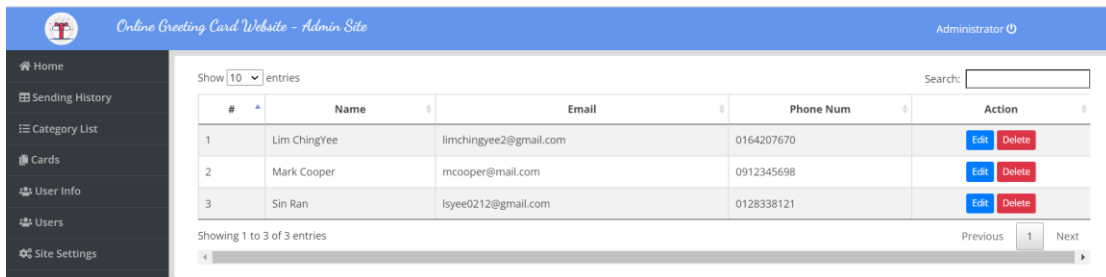


Figure 5.40 User Info Management Interface

An essential facet of administering the platform resides in the prudent management of user accounts, a responsibility bestowed primarily upon the admin. Here, we unfold the systematic process involved in adding a new user, a capability exclusive to the admin role. First and foremost, the admin can review a comprehensive list of registered users within the "Manage User Section", a snapshot of which is vividly captured in Figure 5.41. This section furnishes intricate details of users including, but not limited to, their email addresses, names, and passwords.

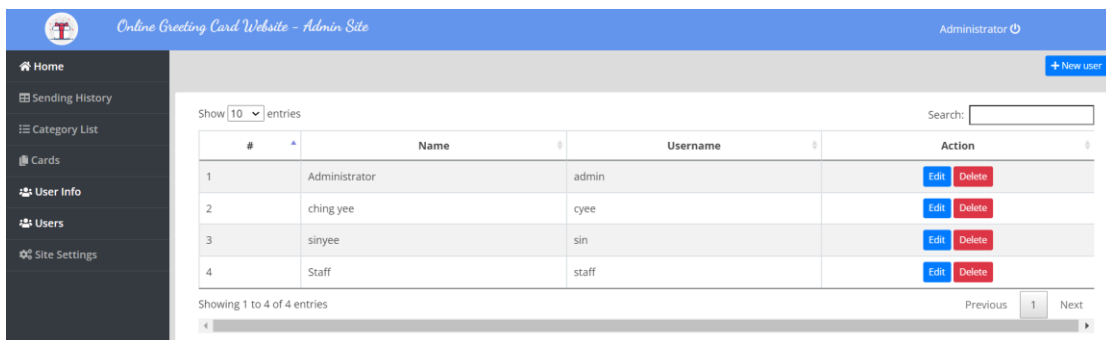


Figure 5.41 Manage User Section

Upon navigating to the section, the admin possesses the ability to undertake various modifications. They can edit existing information such as email addresses or reset passwords to ensure the seamless functioning of user accounts. Moreover, the admin holds the prerogative to remove a user account if deemed necessary. As shown in Figure 5.42, once the admin finalizes the modifications, a simple click on the 'save' option

ensures that the system updates the user information in real-time, enhancing the responsiveness of the platform.

Show entries Search:

#	Name	Username	Action
1	Administrator	admin	Action
2	ching yee	cyee	Action
3	sinyee	sin	<div style="border: 1px solid #ccc; padding: 2px;"> A Edit </div>
4	Staff	staff	<div style="border: 1px solid #ccc; padding: 2px;"> A Delete </div>

Showing 1 to 4 of 4 entries Previous Next

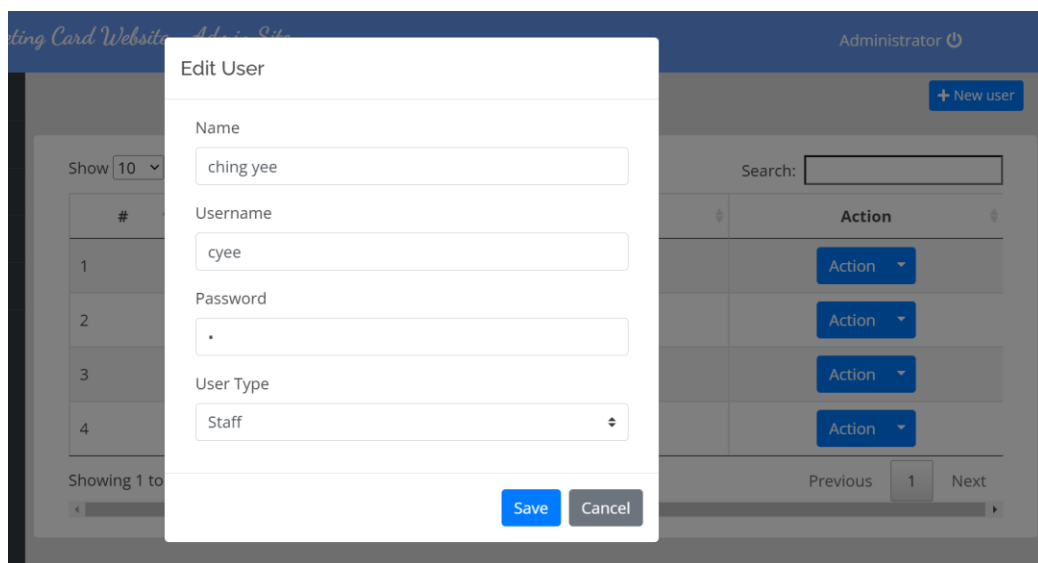


Figure 5.42 Modifying Existing User Accounts

In addition to modifying existing user accounts, a critical functionality vested in the hands of the admin is the ability to usher new users into the platform, fostering growth and versatility within the e-card system. This process is succinctly captured in the forthcoming illustrations.

Upon venturing to the "Add New User" subsection, as illustrated in Figure 5.41, the admin is welcomed by a user-friendly interface that allows for the effortless creation of new user profiles. This pivotal section is engineered to facilitate the input of vital user details such as their name, username, password, and user type (Figure 5.43).

New User

Name

Username

Password

User Type

[Save](#) [Cancel](#)

Figure 5.43 User Details Entry

Following the successful creation of a new user profile, the new data is promptly exhibited within the user section, providing a comprehensive view of the details entered, as seen in Figure 5.44. This visualization not only confirms the successful addition but also allows for any immediate modifications or adjustments.

Online Greeting Card Website - Admin Site Administrator

Home Sending History Category List Cards User Info Users Site Settings

Show 10 entries Search:

#	Name	Username	Action
1	Administrator	admin	Edit Delete
2	ching yee	cyee	Edit Delete
3	sinyee	sin	Edit Delete
4	Staff	staff	Edit Delete
5	Test	testing	Edit Delete

Showing 1 to 5 of 5 entries Previous 1 Next

Figure 5.44 New User Data Display

Subsequently, we transition to the user's initial login experience. Figure 5.45 illustrates the login interface, a gateway designed with an emphasis on security, allowing new users to authenticate their credentials through the provision of their assigned username and password.

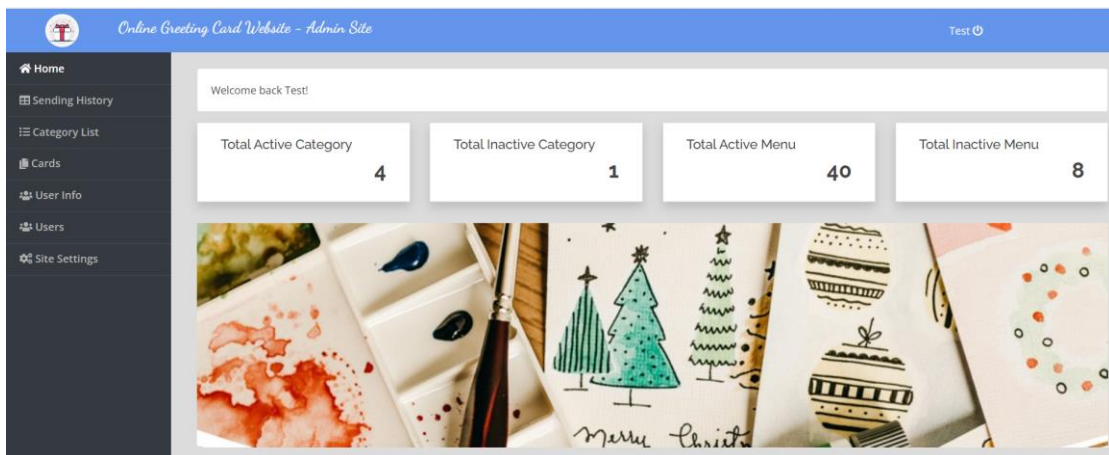


Figure 5.45 New User Login Interface

Furthermore, it's vital to note that the task of adding new users is restricted solely to individuals with admin roles. This measure is put in place to maintain the integrity and security of the admin site, ensuring that only authorized personnel can grant access to new users. Additionally, the admin site serves as the nucleus for content management. The admin can effortlessly manipulate the content visible on the 'About Us' section of the site, allowing for the dynamic display of announcements, updates, or any other pertinent information. This facilitative feature is visualized in Figure 5.46.

