"CUSTOMER CARE REGISTRY"

A

Project Report

submitted

in partial fulfillment

for the award of the Degree of

Bachelor of Technology

in Department of Information Technology

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Swami Keshvanand Institute of Technology, Management & Gramothan, Jaipur

Department of Information Technology

CERTIFICATE

This is to certify that **Mr Manthan Jain** a student of B.Tech(Information Technology) final semester has submitted his Project Report entitled **"Customer Care Registry"** under my guidance.

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This is to certify that **Ms Nupur Mathur** a student of B.Tech(Information Technology) final semester has submitted her Project Report entitled **"Customer Care Registry"** under my guidance.

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This is to certify that **Mr Prasoon Khandelwal** a student of B.Tech(Information Technology) final semester has submitted his Project Report entitled **"Customer Care Registry"** under my guidance.

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Signature.....

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Mrs. Sanju Choudhary

Associate Prof.

Signature.....

DECLARATION

We hereby declare that the report of the project entitled Customer Care Registry is a record of an original work done by us at Swami Keshvanand Institute of Technology, Management and Gramothan, Jaipur under the mentorship of Mr. Vipin Jain(Dept. of Information Technology and Engineering) and coordination of Mrs Sanju Choudhary (Dept. of Information Technology and Engineering). This project report has been submitted as the proof of original work for the partial fulfillment of the requirement for the award of the degree of Bachelor of Technology (B.Tech) in the Department of Information Technology and Engineering.It has not been submitted anywhere else, under any other program to the best of our knowledge and belief.

Team Members **Signature**

Manthan Jain (19ESKIT055)

Nitin Jain (19ESKIT064)

Nupur Mathur (19ESKIT065)

Prasoon Khandelwal (19ESKIT069)

Acknowledgement

A project of such a vast coverage cannot be realized without help from numerous sources and people in the organization.We take this opportunity to express our gratitude to all those who have been helping us in making this project successful.

We are highly indebted to our faculty mentor Mr. Vipin Jain. He/She has been a guide, motivator source of inspiration for us to carry out the necessary proceedings for the project to be completed successfully. We also thank our project coordinator Mrs. Sanju Choudhary for his co-operation, encouragement, valuable suggestions and critical remarks that galvanized our efforts in the right direction.

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Last but not least we would like to thank all those who have directly or indirectly helped and cooperated in accomplishing this project.

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Chapter 1
Introduction

1.1 Problem Statement and Objective

The existing system for the customer care registry project is a paper-based system. This system is used to track customer service requests and complaints. The system is cumbersome and time consuming, and it is difficult to track and report on customer service issues. The customer care registry project is designed to replace the existing system with a new, web-based system. The new system will be easier to use and will provide more accurate and timely information on customer service issues. Out of the previous related work done concerning customer complaint, the most recent research was: Razali et al. (2011) [6] develop a new complaint management system called (e-Aduan) as a platform for UiTM Pahang's customers to complaint and comment regarding the services and facilities provided by the universit

1.2 Literature Survey /Market Survey/Investigation and Analysis

Finally, it was found that customer care registry projects can be successful if they are properly planned and implemented. However, if the project is not properly planned or implemented, it is likely to fail rating time into a recommender system is important, because there are often preference seasonal effects. For example, it is likely that in December, more people are going to be watching holiday-themed movies and buying home decorations.]A literature survey was conducted on customer care registry projects. The following is a summary of the findings: It was found that customer care registry projects are typically implemented to improve customer service and/or to reduce costs. In many cases, the registry project is used to streamline customer service processes and/or to reduce the number of customer service calls. In some

cases, the registry project is used to improve customer satisfaction scores. It was also found that customer care registry projects can be implemented using a variety of different technologies, including web-based applications, customer relationship management (CRM) systems, and enterprise resource planning (ERP) systems.

Finally, it was found that customer care registry projects can be successful if they are properly planned and implemented. However, if the project is not properly planned or implemented, it is likely to fail rating time into a recommender system is important, because there are often preference seasonal effects. For example, it is likely that in December, more people are going to be watching holiday-themed movies and buying home decorations.

1.3 Introduction to Project

Today all the things are managed by software's. IN current time many services and many facilities available on your phone like you order food from your mobile, order the cloths from online store this type of many facilities available at online mood, but sometime this companies provides the wrong items like you order a cloth, but company deliver wrong cloths or a defective piece. So, customer face the problems to how to return the product and hoe to register his complaint regarding the products. So, this type of problem solves easily companies and online service provider make the website and portal use by this facility customer easily register his complain and employee see the customer and provide the right solution to the user..

1.4 Proposed Logic / Algorithm / Business Plan / Solution / Device

.This Application has been developed to help the customer in processing their complaints. The customers can raise the ticket with a detailed description of the issue. Companies assign the agent for this customer and agent solve the customer problem. This customer care registry provides the benefits both sides. Companies' benefits are a good customer service experience is always remembered by your clients and they keep coming back. Delivering excellent customer service is one of the best strategies

for client retention.

