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Contact Us Portal

Tasnim, Zarin

Independent University, Bangladesh

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Contact Us Portal

By

Zarin Tasnim

Student ID: 1731638

Autumn, 2022

Supervisor:

Sabrina Alam
Lecturer

Department Of Computer Science & Engineering
Independent University, Bangladesh

January 19, 2023

Dissertation submitted in partial fulfillment for the degree of
Bachelor of Science in Computer Science

Department of Computer Science & Engineering
Independent University, Bangladesh

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Contact Us Portal

By

Zarin Tasnim

Student ID: 1731638

Autumn, 2022

Consent from Supervisor

The student modified the internship final report as per the recommendations made by his/her academic supervisor and/or panel members during and/or before final viva, and the department can use this version for archiving as well as the OBE course material for CSE499.

Sabrina Alam

Department of Computer Science & Engineering

Independent University, Bangladesh

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Attestation

This is to certify that the report is completed by me, Zarin Tasnim (ID: 1731638), submitted in partial fulfillment of the requirement for the Degree of Computer Science and Engineering from Independent University, Bangladesh (IUB). It has been completed under the guidance of Mrs. Sabrina Alam. I also certify that all my work is genuine which I have learned during my internship. All the sources of information used in this project and report have been duly acknowledged in it.

Signature

Date 30.1.2023

Zarin Tasnim

Name

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Acknowledgement

First and foremost, praises and thanks to Allah, the Almighty, for his showers of blessings throughout my internship work and allowing me to complete the Internship work successfully within the timeframe. I would like to thank Independent University, Bangladesh (IUB) for offering an internship program for me. From the core of my heart, I would like to express great appreciation to all those who provided me with the opportunity to complete this report. A special thanks I give to my course instructor, Sabrina Alam, lecturer at Independent University, Bangladesh, whose contribution and suggestions were extremely helpful to complete this report. The timely completion of this project is mainly due to the attentiveness and perseverance of my company. I am tremendously thankful to my parents for their affection, devotion, kindness and sacrifices for educating and organizing me for my future. I am also grateful to Sonali Bank Ltd. to recruit me as an intern.

I want to offer my utmost gratitude to Ms. Shyamoli Akhter (Principal Officer, Sonali Bank Ltd, Baridhara Branch) for her monitoring and guidance to fulfill my internship.

Zarin Tasnim
January 16th, 2023
Dhaka, Bangladesh

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Letter of Transmittal

16th January 2023, Sabrina Alam, Lecturer of Independent University, Bangladesh
Aftabuddin Ahmed Road, Block-B, Bashundhara R/A Dhaka

Subject: Letter of Submission of Internship Report, Summer 2022.

Dear Ma'am,
I am writing this letter to kindly inform you that I, (Zarin Tasnim), have completed my internship program and its report. The Internship started from 18th October 2020 and ended on 30th December 2022. I completed my internship at Sonali Bank Ltd. The following report is based on my experience and the work I have seen in the company. I was assigned to work as an intern in the Agent Banking Division. I have worked for 3 months in this company and did my best work there with high passion, dedication, and enthusiasm. I hope that you will be kind enough to consider any mistakes in preparing this report and accept it.

Thanking you
Sincerely yours,
Zarin Tasnim

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Evaluation Committee

.....

Signature

.....

Name Md Abu Sayed

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Internal Examiner-1 / Panel Member-1

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Signature

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Name Rubayed Mehedi

.....

External Examiner-2 / Panel Member-2

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Signature

Sabrina Alam

.....

Name

SABRINA ALAM

.....

Supervisor of the intern

.....

Signature

.....

Name

.....

Head, Department of Computer Science & Engineering

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Abstract

Sonali Bank Limited is the principal state-owned leading public commercial bank in Bangladesh. It is the largest bank in the country. Sonali Bank always provides priority to their customers and would like to be their clients' first choice as a differentiated financial service provider, trusted, respected, and cherished by all stakeholders in the region and beyond, and to pursue an unending quest for excellence in all areas. I had to finish my learning sessions before working on any project, and in this learning session, I was assigned by my supervisor Mrs. Sabrina Alam to work on a project where my task was to develop a website portal called Contact Us Portal. In this portal, customers can send messages or ask queries about their account or in general banking questions directly to the admin.

Keywords— Internship, CSE, Report, Sonali Bank Limited

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Chapter 1

Introduction

1.1 Overview/Background of the Work

Internship is performed with a respected organization as part of the undergraduate curriculum in IUB, during which students will receive hands-on training in workplace procedures and industry knowledge. I spent time working at a bank after completing a three-month internship there. In this report, I've covered my time as an intern at Sonali Bank Limited, a summary of the work I did there, and all I accomplished during that time. This section presents my supervisor's perspective on the project. Any organization with numerous linked members and potential new members has realized how important Websites and their functions have become. I designed a contact us portal for them. I was told the kind of design I needed to do from my supervisor Mrs Sabrina Alam. I followed the design paradigm, she advised me. After getting approval for the project, the project work began. A Contact Us portal is an online portal where customers can contact directly with the admin without standing in the line and waiting hours for a piece of information. Customers will use the portal to send their queries directly to the admin and they will receive it from them.

Purpose of the Internship

The objective of this internship is to expose students to real work situations and experiences. The drafting of the report aims to showcase the author's successes throughout the internship. The objectives of the internship program are as follows:

- To help pupils develop their strength, sense of collaboration, and self-confidence.
- The chance to practice learning practical work skills and manners at a real workplace.
- To acquire important knowledge, experience, and abilities in an area that can help you transition into a new job.
- Explore a career interest, develop skills, and gain experience.
- To acquire important knowledge, experience, and abilities in an area that can help you transition into a new job.
- To aid in the application of the theories and abilities you have gained in the classroom and for your own personal growth.

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- During their instruction, the student will be able to learn moral principles including accountability, dedication, and dependability.
- Increasing full-time employees' productivity and time management because interns frequently finish smaller assignments.
- To build the strength, teamwork spirit and self-confidence in students' lives.

1.2 Objectives

The project's goal is to submit a website portal for the bank website. The main goal of the project is to create a comprehensive and effective portal that can offer excellent customer service experience. Other goals include:

- Design a website portal for the bank.
- Test the system many times.
- Make the System user friendly so that customers find it easy to use.
- There should be a range of features to complete various tasks.
- Make the System secure and safe to use.

1.3 Scopes

Features available to user and administrator after developing this website portal are:

- The admin can view customers messages or update the existing information or delete.
- Customers can login into the app, view the features and select their desired ones to perform a task. Once they do that, they will be directed to the desired option and given instructions to complete the task.
- Customers can also contact us.
- The admin can also view the customer information of the ones who have logged in into the app and customers can view the pages.

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Chapter 2

Literature Review

2.1 Relationship with Undergraduate Studies

The different courses offered by IUB were a huge help for this project. The undergraduate CSE program of our university is designed in such a way so that we, the students, can learn the theory and implement what we have understood from the courses. I learned MYSQL in my Database Management System course (CSE303). For this project I will be using SQLite. My programming logic was built by courses like the Data Structure (CSE 203), Algorithms (CSE211), Database Management System (CSE303) etc. Website Application (CSE309) helped me build the codebase in a structured, organized, and professional way. And all the other course lessons helped me solve various problems that occurred while completing the project.

Some of the tools that I've learned from my courses and will be using on my project are described below:

PHP

PHP is a general-purpose scripting language geared toward web development. It was originally created by Danish-Canadian programmer Rasmus Lerdorf in 1993 and released in 1995.The PHP reference implementation is now produced by The PHP Group. PHP was originally an abbreviation of *Personal Home Page*, but it now stands for the recursive initialism *PHP: Hypertext Preprocessor*.