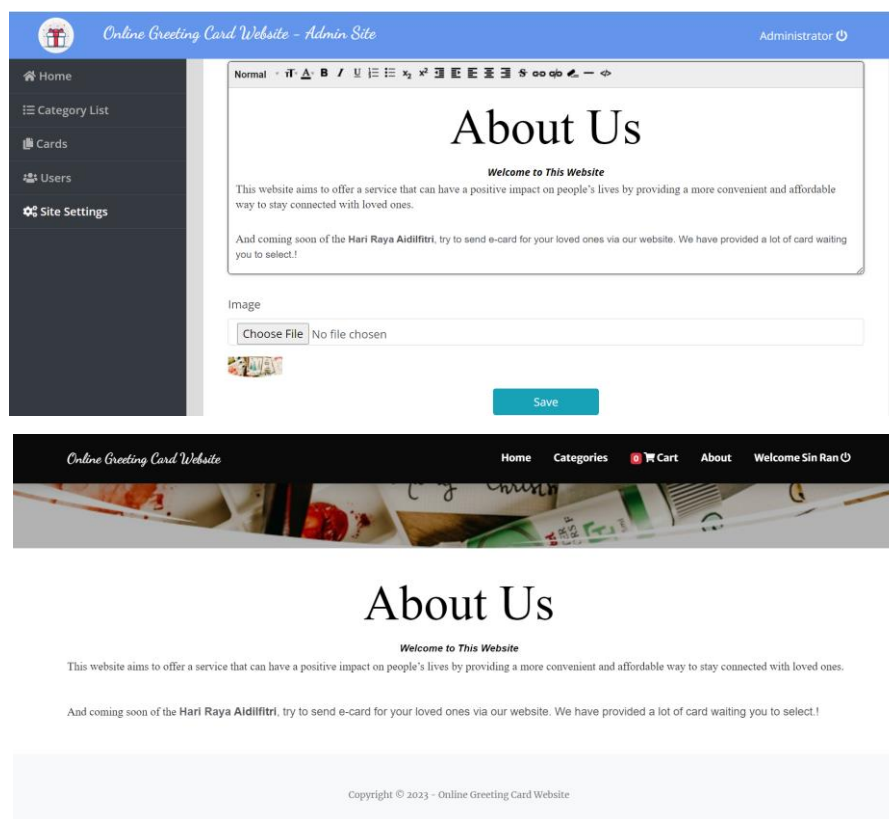


Figure 5.46 Admin-Managed 'About Us' Section

Diving into category management, the admin and staff are endowed with the authority to add, update or remove categories as per the evolving demands and trends. This ensures the site remains fresh, engaging, and aligned with the user expectations. Witness this functionality in Figure 5.47.

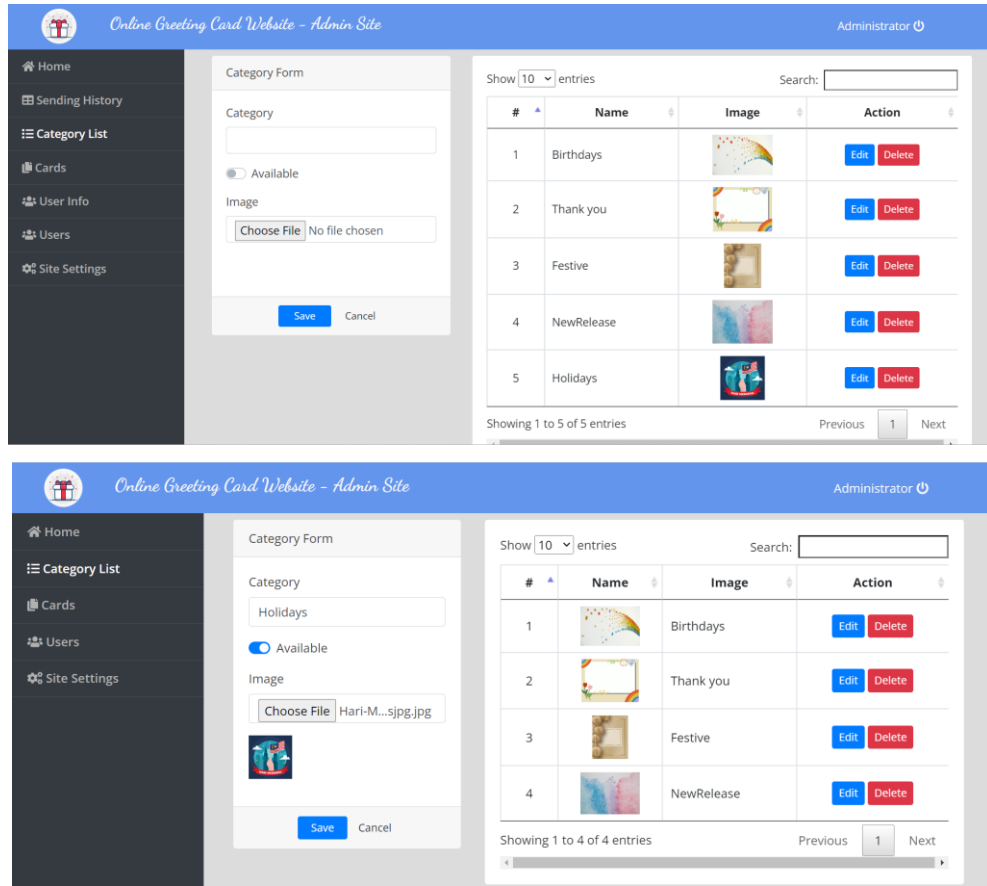


Figure 5.47 Category Management Portal

When data is successfully saved, it will be visible and displayed on the user site, as depicted in Figure 5.48.

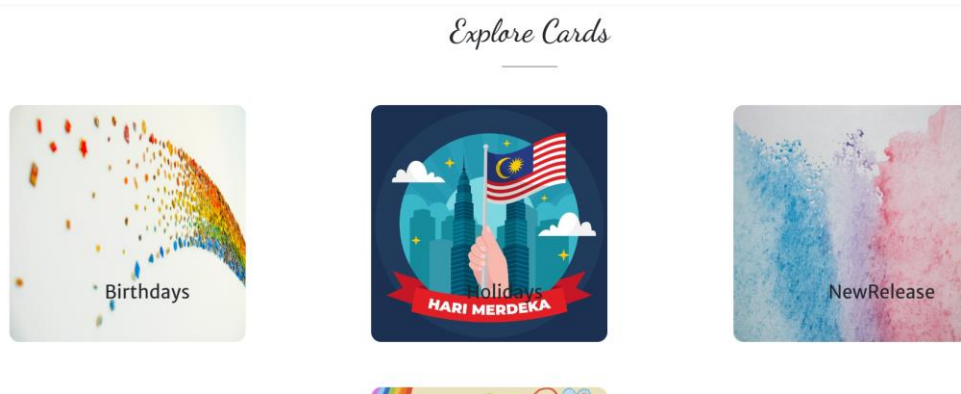


Figure 5.48 Display of Successfully Saved Category Data on User Site

Correspondingly, card management operates with an extended scope, encompassing the systematic organization of cards under specific categories. Here, the admin and staff can fine-tune the details of each card, adding a touch of personalization and uniqueness to the platform. This operational facet is captured in Figure 5.49.

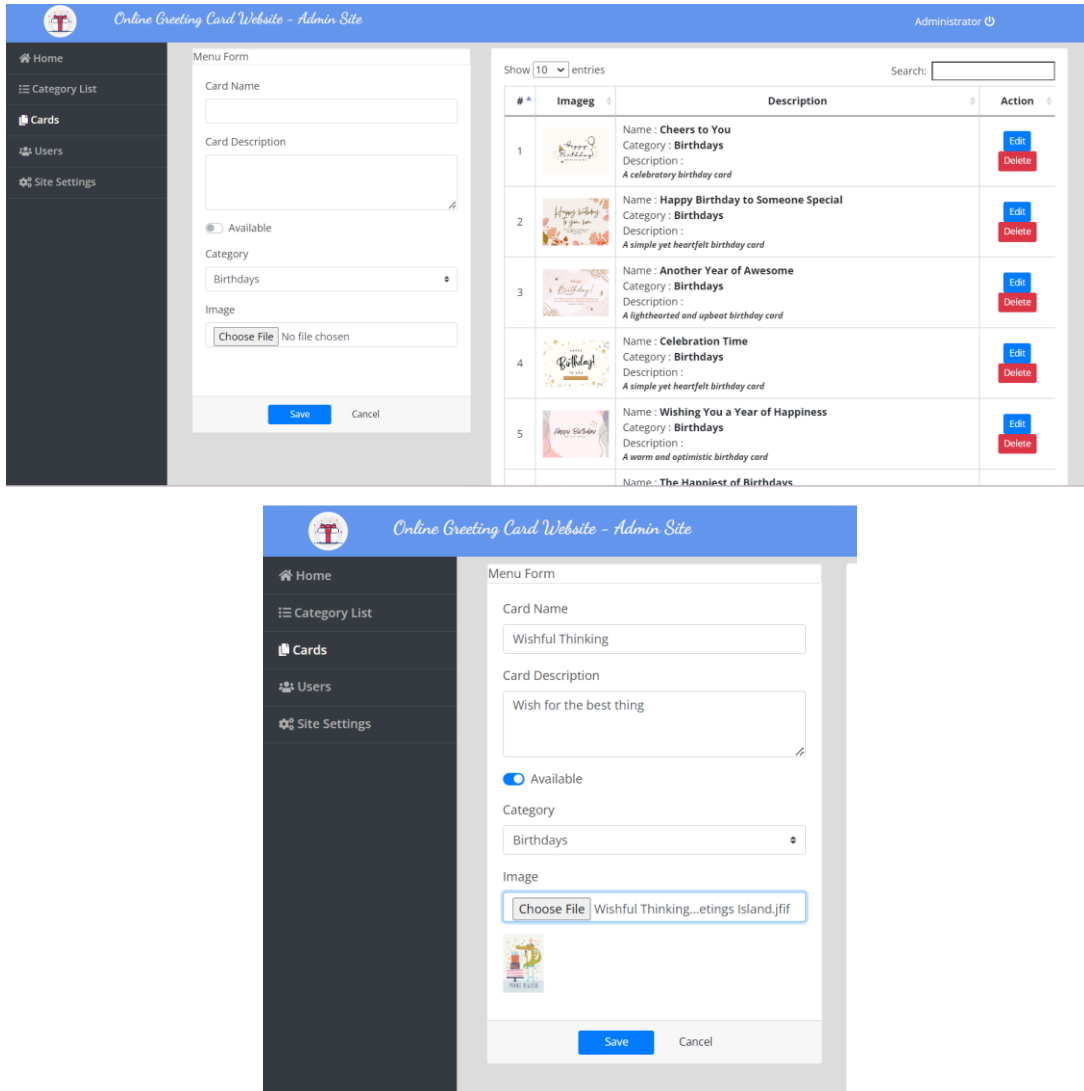


Figure 5.49 Card Management Module

When data is successfully saved, it will be visible and displayed on the user site, as depicted in Figure 5.50.

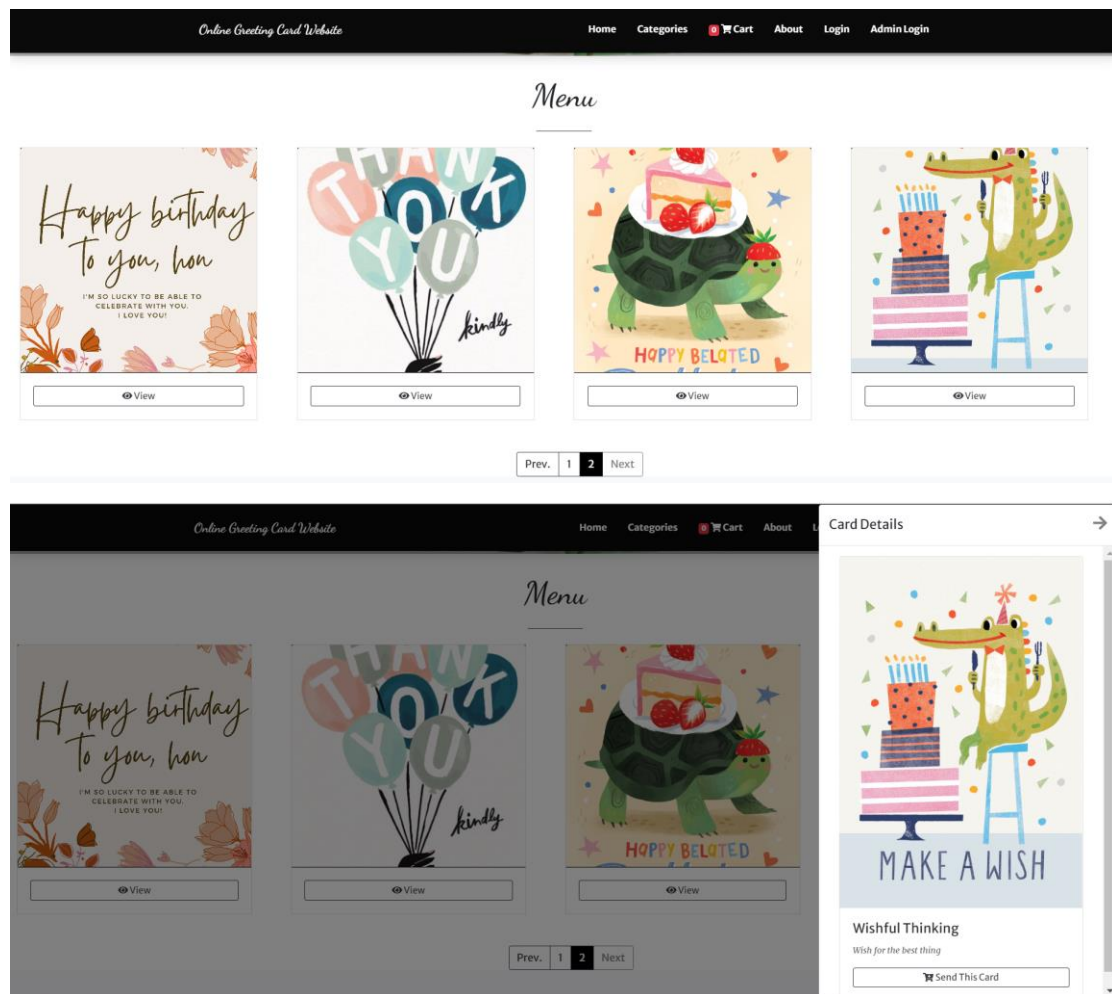


Figure 5.50 Display of Successfully Saved Card Data on User Site

To further elevate the user experience, the admin site grants the functionality to modify card details with precision. For instance, adjusting card descriptions to better resonate with the targeted audience. A successful modification reflects instantaneously on the user site, offering a dynamic and responsive system, as highlighted in Figures 5.51 and 5.52.

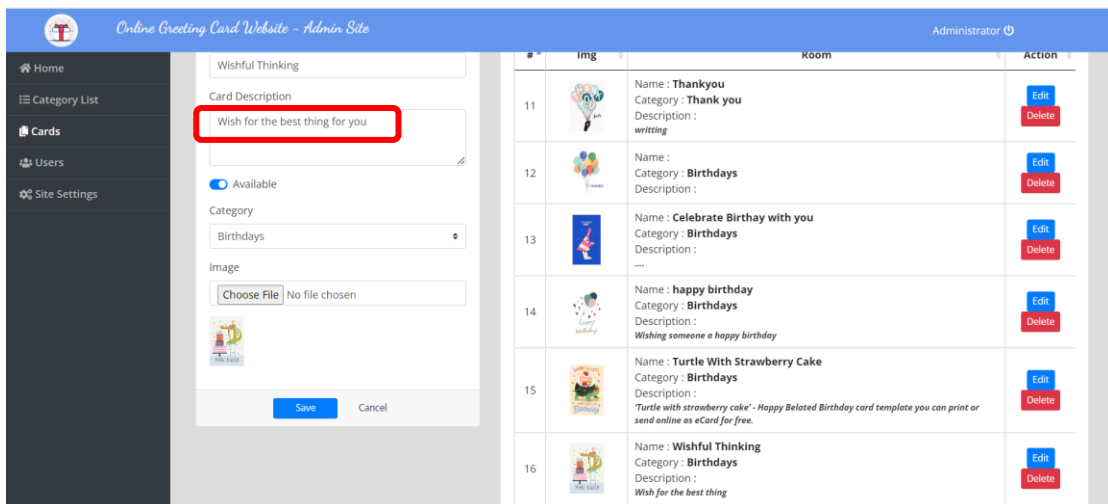
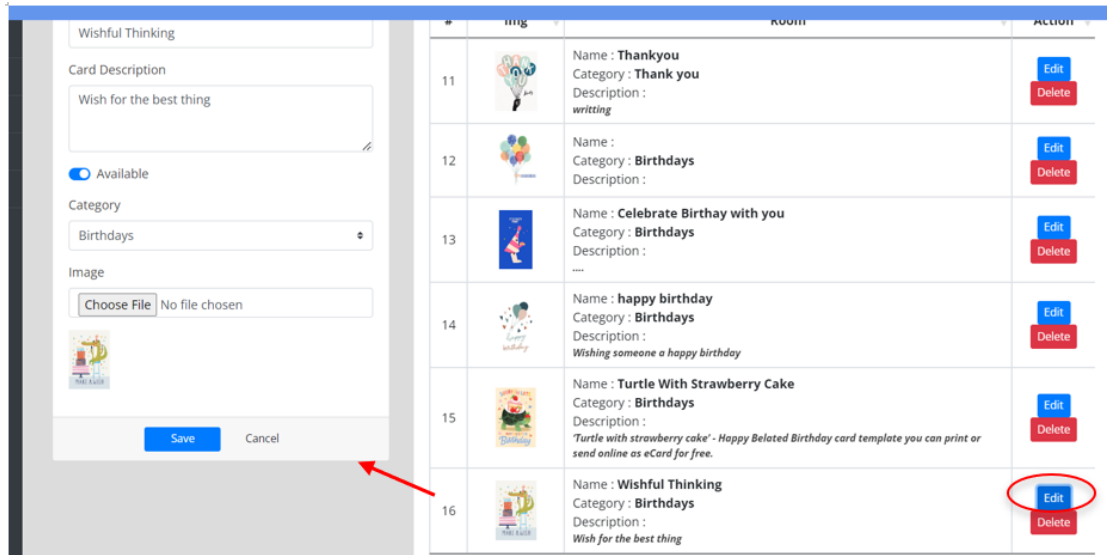


Figure 5.51 Editing Card Details

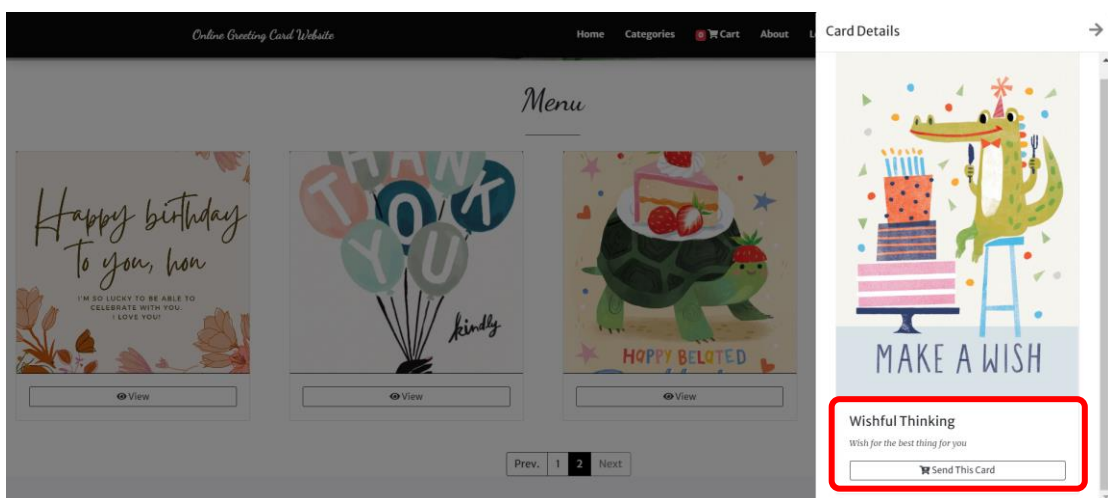


Figure 5.52 Updated Card Details on User Site

5.5 Implementation Issues and Challenges

During the project's development phase, several significant challenges emerged, particularly concerning the email distribution functionality and the real-time scheduling feature. The initial approach was to utilize Gmail's SMTP for email distribution; however, this confined the system to a single sender email address, limiting the personalization capabilities that are central to enhancing the user experience. A solution to this problem could involve integrating a more flexible email server that allows for personalized sender addresses, enhancing the personal touch and authenticity of the e-cards.

Moreover, the project initially operated on the local server XAMPP, which, without a real domain name, limited the project's potential to mimic a real-world environment fully. Transitioning to a dedicated domain in future iterations could significantly enhance the user experience by removing current limitations and allowing for a more authentic and robust platform.

Another notable challenge was the implementation of a real-time scheduling feature, a vital functionality designed to streamline the e-card sending process by enabling users to schedule cards for future dates and times. The creation of a server-side cron job to manage this functionality proved to be complex, requiring a balanced approach that integrates technical development with efficient resource management. Future developments should focus on creating a feature that maintains a harmonious balance between efficiency and user-friendliness without compromising the platform's overall performance.

CHAPTER 6 System Evaluation and Discussion

6.1 Block Box Testing

In this section, we will evaluate the system's functionalities through block box testing, which includes a series of test scenarios that focus on the system's output based on different inputs. The block box testing is divided into two main categories: testing the user site functionalities and the admin site functionalities.

6.1.1 User Site Functionality Testing

This subsection focuses on the testing scenarios pertaining to the user site functionalities.