PHP code is usually processed on a web server by a PHP interpreter implemented as a module, a daemon or as a Common Gateway Interface (CGI) executable. On a web server, the result of the interpreted and executed PHP code – which may be any type of data, such as generated HTML or binary image data – would form the whole or part of an HTTP response. Various web template systems, web content management systems, and web frameworks exist which can be employed to orchestrate or facilitate the generation of that response. Additionally, PHP can be used for many programming tasks outside the web context, such as standalone graphical applications and robotic drone control. PHP code can also be directly executed from the command line.

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Figure 2.1: PHP

VScode

Visual Studio Code, also commonly referred to as VS Code, is a source-code editor made by Microsoft with the Electron Framework, for Windows, Linux and macOS. Features include support for debugging, syntax highlighting, intelligent code completion, snippets, code refactoring, and embedded Git. Users can change the theme, keyboard shortcuts, preferences, and install extensions that add additional functionality.

In the Stack Overflow 2021 Developer Survey, Visual Studio Code was ranked the most popular developer environment tool among 82,000 respondents, with 70% reporting that they use it.



Figure 2.2: Visual Studio Code

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MySQL

MySQL is an open-source relational database management system (RDBMS). Its name is a combination of "My", the name of co-founder Michael Widenius's daughter My, and "SQL", the abbreviation for Structured Query Language. A relational database organizes data into one or more data tables in which data may be related to each other; these relations help structure the data. SQL is a language programmers use to create, modify, and extract data from the relational database, as well as control user access to the database. In addition to relational databases and SQL, an RDBMS like MySQL works with an operating system to implement a relational database in a computer's storage system, manages users, allows for network access and facilitates testing database integrity and creation of backups.

MySQL has stand-alone clients that allow users to interact directly with a MySQL database using SQL, but more often, MySQL is used with other programs to implement applications that need relational database capability. MySQL is a component of the LAMP web application software stack (and others), which is an acronym for *Linux, Apache, MySQL, Perl/PHP/Python*. MySQL is used by many database-driven web applications, including Drupal, Joomla, php, BB, and WordPress. MySQL is also used by many popular websites, including **Facebook, Flickr, MediaWiki, Twitter, and YouTube.**



Figure 2.3: MySQL

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HTML

The **HyperText Markup Language** or **HTML** is the standard markup language for documents designed to be displayed in a web browser. It can be assisted by technologies such as Cascading Style Sheets (CSS) and scripting languages such as JavaScript.

Web browsers receive HTML documents from a web server or from local storage and render the documents into multimedia web pages. HTML describes the structure of a web page semantically and originally included cues for the appearance of the document.

HTML elements are the building blocks of HTML pages. With HTML constructs, images, and other objects such as interactive forms may be embedded into the rendered page. HTML provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes, and other items. HTML elements are delineated by *tags*, written using angle brackets. Tags such as <**img** /> and <**input** /> directly introduce content into the page. Other tags such as <**p**> surround and provide information about document text and may include other tags as sub-elements. Browsers do not display the HTML tags but use them to interpret the content of the page.

HTML can embed programs written in a scripting language such as JavaScript, which affects the behavior and content of web pages. The inclusion of CSS defines the look and layout of content. The World Wide Web Consortium (W3C), former maintainer of the HTML and current maintainer of the CSS standards, has encouraged the use of CSS over explicit presentational HTML since 1997. A form of HTML, known as HTML5, is used to display video and audio, primarily using the <**canvas**> element, in collaboration with JavaScript.



Figure 2.4: HTML

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2.2 Related Works

Some project related to my project are described below:

https://www.liferay.com/blog/customer-experience/exceptional-customer-portal-examples

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Chapter 3

Project management & Financing

3.1 Work Breakdown Structure

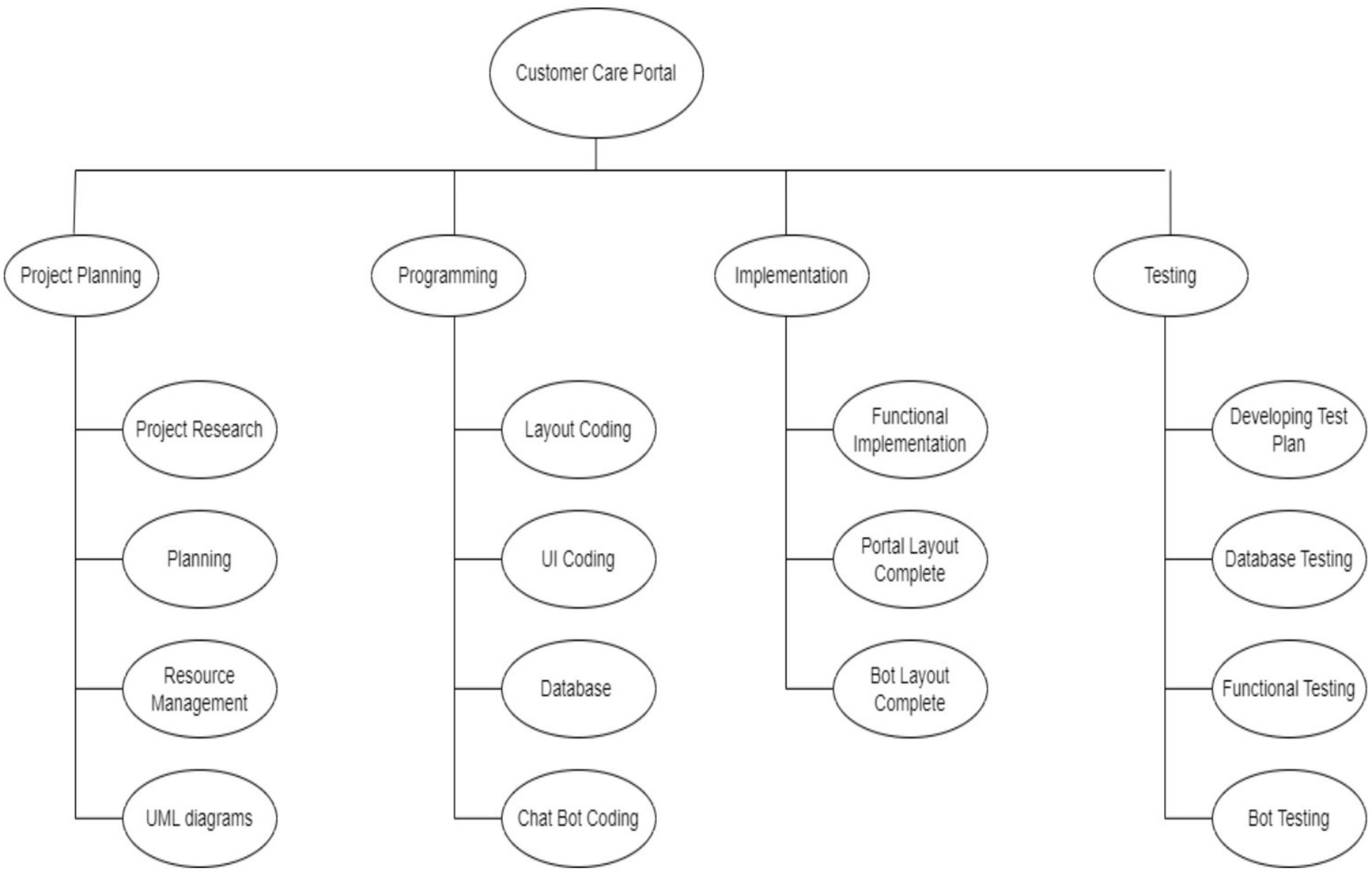

Figure 3.1: Work Breakdown Structure

3.2 Process/Activity wise Time Distribution

As employees from the Administration will be personally handling the complaints and queries, that's why the portal will be available during the office hours.

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3.3 Gantt Chart

Task	Start	End	Duration
Requirement Analysis	9/10/2022	9/26/2022	16
Design	9/26/2022	10/8/2022	12
Implementation	10/10/2022	11/15/2022	36
Testing	11/16/2022	12/10/2022	24

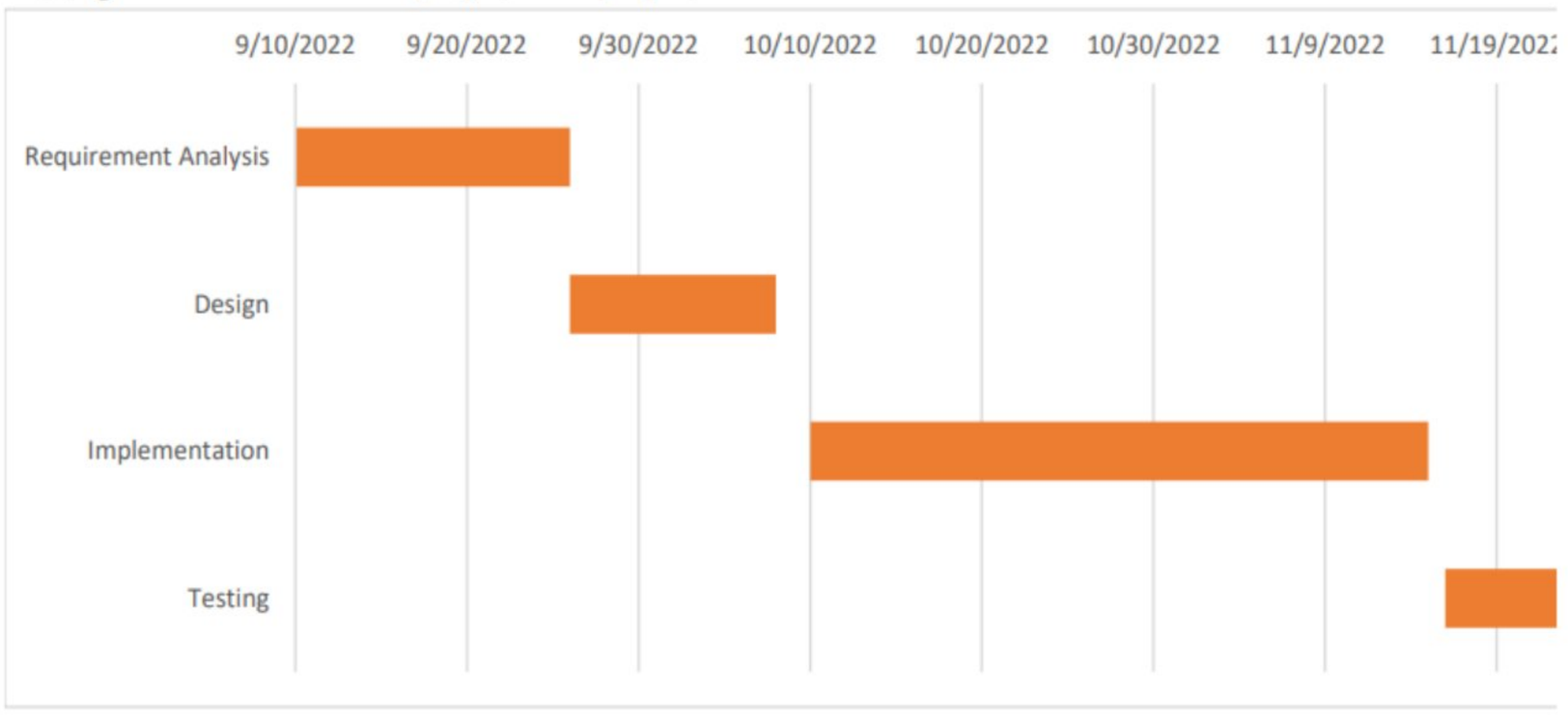

Figure 3.2: Gantt Chart

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3.4 Process/Activity wise Resource Allocation

Enough support and resources were provided to me by my supervisors both in office and IUB.

3.5 Estimated Costing

As the project was chosen by me for my CSE499 course, there was no cost needed in building the project.

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Chapter 4

Methodology

For completing any project, a system must go through some process which is called Software Development Life Cycle (SDLC). SDLC is a process which consists of a detailed plan describing how to develop, maintain, replace, and alter or enhance specific software. The life cycle defines a methodology for improving the quality of software and the overall development process.

In this project, I used an agile model to develop the project. It is the best SDLC methodology and one of the most used SDLC in the tech industry as per the annual State of Agile report. It's one speciality is it allows any requirements to change without negatively impacting. Agile Methodologies have overcome the traditional waterfall model by becoming flexible, fast, lean, responsive, and consistent and methods more open to change.

There are many advantages to this method. Agile method allows fast delivery to satisfy customers and adapt any requirement change. It provides higher product quality through testing during the development process. It helps to predict the cost, time, and resource through breaking up the project. It also allows customer collaboration and feedback. It is becoming more flexible, fast, lean, responsive and consistent. If anything isn't good or acknowledged decidedly, it very well may be immediately changed in the next cycle. Agile cycle empowers more authority over the undertaking through day-by-day gatherings. Agile gives the chance when fresher changes should be fused. The purchasers' necessities and inclinations can be adjusted to, in the turn of events, measure. A practical prepared to utilize item is made get-together few emphases subsequently more useful. Every emphasis permits changes to be made to the item effectively causing it to develop and create. Users are given main concern, and this guarantees the item is valuable and attempts to meet their requests each phase of the way. Small groups work better utilizing coordinated improvement measure as on engineer can have different abilities and can use them at a few phases of the cycle without clashes.

How I have utilized each step of Agile development methodology are stated below:

- **Planning:** I have done brief research on the topic so that I can have enough reference material to work on with. For this step, I have gathered relevant research papers, analyzed feature requirements of the company, validated them, and documented all material for future work.

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- **Design:** The detailed application architecture is created in this phase. For this step, I took help from the gathered materials. This helped me to come up with the design of the portal. Then for the prototyping, XML is used to illustrate the app design layout with the help of android studio.
- **Development:** Development cycle took the longest time to complete because it is the backbone of the entire process, and it contains a number of important considerations. The results of the previous stage's analysis and design are put into action in this stage. The system is then developed with the user's needs in mind, and the user interface is meant to meet their needs for easy navigation.
- **Test:** After the development of the whole website, then comes the" Testing" phase. In this phase, the Reliability test and Functionality test have been done. Also, taking some users feedback from the demo version helped in improving the features and fixing the bugs.
- **Deployment:** In the phase, the bugs and errors identified from the testing phase were solved. And after solving all the issues the final product will be deployed for users.
- **Feedback:** The "Feedback/Review " phase in the agile methodology has helped to identify the failings of the system from a client's perspective after the user feedback.

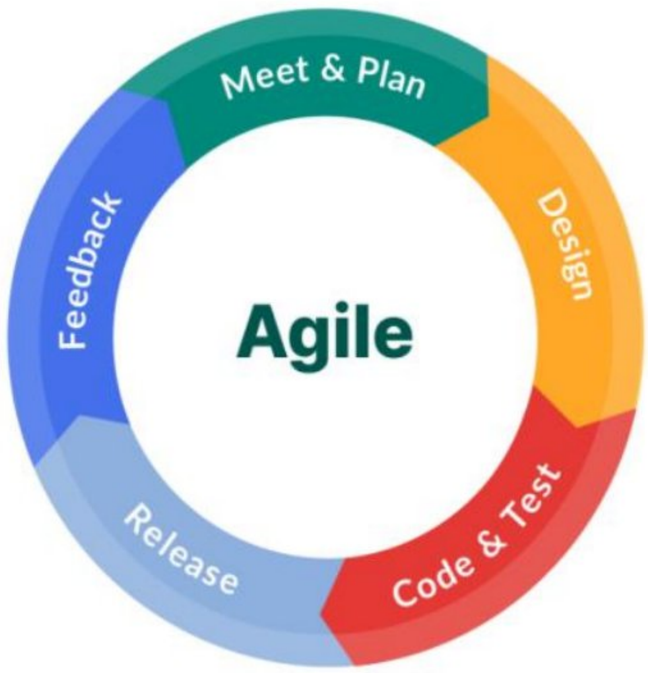

Figure 4.1: Agile Methodology

There are many advantages to this method. Agile method allows fast delivery to satisfy customers and adapt any requirement change. It provides higher product quality through testing during the development process. It helps to predict the cost, time, and resource through breaking up the project. It also allows customer collaboration and feedback. It is becoming more flexible, fast, lean, responsive and consistent. If anything isn't good or acknowledged decidedly, it very well may be immediately changed in the next cycle. Agile cycle empowers more authority over the undertaking through day-by-day gatherings.