6.1.1.1 Test Scenario: Check Account Login Functionality on User Site

Table 6.1 Check Account Login Functionality on User Site

No	Test Case	Value	Expected Result	Actual Result
1.	Verify email and password after click on the login button in login page with valid email and password.	Email: limchingyee2@gmail.com (Valid Email) Password: 1234 (Valid Password)	User is successfully logged in and directed to the intended page.	Same as expected result
2.	Attempt to login with invalid email or password	Email: lim@gmail.com (Invalid Email) Password: 1234 (Valid Password)	Display an error message: "Email or password is incorrect."	Same as expected result
3.	Attempt to login without entering a	Email: Blank Password: Blank	Display a pop-up error message	Same as expected result

	username and password.		prompting the user to enter their email and password.	
4.	Attempt to login with a valid email but a blank password.	Email: limchingyee2@gmail.com (Valid Email) Password: Blank	Display an error message: "Please enter your password."	Same as expected result
5.	Attempt to login with a blank email and a valid password.	Email: Blank Password: 1234 (Valid Password)	Display an error message: "Please enter your email address."	Same as expected result
6.	Attempt to login with both an invalid email and an invalid password.	Email: lim@gmail.com (Invalid Email) Password: 1324 (Invalid Password)	Display an error message: "Invalid ID or Password Entered"	Same as expected result
7.	Attempt to save user name and email for sending a card after logging in with valid credentials.	User has logged in with valid credentials.	User can successfully save their name and email for sending a card, and the saved	

			information is used to facilitate card sending. The user can also continue to browse the website.	
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6.1.1.2 Test Scenario: Check Register Account Functionality on User Site

Table 6.2 Check Register Account Functionality on User Site

No	Test Case	Value	Expected Result	Actual Result
1.	Verify all the information enters by the student after click on the register button with all valid input.	Enter valid user details: Firstname, Lastname, Contact, Email, and Password	User account is successfully registered, and the user is redirected to the intended page.	Same as expected result
2.	Attempt to register with an email that is already registered.	Enter an email that is already associated with an existing account.	Display an error message: "Email already exists."	Same as expected result
3.	Attempt to register with an invalid email format.	Enter an email with an incorrect format (e.g., missing '@' symbol).	Display an error message: "	Same as expected result

			Please include an '@' in the email address.”	
4.	Attempt to register with missing fields.	Leave one or more required fields (e.g., Firstname, Lastname, Contact, Email, and Password) blank	Display error messages for the missing fields and prompt the user to fill them in.	Same as expected result
5.	Attempt to register with valid information and navigate away from the registration page before submitting.	Enter valid user details but leave the registration page without submitting.	The user's information is not saved, and no account is registered.	Same as expected result

6.1.1.3 Test Scenario: Check Card Selection and Customization Functionality on User Site

Table 6.3 Check Card Selection and Customization Functionality on User Site

No	Test Case	Value	Expected Result	Actual Result
1.	Verify the ability to select and view a card from the available list.	User selects a card from the list and views it.	The selected card is displayed in detail for the user to view.	Same as expected result

2.	Verify the ability to add custom text to the selected card.	User adds custom text to the card with specific font style and size.	Custom text is added successfully and displayed with the specified attributes on the card.	Same as expected result
3.	Verify the ability to change the background color of the selected card.	User changes the background color of the card to a custom color.	The background color of the card changes to the selected color successfully.	Same as expected result
4.	Verify the ability to resize the card and the text section dynamically.	User resizes the card and the text section in two ways: manually by dragging and by entering specific dimensions.	The card and text section are resized successfully according to the user's adjustments.	Same as expected result
5.	Verify the ability to delete the added custom text.	User selects the custom text and deletes it.	The custom text is removed successfully from the card.	Same as expected result
6.	Verify the ability to save and send the customized card.	User saves and send the customized card.	The customized card is saved successfully and going to retaining all	Same as expected result

			customizations into sending card .	
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6.1.1.4 Test Scenario: Check Card Sending Functionality on User Site

Table 6.4 Check Card Sending Functionality on User Site

No	Test Case	Value	Expected Result	Actual Result
1.	Verify the ability to save a customized card	User initiates the save action after customizing the card	A message pops up indicating that the card has been saved successfully	Same as expected result
2.	Verify the message prompt functionality before saving the card go to send card process	User clicks 'OK' after saving the card	A prompt appears asking the user if they are sure about proceeding to send the card	Same as expected result
3.	Verify the functionality to edit the card before sending	User clicks 'Cancel' on the prompt	The system allows the user to return to the editing mode to	Same as expected result

			make further changes to the card	
4.	Verify the email retrieval functionality	User proceeds to send the card	The sender's name and email address are auto-retrieved from the user ID	Same as expected result
5.	Verify the recipient email and message input functionality	User inputs recipient email address(es) and a personal message	The system accepts the input and facilitates the sending of the card with the included message	Same as expected result
6.	Verify the functionality to schedule the card sending	User opts to send the card at a later time	The system allows the user to select a future date and time for the card to be sent	Same as expected result
7.	Verify the card sending functionality	User clicks on the 'Submit' button to send the card	The recipient receives an email with the e-card	Same as expected result

			along with the sender's name, email, and personal message	
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6.1.1.5 Test Scenario: Check Sent Card History Functionality on User Site

Table 6.5 Check Sent Card History Functionality on User Site

No	Test Case	Value	Expected Result	Actual Result
1.	Verify access to sent card history	Logged-in user navigates to the "Sent Card History" section	System displays a list of all cards previously sent by the user, based on their user ID	Same as expected result
2.	Verify the details displayed for each sent card	User views an entry in the sent card history	For each card, the system displays details such as the recipient's email, date sent, card design, and message content	Same as expected result

3.	Verify the functionality when no history exists	New user with no sent cards accesses the "Sent Card History"	System displays a message, "No sent card history found."	Same as expected result
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6.1.2 Admin Site Functionality Testing

Testing the admin site functionality is essential to ensure the reliability and security of the system.

6.1.2.1 Test Scenario: Check Admin and Staff Login Functionality

Table 6.6 Check Admin and Staff Login Functionality

No	Test Case	Value	Expected Result	Actual Result
1	Verify admin login with valid credentials	Username: admin (Valid Username) Password: admin123 (Valid Password)	Admin is successfully logged in and navigated to the admin dashboard with the full admin privileges	Same as expected result
2	Verify staff login with valid credentials	Username: staff (Valid Username) Password: staff123 (Valid Password)	Staff is successfully logged in and navigated to the admin dashboard with the appropriate	Same as expected result

			staff privileges	
3	Attempt to login with an invalid email or password	Email: aduim (Invalid Username) Password: 12345 (Invalid Password)	Display an error message: “Username or password is incorrect.”	Same as expected result
4	Attempt to login with a valid username but blank password	Username: admin (Valid Username) Password: Blank	Display an error message: “Username or password is incorrect.”	Same as expected result
5	Attempt to login with a blank username and valid password	Username: Blank Password: admin123 (Valid Password)	Display an error message: “Username or password is incorrect.”	Same as expected result
6	Attempt to login with a blank username and blank password	Username: Blank Password: Blank	Display a pop-up error message prompting the admin to enter their username and password	Same as expected result

7.	Verify login functionality with newly reset password (Admin)	Username: admin Password: [Newly reset password]	User (Admin) is successfully logged in and navigated to the dashboard with full admin privileges	Same as expected result
8.	Verify login functionality with newly reset password (Staff)	Username: staff Password: [Newly reset password]	User (Staff) is successfully logged in and navigated to the dashboard with appropriate staff privileges	Same as expected result
9.	Validate the option to navigate back to user site without login	Click on a "Back to Website" button or link	The system navigates back to the user site without requiring login	Same as expected result

6.1.2.2 Test Scenario: Check User Management on Admin Site*Table 6.7 Check Admin Login Functionality*

No	Test Case	Value	Expected Result	Actual Result
1.	Verify the ability to view the list of registered users	Navigate to “User Management” section	Admin can view a list of registered users and their details	Same as expected result
2.	Verify the ability to add a new user	Navigate to “Add New User” subsection and enter necessary details	Admin can successfully create a new user profile	Same as expected result
3.	Verify the ability to edit user details	Select a user and edit details such as email address or reset password	Admin can successfully update user details in real-time	Same as expected result
4.	Verify the ability to assign roles to users	During the process of adding or editing a user, select a role (admin or staff) for the user	Admin can successfully assign roles (admin or staff) to users, defining their level of access to the admin site	Same as expected result

6.1.2.3 Test Scenario: Category Management On Admin Site (Applicable for Admin and Staff)

Table 6.8 Check Category Management On Admin Site

No	Test Case	Value	Expected Result	Actual Result
1	Verify the ability to add a new category with an image	Admin/Staff navigates to “Add New Category” subsection	Admin/Staff can successfully add a new category with an accompanying image	Same as expected result
2	Verify the ability to view available categories	Admin/Staff navigates to the category management section	Admin/Staff can view a list of all available categories along with the associated details	Same as expected result
3	Verify the ability to view unavailable categories	Admin/Staff navigates to the category management section	Admin/Staff can view a list of all unavailable categories along with the associated details	Same as expected result
4	Verify the ability to edit category details	Admin/Staff selects a category and edits details	Admin/Staff can successfully modify category	Same as expected result

			details (e.g., name, image) and the system updates the information immediately	
5	Verify the ability to mark a category as unavailable	Admin/Staff selects a category and marks as unavailable	Admin/Staff can successfully make a category unavailable; cards within the category also become unavailable on the user site	Same as expected result
6	Verify the ability to mark a category as available	Admin/Staff selects a category and marks as available	Admin/Staff can successfully make a category available; cards within the category also become available on the user site	Same as expected result
7	Verify the impact of category availability on card visibility	Admin/Staff toggles category availability status	Changing the availability status of a category affects the	Same as expected result

			visibility of all cards within that category on the user site	
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6.1.2.4 Test Scenario: Card Management on Admin Site (Applicable for Admin and Staff)

Table 6.9 Check Card Management on Admin Site

No	Test Case	Value	Expected Result	Actual Result
1.	Verify the ability to view available cards	Admin/Staff navigates to the card management section	Admin/Staff can view a list of all available cards and their details	Same as expected result
2.	Verify the ability to view unavailable cards	Admin/Staff navigates to the card management section	Admin/Staff can view a list of all unavailable cards and their details	Same as expected result
3.	Verify the ability to add a new card template	Admin/Staff navigates to “Add New Card” subsection and enters necessary details and uploads template	Admin/Staff can successfully add a new card	Same as expected result

			template to the system	
4.	Verify the ability to edit card details	Admin/Staff selects a card and edits details such as template or description	Admin/Staff can successfully modify card details and system updates the information immediately	Same as expected result
5.	Verify the ability to delete a card template	Admin/Staff selects a card template and chooses the delete option	Admin/Staff can successfully delete a card template from the system	Same as expected result
6.	Verify the ability to mark a card template as unavailable	Admin/Staff selects a card template and marks as unavailable	Admin/Staff can successfully make a card template unavailable within the user site	Same as expected result
7.	Verify the ability to mark a card template as available	Admin/Staff selects an unavailable card template and marks it as available	Admin/Staff can successfully make a card template available	Same as expected result

8.	Verify the ability to categorize card templates	Admin/Staff selects a card template and assigns to a specific category	Admin/Staff can successfully categorize card templates for organized viewing on the user site	Same as expected result
9.	Verify the functionality of the search feature in the card management section	Admin/Staff uses the search feature to find specific card templates	Admin/Staff can successfully use the search feature to find specific card templates quickly	Same as expected result

6.1.2.5 Test Scenario: User Info Management on Admin Site

Table 6.10 Check User Info Management on Admin Site

No	Test Case	Value	Expected Result	Actual Result
1.	Verify the ability to view customer (user info) profiles	Navigate to “User Info Management” section	Admin and staff can view a list of customer profiles with their details (name,	Same as expected result

			email, phone number, and password)	
2	Verify the ability to edit customer information	Select a customer profile and edit details such as name, email, phone number, or password	Admin and staff can successfully edit customer information and the system updates the information immediately	Same as expected result
3	Verify the ability to delete customer profiles	Select a customer profile and choose the delete option	Admin and staff can successfully delete customer profiles from the system, preventing the customer from logging in on the user site	Same as expected result
4	Verify the functionality of the search feature in the user info	Use the search feature to find specific customer profiles	Admin and staff can successfully use the	To be recorded

	management section		search feature to find specific customer profiles quickly	
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6.2 User Testing

6.2.1 Summary of User Testing

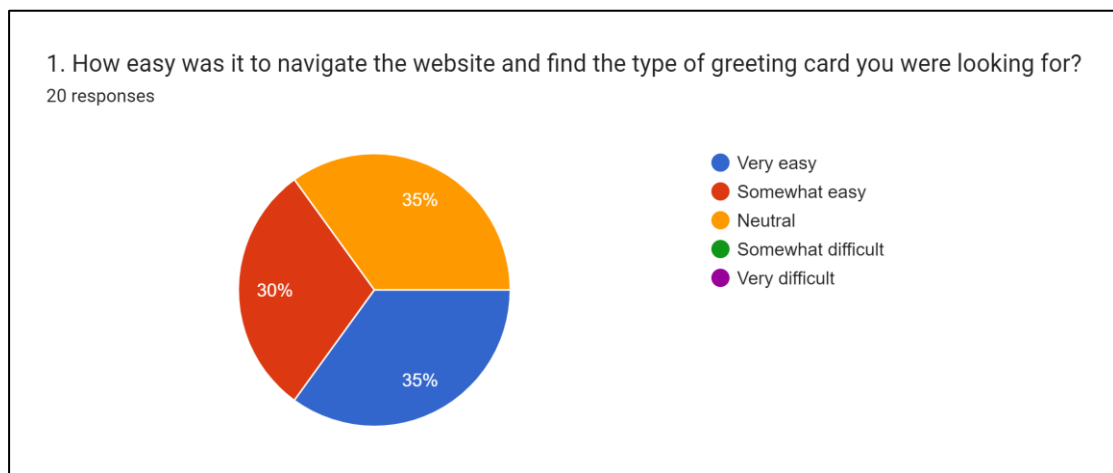


Figure 6.1 User Testing Response 1

The survey results indicate that a majority of users find the website user-friendly, with 35% finding it very easy to navigate. Another 30% found it somewhat easy, suggesting minor adjustments might be necessary for a smoother browsing experience. The 35% who responded neutral present an opportunity to improve and possibly shift their perception towards a more positive experience through slight modifications in the website's navigation and search functionalities. These adjustments can further enhance the overall user experience on the online greeting card website.

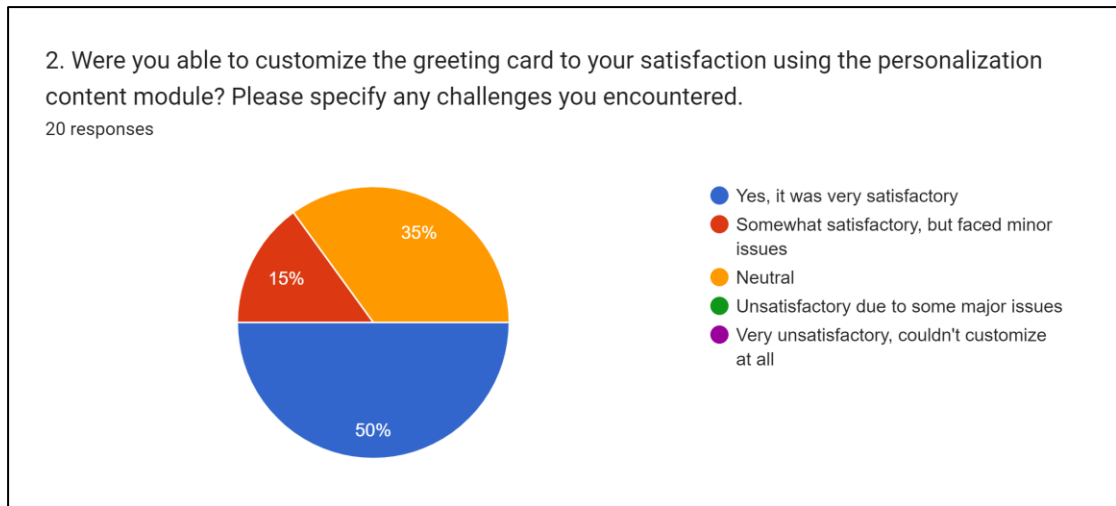


Figure 6.2 User Testing Response 2

The majority of users find the customization feature of the online greeting card website satisfactory, with 50% finding it very satisfactory. However, a small portion (15%) encountered minor issues, suggesting there is room for enhancement in the personalization process. The 35% neutral responses indicate an opportunity to possibly impress a segment of users by refining and introducing more user-friendly customization tools. Addressing these areas can help improve user satisfaction and make the customization process more enjoyable and engaging.

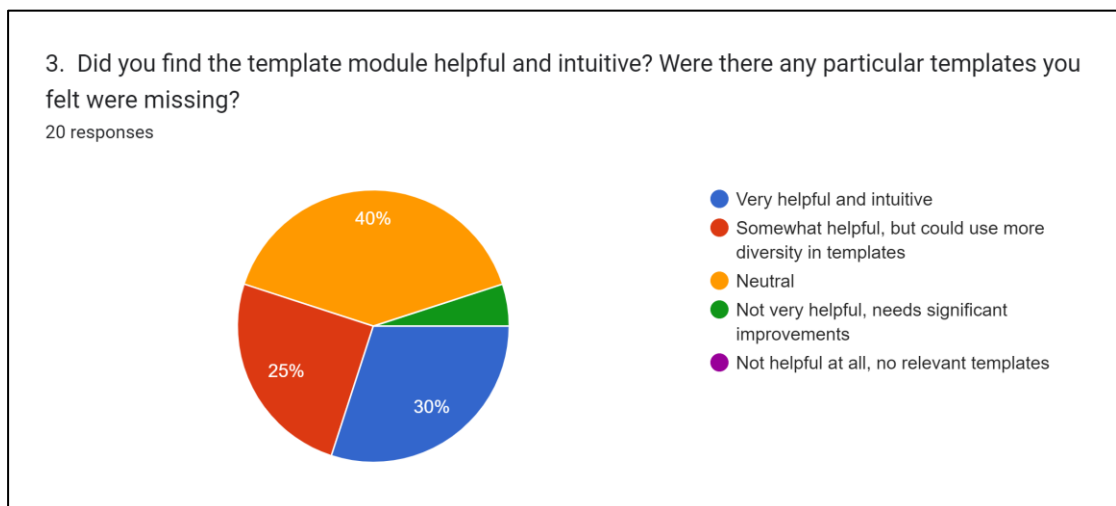


Figure 6.3 User Testing Response 3

From the survey, it's evident that most users find the template module either satisfactory or neutral (70% combined), indicating a generally positive reception. However, a notable portion of respondents (25%) are seeking more diversity in the templates offered, highlighting an area for enhancement. With only a small percentage (5%)

finding it less than satisfactory, the focus should be on expanding template variety and perhaps increasing the intuitiveness of the module to cater to a wider user base and enhance overall satisfaction.

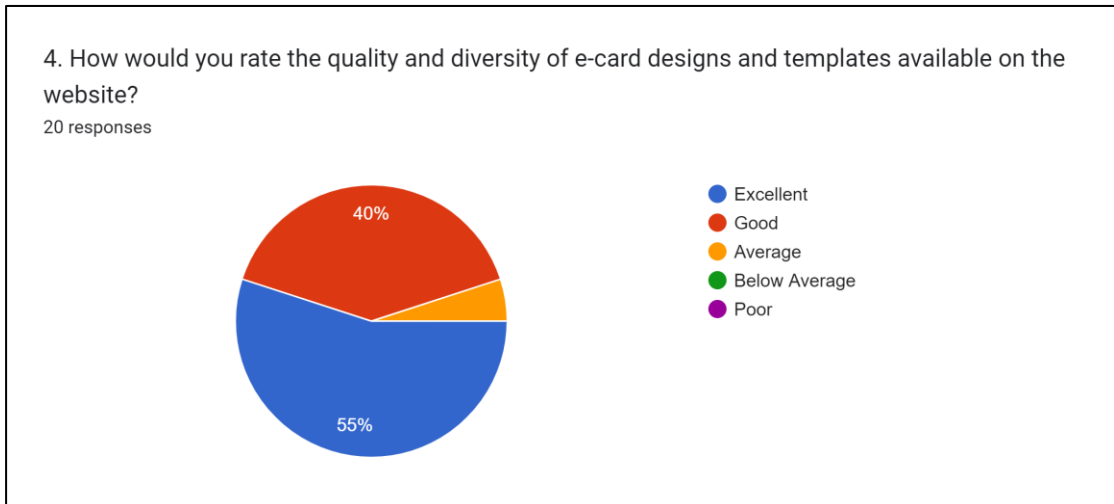


Figure 6.4 User Testing Response 4

The majority of users (95%) find the quality and diversity of e-card designs and templates to be either excellent or good, indicating strong approval of the current offerings. However, addressing the preferences of the 5% who rated them as average could further enhance user satisfaction. Consider exploring detailed feedback from this group for improvements.