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CHAPTER 4 METHODOLOGY

Agile gives the chance when fresher changes should be fused. The purchasers' necessities and inclinations can be adjusted to, in the turn of events, measure. A practical prepared to utilize item is made get-together few emphases subsequently more useful. Every emphasis permits changes to be made to the item effectively causing it to develop and create. Users are given main concern, and this guarantees the item is valuable and attempts to meet their requests each phase of the way. Small groups work better utilizing coordinated improvement measures as engineers can have different abilities and can use them at a few phases of the cycle without clashes.

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Chapter 5

Body of the project

5.1 Work Description

I used PHP, HTML, VSCode and MySQL. The contact portal is a function where customers can discuss their problems and queries personally with the Administrator. The portal permits the customer to ask any type of questions or queries. It provides a mobile display of all the features related to the portal. Customers must log in with their id and password to send their queries to the admin.

The contact portal will be possible through a website. It is very user friendly.

Our goal is to:

- Design a website.
- Test the system as many times as possible.
- Building the portal as smoothly as possible
- Increasing customer traffic
- User friendly login process
- Easy design
- Make it user friendly so that customers find it easy to use.
- Make runtime faster.

5.2 Requirement Analysis

Functional Requirement:

- The system should allow customers to login with their password.
- The system should allow them to update personal details.
- The system should allow them to Send messages to the Admin.
- The system should allow them to view Current News.
- The system should allow them to Notice and important messages.

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Non-Functional Requirement:

Non-practical prerequisites determine measures that can be utilized to pass judgment on the captivity of a framework in general as opposed to explicit ways of behaving. Properties like security, execution and accessibility which can be worked around, are fundamentals to satisfy for a usable framework. The assessment regardless of whether the item satisfies the non-practical necessity typically lessens to a Boolean response yes or no.

For a contact portal, the main non-utilitarian prerequisites incorporate security, execution, ease of use, and accessibility.

5.3 System Analysis

System Analysis is a detailed study of the various operations performed by a system and their relationships within and outside of the system. Analysis begins when a user or manager begins a study of the program using an existing system. During analysis, data collected on the various files, decision points and transactions handled by the present system. The commonly used tools in the system are Data Diagrams etc.

5.3.1 Six Element Analysis:

Process	Human	Non-Computing Hardware	Software	Hardware	Database	Connectivity
Login	Select option from the website	None	Web	PC, Laptop, Smartphone	MySQL	Internet
Select an option	Press the option	None	Web	PC, Laptop, Smartphone	MySQL	Internet
Perform the task	Put necessary	None	Web	PC, Laptop, Smartphone	MySQL	Internet

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	info					
Logout	Logging out of the website	None	Web	PC, Laptop, Smartphone	MySQL	Internet

Figure 5.1: Six Element Analysis

5.3.2 Feasibility Analysis

There are 5 different kinds: technical, operational, economic, schedule and social feasibility. The main goal of feasibility study is not to solve the problem but to achieve the scope. Let's check the different kinds of feasibilities:

Technical Feasibility: Technical feasibility refers to the analysis of the technical resources that are available inside the organizations in relation to the project requirements. Technical feasibility study aids in determining whether technical resources are adequate for a given task and assesses hardware, software, and other technical needs for mobile app development companies.

Operational Feasibility: Operational feasibility refers to the evaluation of the procedures that the app development company uses to carry out the project's completion. This evaluation entails research to evaluate whether and how the needs of the mobile app development company may be satisfied by completing the project.

Economic Feasibility: Economic viability includes the project's cost and benefit analyses. Before allocating financial resources, economic feasibility enables mobile app development companies to assess a project's viability, costs, and benefits.

5.3.3 Problem & Solution Analysis

Problems:

- There should be an option to reply to the queries of the customers.
- Admin side should be able to control the information of customers and update if necessary.
- Customers should be able to view options and perform them.

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Solutions:

- An admin panel will be built to manage the admin side.
- Database will be used for controlling the purpose of customer information.

5.3.4 Effects and Constraints Analysis

Effects:

- Efficiency Flexibility.
- Better Management, Better Quality.
- Furthermore, Proper system analysis makes the clear path for android application development by minimizing the future IT requirements.
- Social events of a reasonable arrangement of necessity for any framework will give a benefit of the exact preparation of the assets for improvement, this will bring the result for minimal price.
- System analysis helps to acquire flexibility and flexibility in the system development, in addition to lowering expenses. Additionally, it establishes a set of criteria that clearly outlines the development goals for each version.

Constraints:

Product Summary:

Customers can perform their tasks from the website. To conduct the tasks, the person needs to have a PC or laptop. They can ask any kind of question about banking and bank related questions through the portal.

Stakeholders:

Admin panel, Organization, and Customers

Technical Features:

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- Must be user friendly.
- Customers should be able to perform all tasks smoothly.
- Should have alerts.
- Should provide security.

5.4 System Design

UML Diagrams

1. **Use Case Diagram**



Figure 5.2: Use Case Diagram

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2. ERD

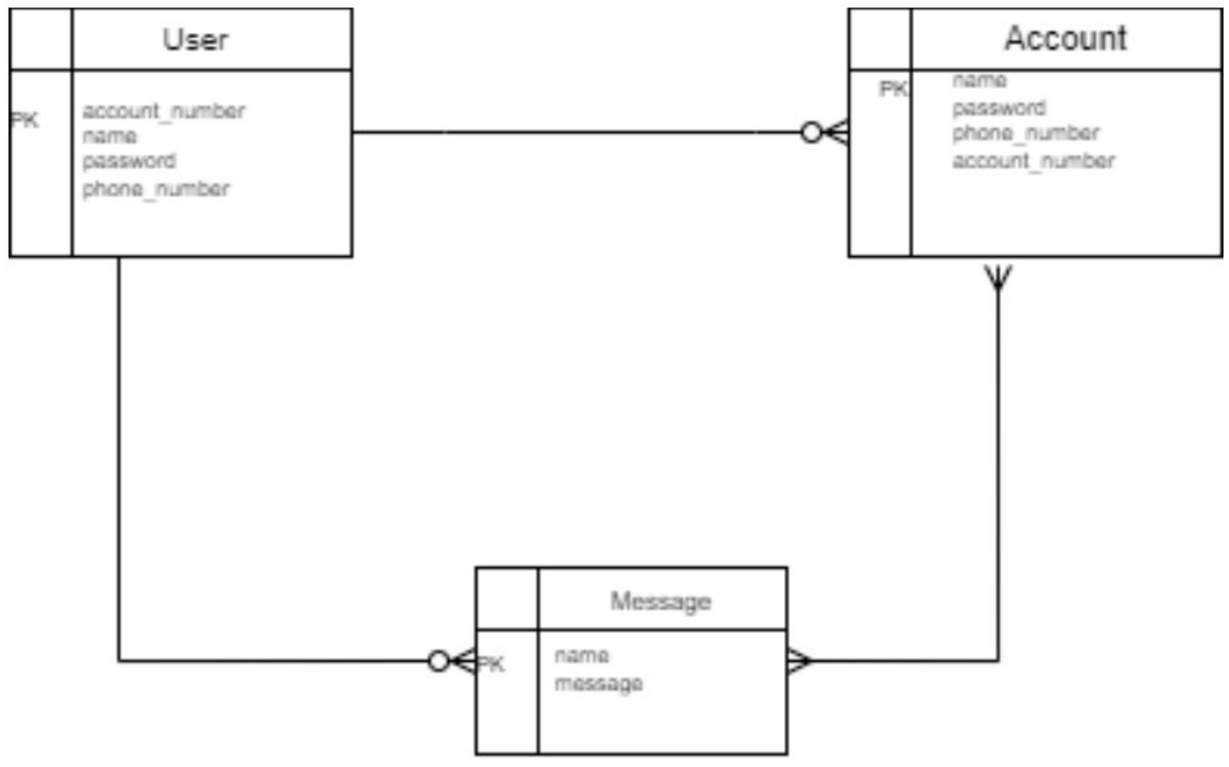

Figure 5.3: ERD

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3. Activity Diagram

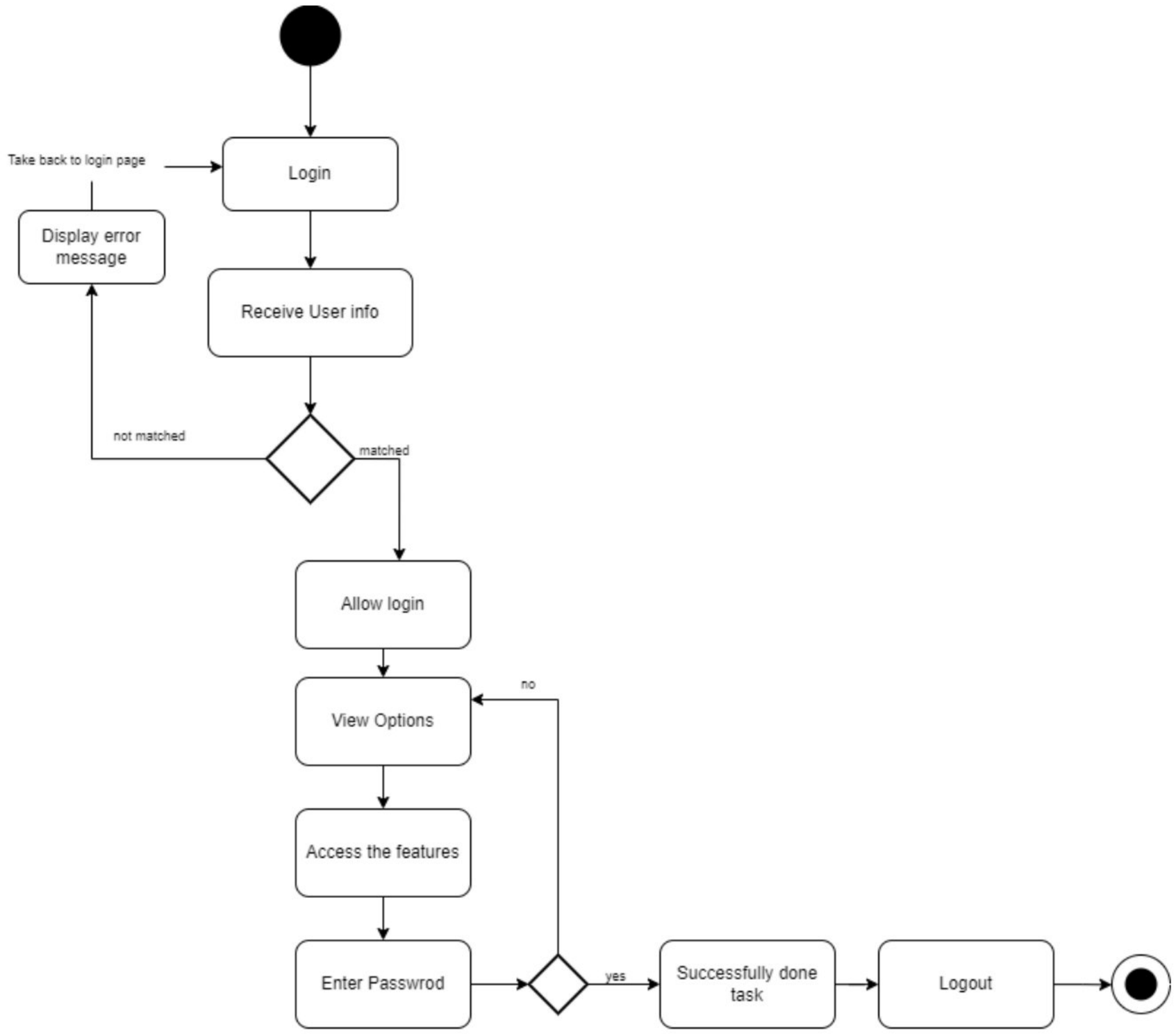

Figure 5.4: Activity Diagram

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4. Sequence Diagram

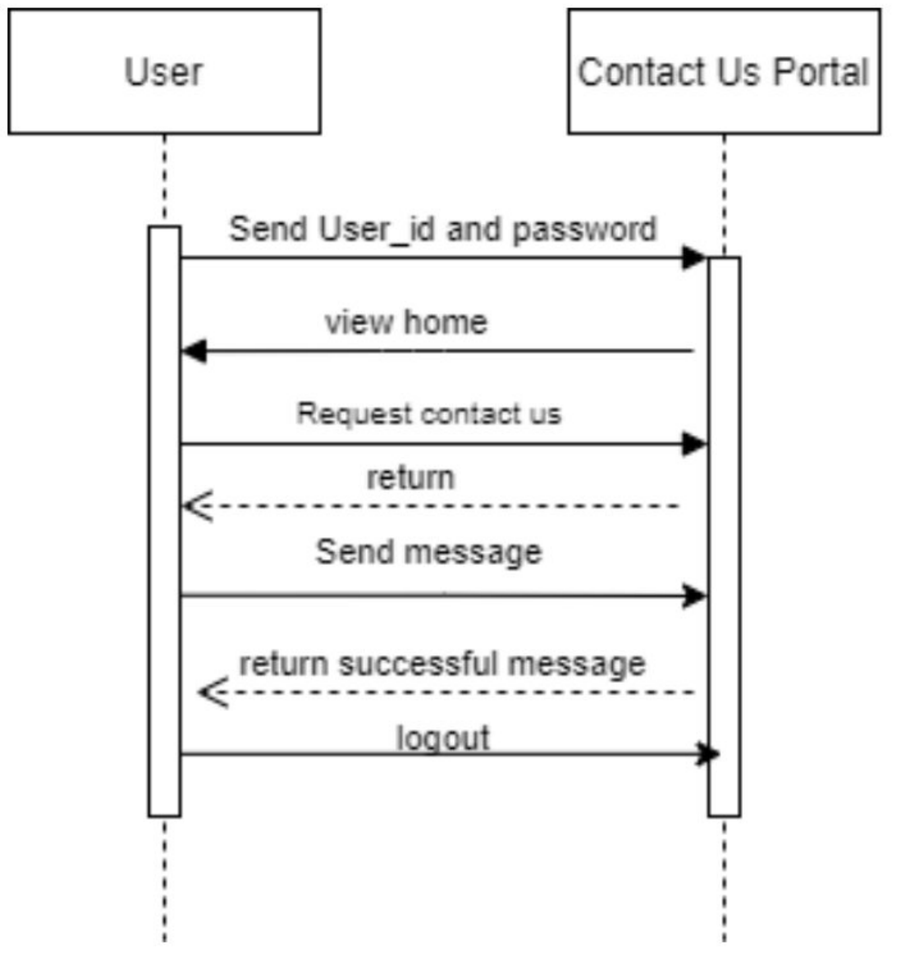

Figure 5.5: Sequence Diagram

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5.5 Implementation & Testing