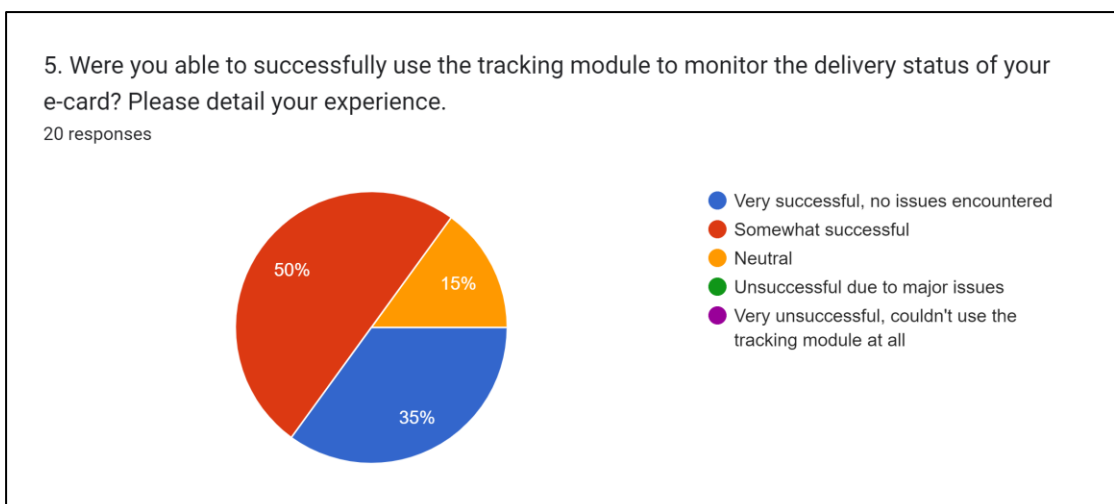


Figure 6.5 User Testing Response 5

Most users (85%) had a successful experience using the tracking module, with a significant portion encountering no issues. However, 15% remained neutral about their

experience. Addressing concerns from the neutral group and refining the tracking process can enhance the overall user experience.

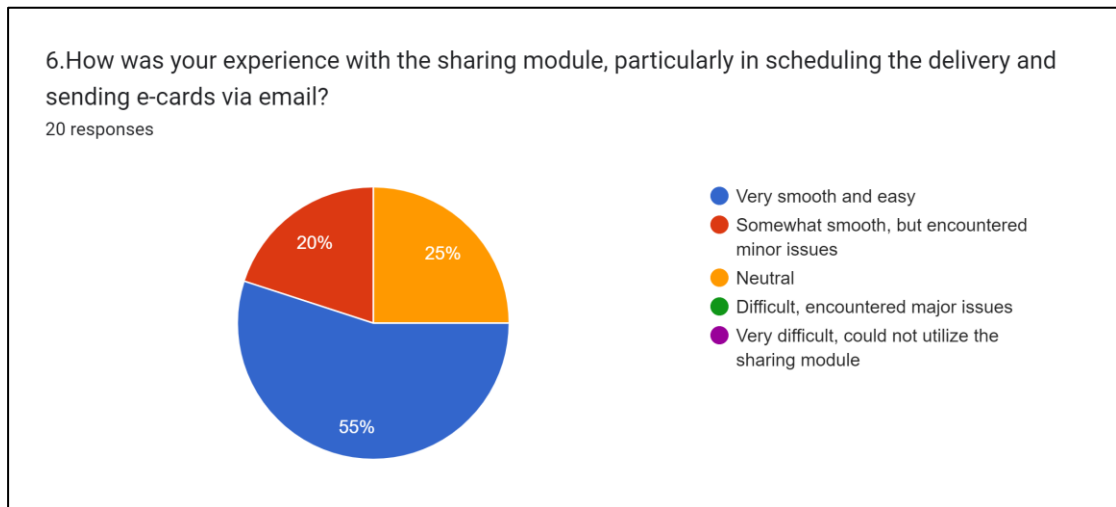


Figure 6.6 User Testing Response 6

The majority of users found the sharing module smooth and easy to use, with 55% having a very smooth experience and an additional 20% finding it somewhat smooth despite minor issues. However, there seems to be room for improvement, as 25% of users remained neutral regarding their experience. Enhancements targeting the elimination of minor issues and further simplifying the process might lead to an even higher rate of positive user experiences.

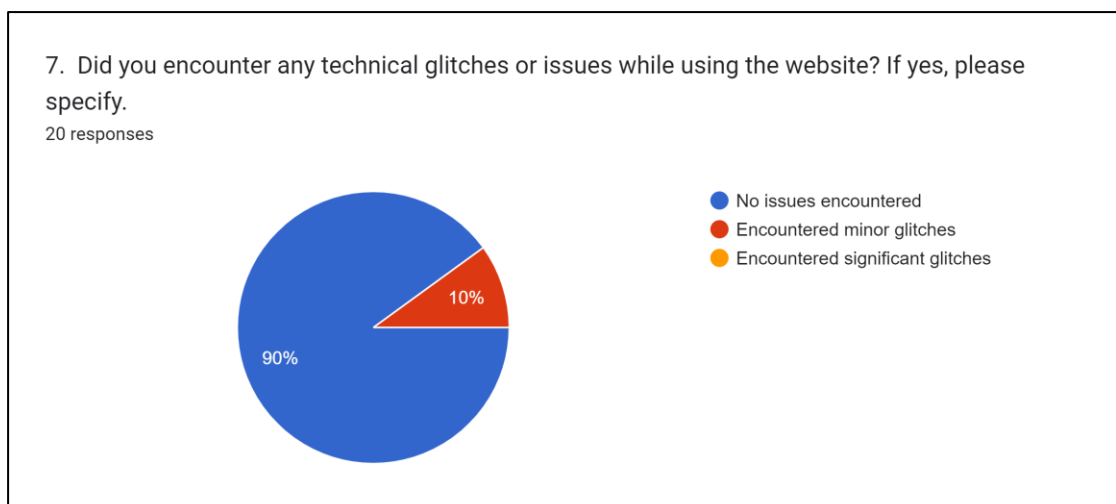


Figure 6.7 User Testing Response 7

The data from the survey indicates that a majority of users (90%) did not encounter any issues while using the website, showcasing stability and reliable functionality on the

platform. Nevertheless, a small proportion of users (10%) experienced minor glitches. Moving forward, it would be beneficial to identify and rectify these glitches to ensure a seamless user experience for everyone. Identifying the specifics of these glitches can be a vital next step in the improvement process.

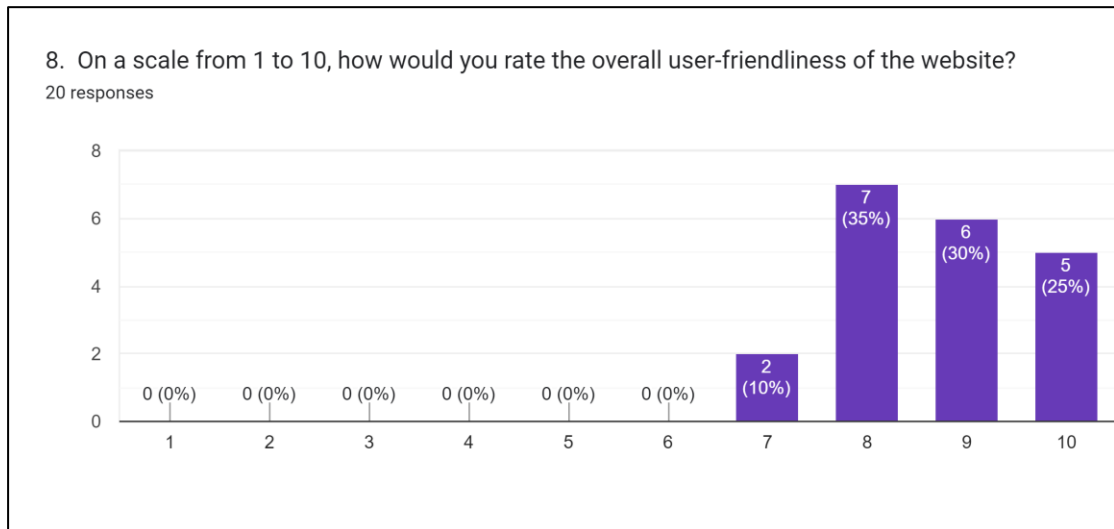


Figure 6.8 User Testing Response 8

The majority of users rated the user-friendliness of the website highly, with 35% giving a score of 8, and 25% and 30% awarding the site a score of 10 and 9, respectively. This indicates that the majority of users found the website to be intuitive and easy to navigate. The presence of ratings at 7 and above (totaling 100%) without any ratings below 7 demonstrates consistent positive feedback and suggests that the website provides a user-friendly experience. It's commendable that there were no ratings below 7, highlighting the site's effective design and functionality.