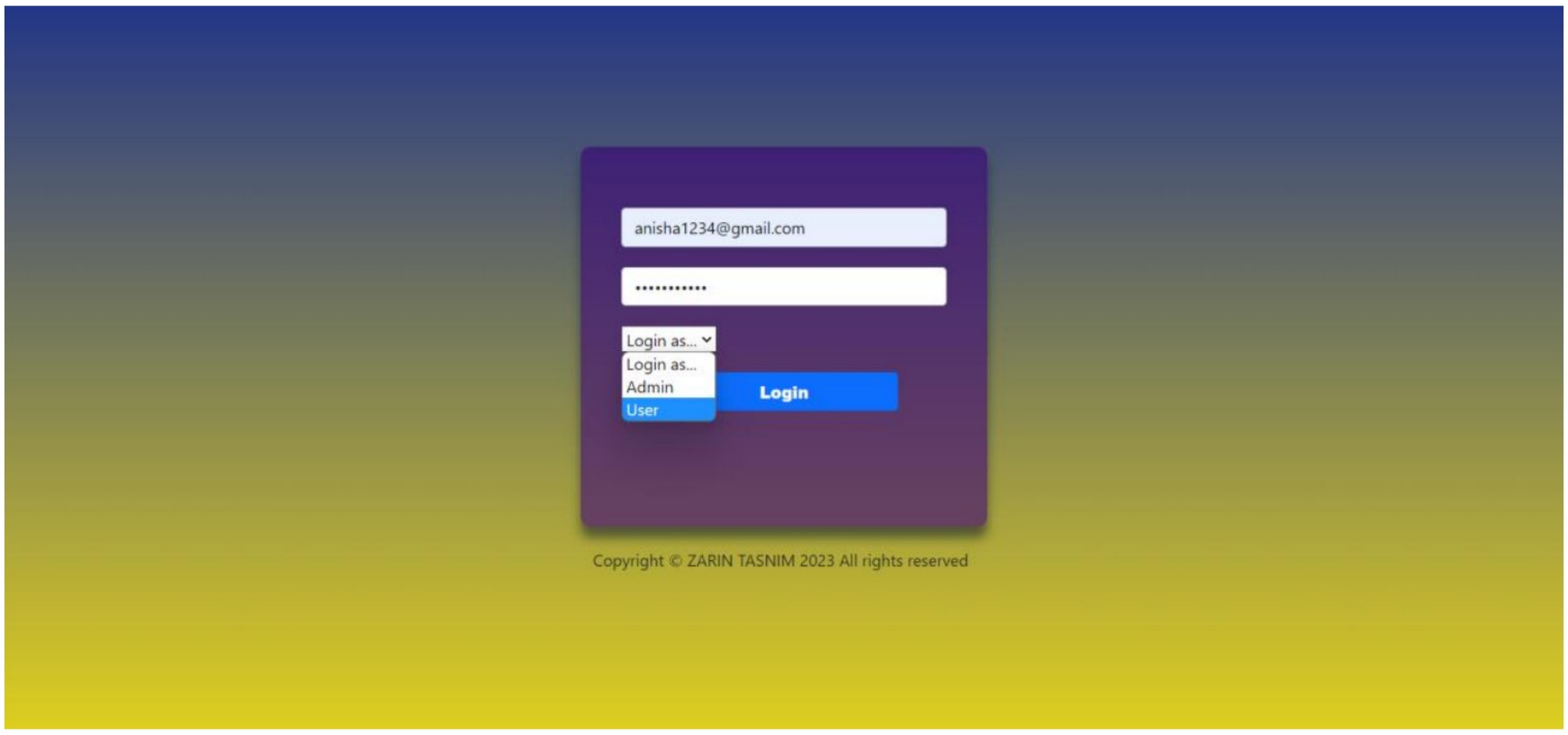

Figure 5.6: Login



Figure 5.7: Homepage

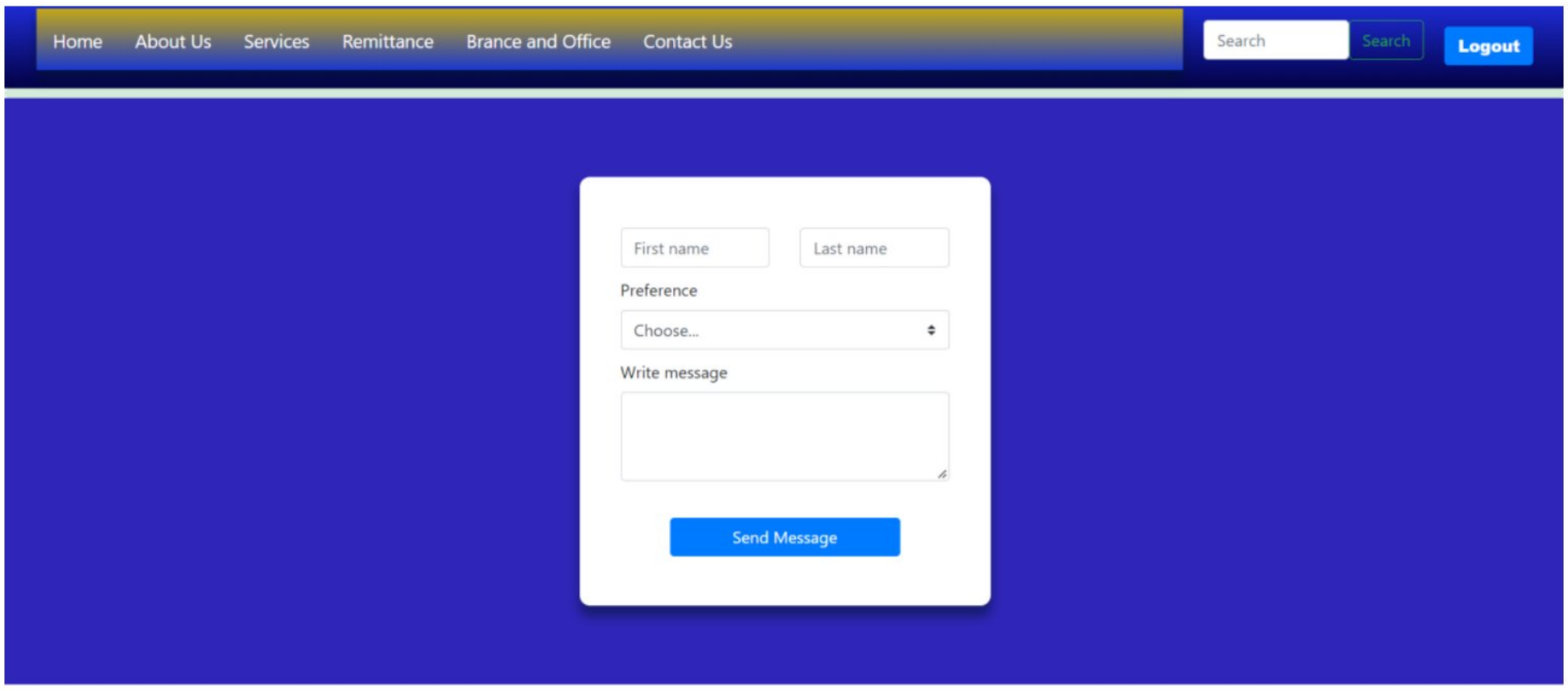

Figure 5.8: Sending Message

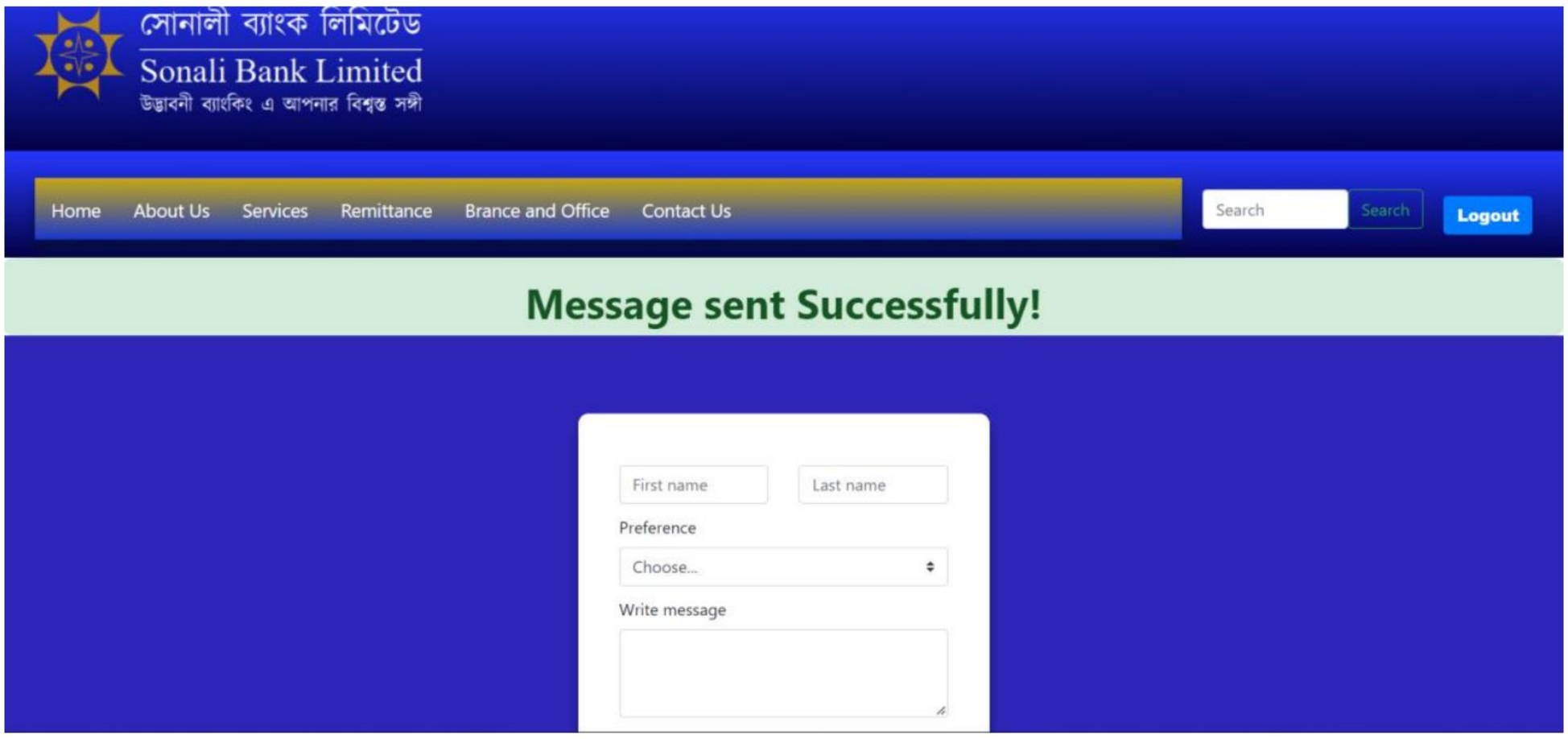

Figure 5.9: Message Sent Alert

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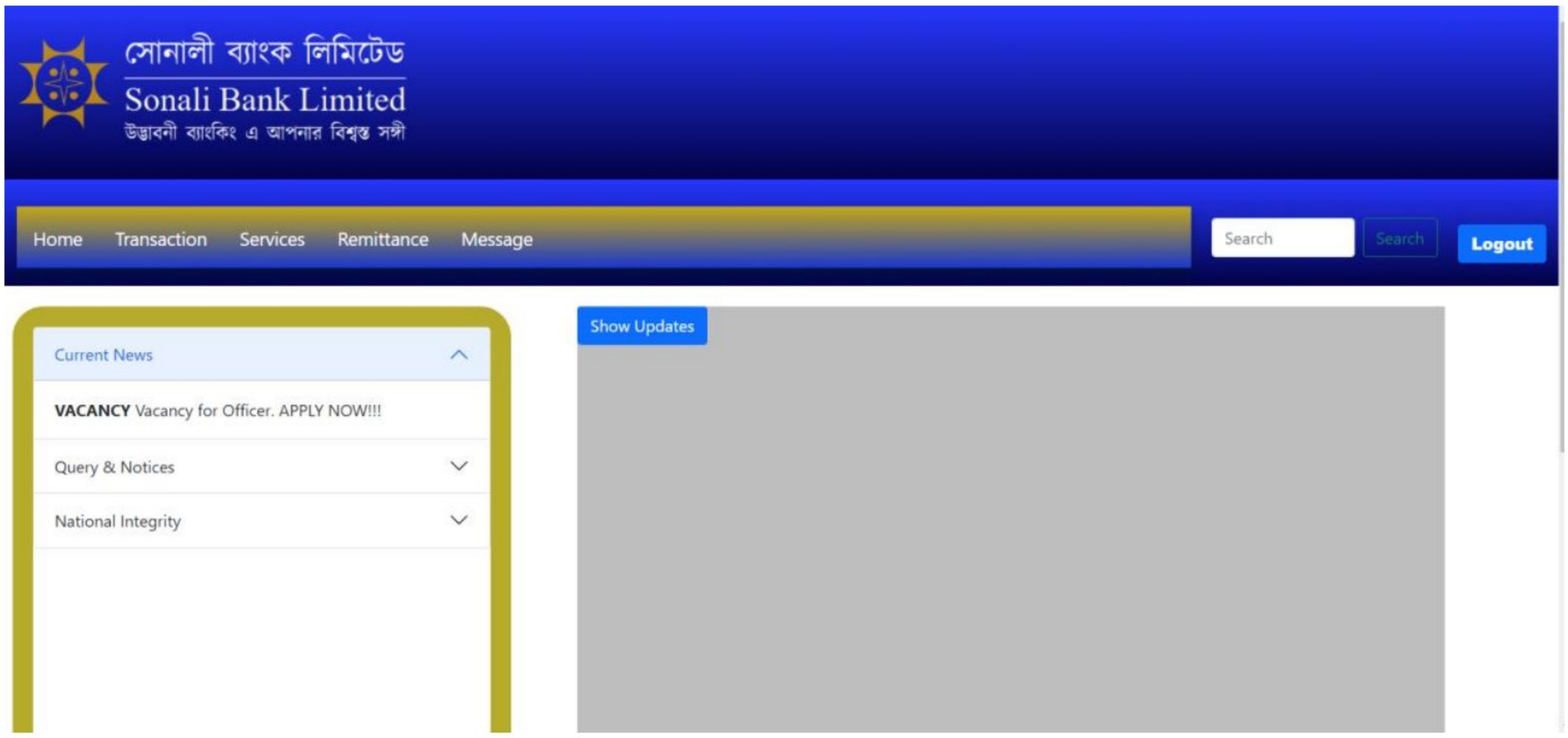