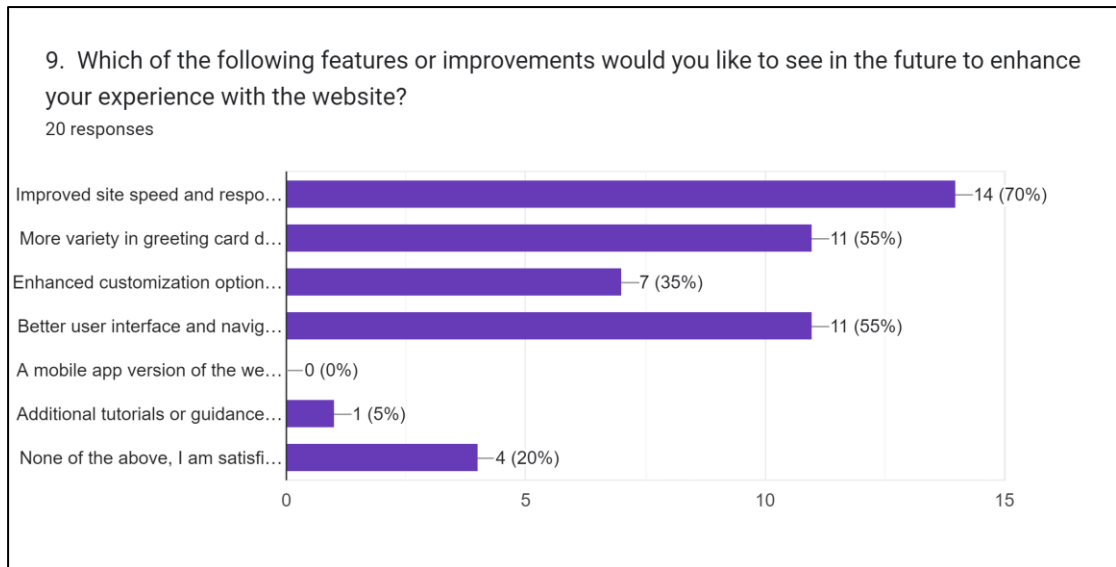


Figure 6.9 User Testing Response 9

A considerable number of users have provided insights on enhancements they'd like to see on the website. A significant 70% of respondents emphasized the necessity for improved site speed and responsiveness, highlighting its importance for a better user experience. Alongside, both the demand for a greater variety in greeting card designs and the call for a better user interface and navigation were voiced by 55% of users, indicating areas ripe for development. A segment, 35%, expressed the desire for more advanced customization options, suggesting an opportunity to make the site more personalized. Notably, no users expressed interest in a mobile app version, indicating satisfaction with the current platform. Only 5% sought additional tutorials, hinting that the platform's usability is largely intuitive. However, it's worth noting that 20% of respondents found the current features sufficient, signaling satisfaction with the platform as it stands. Addressing the highlighted areas could undoubtedly elevate the website's overall appeal and user satisfaction.

10. Would you recommend this online greeting card website to friends and family? Please explain why or why not.

20 responses

Yes, unique designs unavailable elsewhere.

Yes, it's very easy to use.

Yes, loved the card variety.

Yes, unique unavailable elsewhere.

Yes, it is every to use

yes, I love this khind of website

Yes, we can use to send to each other.

yes, I will recommed because it is easy to use

Figure 6.10 User Testing Response 10

Based on the responses you've received to the question about recommending the online greeting card website to friends and family, it appears that most respondents are likely to recommend the website because of its user-friendly nature, intuitive design, unique card options, variety, ease of use, facilitation of personal connections, and overall positive experience with the website. These are strong points that can be highlighted when promoting the website to a wider audience.

6.3 Objective Evaluation

6.3.1 To study the current system and determine the target audience's needs and preferences for online greeting cards.

Based on the user survey results, it appears this objective has largely been met. The survey managed to gauge the audience's needs and preferences, particularly highlighting areas like improved site speed and navigation, and the desire for more diverse greeting card templates. The constructive feedback from the users gives a clear insight into the current system's strengths and the areas where it can be developed to better align with the target audience's needs and preferences.

6.3.2 To develop a user-friendly website with a diverse collection of free e-cards for users to easily send for various occasions.

The user feedback suggests that this objective has been partially achieved. A substantial portion of respondents rated the website's user-friendliness positively, with high scores on the ease of navigation and sharing module. However, the request for more variety in greeting card designs indicates that there is room to expand the diversity in the collection of e-cards available. Enhancing the variety can further meet users' expectations and improve the user experience.

6.3.3 To develop greeting card sending website with personalization features.

This objective seems to have been partly met. While there are personalization features in place, as reflected in the high percentage of users who found the customization satisfactory, there were also indications of challenges encountered. About 15% of users experienced minor issues with personalization, which suggests that there is potential to further refine and enhance the personalization options available on the website, making it even more user-friendly and aligning with the users' preferences for customization.

CHAPTER 7 Conclusion and Recommendation

7.1 Conclusion

As we take a moment to look back on the journey that this project has undertaken, it's apparent that we have laid a robust and comprehensive foundation, all set to bring about a significant change in the digital greeting card sector. From the very beginning, the project was envisioned as a bridge to fill the existing gap in the market, a beacon that combines the cultural richness of Malaysia with the conveniences of modern technology, fostering deeper and more heartfelt connections in the digital world. Drawing from a wide pool of research and studies, the project shaped itself to be a unique and user-friendly platform, a space where users can find a blend of tradition and modernity in digital greetings.

Our approach, grounded in innovation and technical expertise, carved a path that harmoniously blends traditional elements with modern features, creating a platform that is not only functional but also aesthetically pleasing. Every step of the design and development phase was taken with the user in mind, ensuring that the platform would offer an experience that is both seamless and enjoyable. As we navigated through the intricacies of system implementation, the project showcased resilience, adaptability, and a knack for problem-solving. We tackled challenges head-on, fine-tuning the platform to offer a user experience that is seamless and engaging. The evaluative steps undertaken highlighted the project's commitment to quality and excellence, paving the way for future enhancements that promise to elevate the user experience even further.

Looking back, we see a journey marked with determination and innovation, a project that stands ready to redefine how we connect in the digital space. The potential it holds is immense, promising to carve out a significant place in the industry by fostering connections that are deeper and more personal. As we stand at this juncture, ready to step into a future filled with possibilities, we carry with us the learnings and accomplishments of this journey. We look forward to an era where digital greeting cards resonate with the vibrant and diverse cultural backdrop of Malaysia, offering a space that is lively, inclusive, and truly Malaysian at its core. With an eye on the future, we are optimistic about the road ahead, a journey that promises growth, exploration, and delightful discoveries. We look forward to fostering a community that finds joy

and connection through our platform, as we continue to evolve, innovate, and grow in the exciting world of digital greeting cards.

7.2 Future Plan & Recommendation

As we move forward with the project, we are building on a strong foundation to create a digital greeting card platform that is more lively, welcoming, and innovative, fully showcasing Malaysia's rich cultural heritage. The upcoming steps are clearly outlined, focusing on enhancing the user experience and promoting stronger bonds in the digital world.

In the next phase, we plan to integrate the latest technologies to solidify our presence in the digital landscape. The creation of a user-friendly mobile application is at the forefront of our plans. This app will cater to a wide audience, including individuals of different age groups and technical skill levels. Additionally, we are exploring the possibility of adding voice commands to make the platform more accessible, especially for older individuals who might prefer speaking to typing.

Engaging with our user community is a crucial part of our future strategy. We are developing a feedback system that encourages open dialogue between users and the development team, allowing us to tailor the platform based on user feedback and ideas. We also plan to initiate community events like workshops and user forums to create a lively community where users can exchange ideas and contribute to the platform's development.

In conclusion, we are optimistic about the project's future. We aim to revolutionize digital communications by combining traditional elements with modern innovations, facilitating deeper and more heartfelt connections in the digital sphere.

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APPENDIX

Questionnaire Sample (User Requirements)

Survey on Online Greeting Card Website

Dear respondents,

I am undergraduate student of Information Systems (Hons) from Universiti Tunku Abdul Rahman (UTAR). You are invited to take part in my final year project entitled "Online Greeting Card Website". The purpose of this survey is to understand your need and preference for an online greeting cards.

This questionnaire may take you about 10 minutes to complete. Your contribution to this research is much appreciated. Thank you very much for your time to fill up this questionnaire as every single contribution would greatly mean a lot to this study. All the information that provided will be strictly keep private and confidential, without reveal to any third parties without consent. The information which includes personal information will be only used for this research study. Participant may be contacted through the email provided if the information given has certain errors or issues.

Lastly, a copy of response will be delivered to the email that you provided.

If you have any inquiries, please do not hesitate to contact me at limchingyee2@utar.my. Thank you.

* Required

1. Email *

2. Email *

3. Gender *

Mark only one oval.

Male

Female

Prefer not to say

4. Faculty *

Mark only one oval.

- Faculty of Arts and Social Science (FAS)
- Faculty of Business and Finance (FBF)
- Faculty of Engineering and Green Technology (FEGT)
- Faculty of Information and Communication Technology (FICT)
- Faculty of Science (FSC)
- Other: _____

5. 1. How frequently do you send greeting cards to your friends and family? *

Mark only one oval.

- Once a month or more
- Few times a year
- Once a year or less
- Rarely or never

6. 2. How do you typically send greeting cards to your friends and family? *

Mark only one oval.

- Traditional paper cards
- E-cards or digital greetings
- Both
- Other: _____

7. 3. What occasions do you typically send greeting cards? *

Check all that apply.

- birthdays
- holidays
- special events
- Other: _____

8. 4. How important is personalization when sending greeting cards? *

Mark only one oval.

Not all important

1

2

3

4

5

Very important

9. 5. How important is it to you to have a large selection of cards to choose from? *

Mark only one oval.

Not important at all

1

2

3

4

5

Very important

10. 6. How satisfied are you with the variety of designs and options available on the website?

Mark only one oval.

Very dissatisfied

1

2

3

4

5

Very satisfied

11. 7. Which feature(s) of the online greeting card website do you find most useful? *

Mark only one oval.

Pre-designed templates

Customizable text

Personalized photos

Scheduling delivery

Other: _____

APPENDIX

12. 8. Have you ever encountered issues with online greeting card websites (e.g. difficulty navigating the site, technical glitches, limited design options)?

Mark only one oval.

- Yes
 No
 Maybe
 Other: _____

13. 9. What is the biggest challenge you face when sending greeting cards online? *

Mark only one oval.

- Difficulty in finding the right card design
 Limited customization options
 Confusing website features
 Other: _____

14. 10. What types of customization options would you like to see on an online greeting card website? *

Check all that apply.

- Ability to add custom text
 Ability to add photos
 Ability to choose fonts and colors
 Ability to add music or videos
 Other: _____

Questionnaire Sample (User Testing)

Survey on Online Greeting Card Website

I am an undergraduate student of Information Systems (Hons) from Universiti Tunku Abdul Rahman (UTAR). This survey is designed to evaluate the user experience on my Online Greeting Card Website. I am eager to understand your interactions and experiences while using the website.

Completing this survey should take only 5-10 minutes of your time. Rest assured, your responses will be kept confidential and will be utilized exclusively for enhancing the functionality and user-friendliness of the portal.

I appreciate your valuable input as it is crucial for my ongoing efforts to improve and optimize the platform.

If you have any inquiries, please do not hesitate to contact me at limchingyee2@utar.my.

Thank you.

** Indicates required question*

1. 1. How easy was it to navigate the website and find the type of greeting card you were looking for? *

Mark only one oval.