Figure 5.10: Admin Homepage

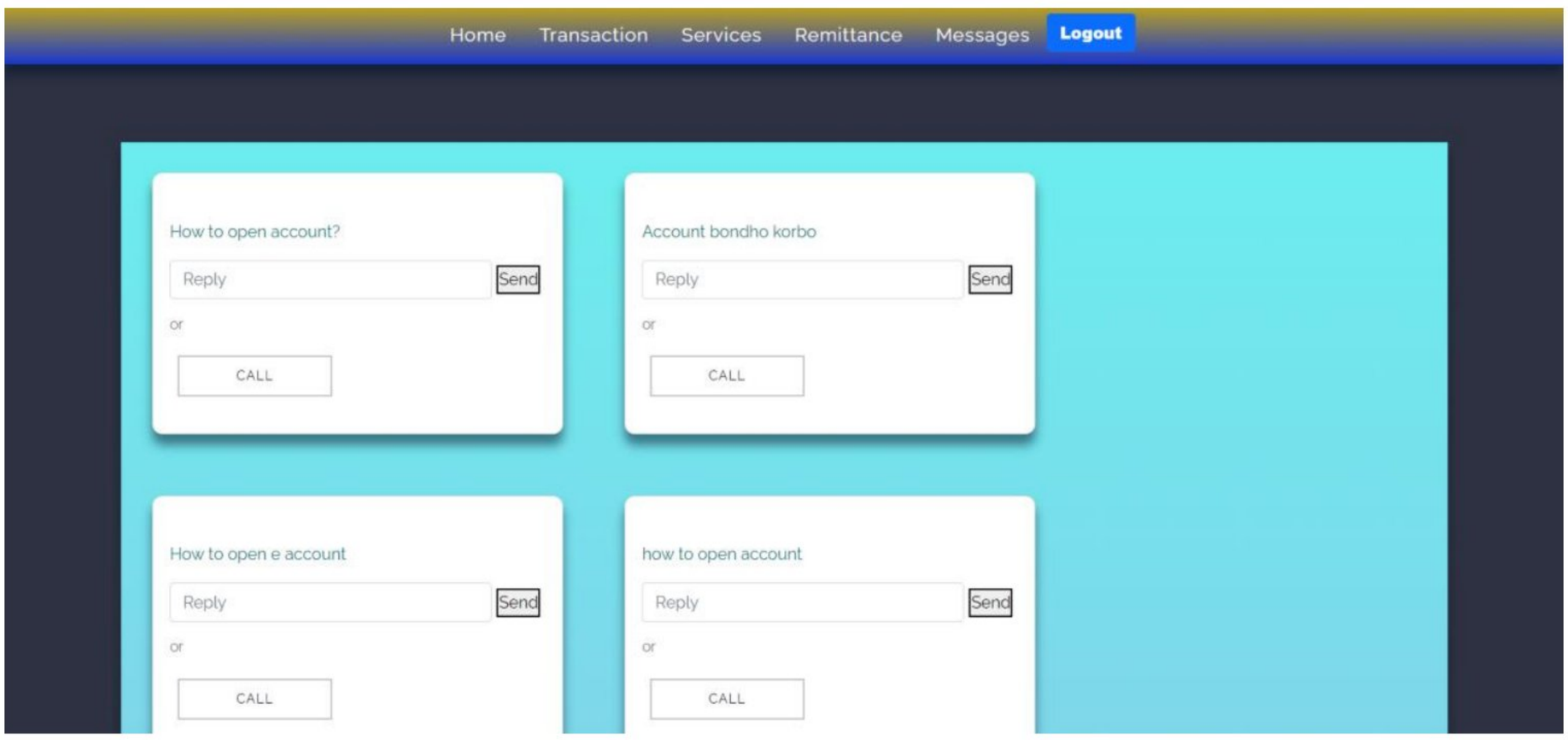

Figure 5.11: Messages

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Chapter 6

Result And Analysis

Our portal has a very user-friendly interface. Customers can login/logout from the website. Customers can view all the features of the website and ask their queries about banking. Customers can choose any option from the website to view it.

The main function of the website is the contact u portal is used to send their queries and questions to the Administrator. The website will show different notices and current news related to the bank.

Opportunities:

- The website can be used 24/7.
- Many useful features are available.
- Building good relationships with customers and giving them a good experience.

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Chapter 7

Project as Engineering Problem Analysis

7.1 Sustainability of the Project/Work

By adopting a" green" mindset into its project management strategy, a company can have positive effects across the board, which can increase productivity, minimize waste, and improve employee morale. There aren't many techniques for planning and executing sustainable projects.

Start by assessing current project sustainability:

Before taking any steps toward greater sustainability, it's imperative to be aware of where you are right now. A sustainability analysis makes it easier to identify the most important areas for improvement and to monitor your progress as your sustainability initiative takes shape. You should first establish whether the concept of sustainability pertains to a particular project or project management technique. In that case, you should evaluate the expenses and time necessary to implement the necessary changes, the potential advantages for the environment and the company's reputation, and any potential cost savings that may result.

Develop a sustainability strategy:

After your assessment is finished, the next stage is to write a strategy that outlines the objectives for increasing sustainability, how those objectives will be met, and the benefits the business expects to reap as a result. Like a project plan, the strategy should identify the individuals, positions, or divisions in charge of overseeing the sustainability initiative and the degree of control they will have over setting project priorities.

Adopt a sustainability standard:

Organizations have started to establish guidelines to aid senior leaders and project managers in determining if they are accomplishing their sustainability objectives as interest in projects becomes more widespread. Look for sustainability in partners and vendors: An organization's ability to put pressure on the businesses it does business with increases with size. In addition to lowering your company's

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environmental impact, requesting more sustainability from vendors and suppliers may result in wider changes among your vendors' other clients.

Spread the word:

The secret to success in any organizational endeavor is communication. Project teams should be included as soon as sustainability strategy is established. Request input from staff members regarding your sustainability objectives and fresh suggestions that they may have based on prior work. Employees will work harder to make the sustainability endeavor successful the more invested they feel in it.

7.2 Social and Environmental Effects and Analysis

Our website is not detrimental or harmful to the environment in any way. We hope that customers will throw away the paper waste in the garbage after their work or reuse them in some way.

7.3 Addressing Ethics and Ethical Issues

It is important that the ethical guidelines are being followed. Here are some that should be followed:

- Maintaining privacy and keeping user data safe and secure.
- Only the administration has access to the database.
- There should not be any kind of favoritism.
- Only relevant user data should be collected.

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Chapter 8

Lesson Learned

During this time, I gained a lot of insightful knowledge about a wide range of issues. Some issues were technical, while others had to do with corporate strategy. I was able to resolve those issues with the aid of my supervisor, teachers, course lessons, and the internet.

8.1 Problems Faced During this Period

- Delay in web runtime.
- Same option for user and admin login
- Web quality.
- Delay in confirmation text.

8.2 Solution of those Problems

- Work on responsiveness of the web
- Separating admin and user options.
- Improving web quality.
- Making confirmation text faster and more responsive.

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Chapter 9

Future Work & Conclusion

9.1 Future Works

I've seen the system that the bankers work on. The interface doesn't seem friendly, and the design was not eye soothing. I would like to work on the full banking system with a user-friendly interface for the officers of the bank. Customer profiles will be added to the website. Profile customization for the customers will be added.

9.2 Future Scopes

There will be scopes to work in an IT company. Students will be able to gain valuable work experience. Students can work as Web Developers. Students will learn new and improved skills and how to apply them. They can prepare for a future career.

9.3 Limitations of the Work

Due to time shortage for an internship program, there is still a lot of work that is to be done as I had planned earlier, like working on a full-fledged website.

9.4 Conclusion

A very nice initiative to assist individuals to be able to talk to the admin directly for short queries. They no longer must wait in long lines for simple questions. They can simply do it from their home. Once again thanks to my supervisor, Sabrina Alam for assigning this project to me and my internship workplace supervisor Shyamoli Akhter. Technical comprehension was enhanced through this project. There are now several possibilities open to students who are interested in working in this field. Many public and private businesses hire web developers to work on online initiatives and develop websites. As a result of the online industry's rapid expansion and the increased demand for web designers, there will be several career prospects for hopefuls in the upcoming years. An expert in this subject can also work independently as there are numerous internet businesses that offer freelancing employment to people.

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