- Very easy
 Somewhat easy
 Neutral
 Somewhat difficult
 Very difficult

APPENDIX

2. 2. Were you able to customize the greeting card to your satisfaction using the personalization content module? Please specify any challenges you encountered. *

Mark only one oval.

- Yes, it was very satisfactory
- Somewhat satisfactory, but faced minor issues
- Neutral
- Unsatisfactory due to some major issues
- Very unsatisfactory, couldn't customize at all
- Other: _____

3. 3. Did you find the template module helpful and intuitive? Were there any particular templates you felt were missing? *

Mark only one oval.

- Very helpful and intuitive
- Somewhat helpful, but could use more diversity in templates
- Neutral
- Not very helpful, needs significant improvements
- Not helpful at all, no relevant templates

4. 4. How would you rate the quality and diversity of e-card designs and templates available on the website? *

Mark only one oval.

- Excellent
- Good
- Average
- Below Average
- Poor

APPENDIX

5. 5. Were you able to successfully use the tracking module to monitor the delivery status of your e-card? Please detail your experience. *

Mark only one oval.

- Very successful, no issues encountered
 Somewhat successful
 Neutral
 Unsuccessful due to major issues
 Very unsuccessful, couldn't use the tracking module at all
 Other: _____

6. 6.How was your experience with the sharing module, particularly in scheduling the delivery and sending e-cards via email? *

Mark only one oval.

- Very smooth and easy
 Somewhat smooth, but encountered minor issues
 Neutral
 Difficult, encountered major issues
 Very difficult, could not utilize the sharing module
 Other: _____

7. 7. Did you encounter any technical glitches or issues while using the website? If yes, please specify. *

Mark only one oval.

- No issues encountered
 Encountered minor glitches
 Encountered significant glitches
 Other: _____

APPENDIX

8. 8. On a scale from 1 to 10, how would you rate the overall user-friendliness of the website? *

Mark only one oval.

1

2

3

4

5

6

7

8

9

10

APPENDIX

9. 9. Which of the following features or improvements would you like to see in the future to enhance your experience with the website? *

Tick all that apply.

- Improved site speed and responsiveness
- More variety in greeting card designs
- Enhanced customization options for greeting cards
- Better user interface and navigation
- A mobile app version of the website
- Additional tutorials or guidance on how to create a card
- None of the above, I am satisfied with the current features

10. 10. Would you recommend this online greeting card website to friends and family? Please explain why or why not. *

This content is neither created nor endorsed by Google.

Google Forms

FINAL YEAR PROJECT WEEKLY REPORT

(Project II)

Trimester, Year: Y3S1	Study week no.: 2
Student Name & ID: Lim Ching Yee 20ACB01941	
Supervisor: Dr Suthashini a/p Subramaniam	
Project Title: Online Greeting Card Website	

<p>1. WORK DONE</p> <ul style="list-style-type: none"> Successfully completed testing of the system from FYP1.
<p>2. WORK TO BE DONE</p> <ul style="list-style-type: none"> The upcoming tasks include defining specific work items, such as designing the UI and implementing the sharing module.
<p>3. PROBLEMS ENCOUNTERED</p> <ul style="list-style-type: none"> No significant issues or challenges have been encountered thus far.
<p>4. SELF EVALUATION OF THE PROGRESS</p> <ul style="list-style-type: none"> The project's progress is on track and proceeding smoothly.



Supervisor's signature



Student's signature

FINAL YEAR PROJECT WEEKLY REPORT

(Project II)

Trimester, Year: Y3S1	Study week no.:5
Student Name & ID: Lim Ching Yee 20ACB01941	
Supervisor: Dr Suthashini a/p Subramaniam	
Project Title: Online Greeting Card Website	

1. WORK DONE

- In the last fortnight, significant progress has been made on the canvas editor, including the ability to create and save images.

2. WORK TO BE DONE

- The upcoming tasks include implementing the email sending functionality using the SMTP server.

3. PROBLEMS ENCOUNTERED

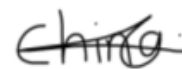
- No major issues or challenges have been encountered during this period.

4. SELF EVALUATION OF THE PROGRESS

- The project is advancing as planned, with the canvas editor functionality now in place. The focus will now shift to integrating SMTP server functionality for email sending.



Supervisor's signature



Student's signature

FINAL YEAR PROJECT WEEKLY REPORT

(Project II)

Trimester, Year: Y3S1	Study week no.:7
Student Name & ID: Lim Ching Yee 20ACB01941	
Supervisor: Dr Suthashini a/p Subramaniam	
Project Title: Online Greeting Card Website	

1. WORK DONE

- Over the last fortnight, I have been diligently working on ensuring that all messages sent, along with the edited pictures from the sender, are successfully customized and delivered to the receiver's email.

2. WORK TO BE DONE

- Moving forward, my next objectives are to implement a feature that allows users to view their sending history and to continue working on the report, specifically focusing on the Screenshot of the System Implementation section.

3. PROBLEMS ENCOUNTERED

- No significant issues or challenges have arisen during this period.

4. SELF EVALUATION OF THE PROGRESS

- I am satisfied with the progress made so far, particularly with regards to the customization and delivery of edited pictures. This is a critical aspect of the project, and ensuring its functionality is a significant milestone.



Supervisor's signature



Student's signature

FINAL YEAR PROJECT WEEKLY REPORT

(Project II)

Trimester, Year: Y3S1	Study week no.:9
Student Name & ID: Lim Ching Yee 20ACB01941	
Supervisor: Dr Suthashini a/p Subramaniam	
Project Title: Online Greeting Card Website	

1. WORK DONE

- During the last fortnight, I continued to work on the project's objectives. Specifically, I concentrated on finalizing the implementation of the feature that allows users to view their sending history within the system.

2. WORK TO BE DONE

- In the coming weeks, my primary focus will be on completing the report's black box testing section. This crucial step involves a comprehensive evaluation and validation of the system's functionalities to ensure it meets all requirements and operates flawlessly.

3. PROBLEMS ENCOUNTERED

- No significant problems or obstacles have been encountered during this period.

4. SELF EVALUATION OF THE PROGRESS

- I am content with the progress achieved in recent weeks, particularly the successful implementation of the sending history feature. This feature enhances the user experience and adds value to the system. Looking ahead, I am determined to complete the black box testing, which is essential for ensuring the system's reliability and robustness.



Supervisor's signature



Student's signature

FINAL YEAR PROJECT WEEKLY REPORT

(Project II)

Trimester, Year: Y3S1	Study week no.:11
Student Name & ID: Lim Ching Yee 20ACB01941	
Supervisor: Dr Suthashini a/p Subramaniam	
Project Title: Online Greeting Card Website	

1. WORK DONE

- In the last fortnight, I have been dedicated to finalizing the black box testing section of the project's report. This involved conducting comprehensive testing scenarios to evaluate and validate the system's functionalities thoroughly.

2. WORK TO BE DONE

- My immediate goal is to wrap up the remaining sections of my report.

3. PROBLEMS ENCOUNTERED

- During this period, I encountered an issue with the abstract section of the report that requires revision.

4. SELF EVALUATION OF THE PROGRESS

- I am content with the progress achieved, particularly in successfully completing the critical black box testing phase. This represents a significant milestone in ensuring the system's functionality and reliability. As I shift my focus towards finalizing the report, I am confident in my ability to meet the project's objectives effectively.



Supervisor's signature



Student's signature

FINAL YEAR PROJECT WEEKLY REPORT

(Project II)

Trimester, Year: Y3S1	Study week no.: 12
Student Name & ID: Lim Ching Yee 20ACB01941	
Supervisor: Dr Suthashini a/p Subramaniam	
Project Title: Online Greeting Card Website	

1. WORK DONE

- During this period, I have focused on finalizing the project report, ensuring that all sections are complete and well-structured.

2. WORK TO BE DONE

- Moving forward, my immediate priority is to review and ensure the correct formatting of the report. Additionally, I will commence preparations for the final project presentation.

3. PROBLEMS ENCOUNTERED

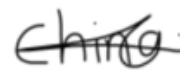
- No significant problems or challenges have arisen in the recent period.

4. SELF EVALUATION OF THE PROGRESS

- I am satisfied with the progress made so far, particularly in completing the report. As I move forward, I will continue to maintain a high level of attention to detail to ensure the project's successful conclusion.



Supervisor's signature



Student's signature

POSTER

ONLINE GREETING CARD WEBSITE



Introduction

- Keep in touch with people
- Generated using digital media
- Presented at significant events





Problem Statement



1. Insufficient festive occasion card options for Malaysian users in current greeting card systems.
2. Users may not be familiar with using the website to send greeting cards.
3. Senders facing limited e-card options need help finding the right one that suits their needs.

Objective

- ✓ To **study** determine the target audience's needs and preferences
- ✓ To **develop** a user-friendly website
- ✓ To **develop** with Personalization features

Scope

- Template Module
- Personalization Content Module
- Tracking Module
- Sharing Module

User Interface





Conclusion

- ➔ Provide an innovative platform.
- ➔ Personalized e-cards on various occasions.
- ➔ Meet the needs of users who are looking for a user-friendly and efficient platform to send personalized e-cards.

Bachelor of Information Systems (Honours) Business Information Systems

By Lim Ching Yee



Final Year Project

PLAGIARISM CHECK RESULT

FYP2_Report

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FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY

Full Name(s) of Candidate(s)	Lim Ching Yee
ID Number(s)	20ACB01941
Programme / Course	IB
Title of Final Year Project	Online Greeting Card Website

Similarity	Supervisor's Comments (Compulsory if parameters of originality exceeds the limits approved by UTAR)
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Based on the above results, I hereby declare that I am satisfied with the originality of the Final Year Project Report submitted by my student(s) as named above.

Signature of Supervisor
 Name: Ts Dr Suthashini a/p Subramaniam
 Date: 11 September 2023

Signature of Co-Supervisor
 Name: _____
 Date: _____



UNIVERSITI TUNKU ABDUL RAHMAN

FACULTY OF INFORMATION & COMMUNICATION TECHNOLOGY (KAMPAR CAMPUS)

CHECKLIST FOR FYP2 THESIS SUBMISSION

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Student Name	Lim Ching Yee
Supervisor Name	Dr Suthashini a/p Subramaniam

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✓	Signed FYP Thesis Submission Form
✓	Signed form of the Declaration of Originality
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*Include this form (checklist) in the thesis (Bind together as the last page)

I, the author, have checked and confirmed all the items listed in the table are included in my report.

Ching

(Signature of Student)

Date: 10 September 2023