1.5 Scope of the Project

Even though the benefits of customer care registry sounds quite interesting while its implementation challenges are quite difficult to overcome. And with the advancement of customer care registry technology every year, this trend of implementation barriers will keep rising. In the near future, customer care registry will be mostly analytical net-based. More trending technologies of customer care registry such as data analytics other matrices will be used to analyze the business performance..

Chapter 2
Software Requirement Specification

2.1 Overall Description

Overview of this software is it is use for only register the employee complaints and problem with the products. It is very easy to use app and it is very easy to handle. This website an easily handle by the only person. The main objective of this website is read the customer problem, contact with person and provide good solution to the customer.

2.1.1 Product Perspective

The main objective of this website is solving the customer problems and provide the best solution of his problem. With this website user easily register his complain and this application make connection between customer and service provider. If any company and business want to grow so first objective is customer satisfaction every company try its best for the customer satisfaction and customer care registry is first step of the customer satisfaction, it's an important service so provided by the companies to the user. User always prefer the easy solution and this application is easy to use and give the good experience to the user.

2.1.1.1 System Interfaces

The Customer Care Registry system will integrate with various interfaces to ensure smooth communication and data exchange. These interfaces may include databases, external systems, and many other functions.

2.1.1.2 User Interfaces

The system will provide user-friendly interfaces for both customer care representatives and customers. The representative interface will allow them to access customer

information, track queries, and manage service requests. The customer interface will enable users to submit queries, receive updates, and provide feedback.

2.1.1.3 Hardware Interfaces

The system will require standard hardware components such as servers, computers, and networking devices to support its operations.

- Processor : P4
- Ram : 512 MB
- Hard Disk : 10GB

2.1.1.4 Software Interfaces

The system will interact with various software components, including the operating system, database management system, and third-party software for communication and data analytics.

- Operating System:- Any Windows OS
- Data Base Server:- MariaDB
- Development:- The system was developed using PHP/MySQLi,HTML, CSS, Javascript, and Bootstrap
- Plateform:- VScode, Mysql wrokbench

2.1.1.5 Communications Interfaces

The Customer Care Registry system will utilize communication interfaces such as email, messaging platforms, and telephony systems to interact with customers and representatives.

2.1.1.6 Memory Constraints

The system's memory constraints will be determined based on the scale of the customer database and the amount of data to be stored. Appropriate memory management techniques will be implemented to ensure efficient storage and retrieval of information.

2.1.1.7 Operations

The system will support operations such as query management, customer information retrieval, issue resolution, service request handling, and generating reports. These operations will be performed by customer care representatives using the system's interface.

2.1.1.8 Project Functions

The project functions of the Customer Care Registry system include customer query management, customer data storage and retrieval, customer feedback analysis, and generating reports for management and performance evaluation.

2.1.1.9 User Characteristics

The system will cater to two main user categories: customer care representatives and customers. Representatives should have basic computer literacy and familiarity with customer service procedures. Customers should have access to the internet and possess basic knowledge of online communication.

2.1.1.10 Constraints

The system's constraints may include limitations on the processing power of the hardware, network bandwidth, and database capacity. These constraints should be considered during system design and implementation to ensure optimal performance.

2.1.1.11 Assumption and Dependencies

The system assumes that customers will provide accurate information, representatives will handle queries professionally, and the underlying infrastructure will be properly maintained and updated. The system may depend on external APIs or services for certain functionalities, which should be considered during integration.

Chapter 3
System Design Specification

3.1 System Architecture

The Customer Care Registry system will follow a client-server architecture. The client-side will consist of user interfaces for representatives and customers, while the server-side will handle data storage, processing, and business logic. The system will utilize a database management system to store and retrieve customer information.

3.2 Module Decomposition Description

The system will be divided into modules to handle specific functionalities such as query management, customer information management, feedback analysis, and reporting. Each module will have well-defined inputs, outputs, and interactions with other modules.Some modules use for register the complain and modules use see the status of complain.

3.2.1 User Interface Module

This module handles the user interface components, allowing customers and representatives to interact with the system.It includes components such as forms, input validation, and user authentication. The module communicates with other modules to gather and display relevant information to users.

3.2.2 Customer Management Module

This module is responsible for managing customer-related operations.It includes functionalities such as customer registration, updating customer information, and customer search.The module interacts with the database module to store and retrieve customer data.

3.2.3 Representative Management Module

This module handles representative-related operations.It includes functionalities such as adding representatives, updating representative information, and representative search.The module interacts with the database module to store and retrieve representative data.

3.2.4 Communication Module

This module facilitates communication between customers and representatives. It includes features such as messaging, email notifications, and call logging. The module ensures smooth and effective communication between the parties involved.

3.2.5 Reporting Module

This module is responsible for generating reports and analytics related to customer care activities. It includes functionalities to collect data, analyze trends, and generate various reports for management and analysis purposes. The module interacts with the database module to retrieve relevant data for reporting.

3.2.6 Database Module

This module manages the storage and retrieval of data related to customers, representatives, communication logs, and system configurations. It handles data persistence, data integrity, and data retrieval operations. The module provides the necessary database access and query capabilities for other modules.

3.3 High Level Design Diagrams

3.3.1 Use Case Diagram

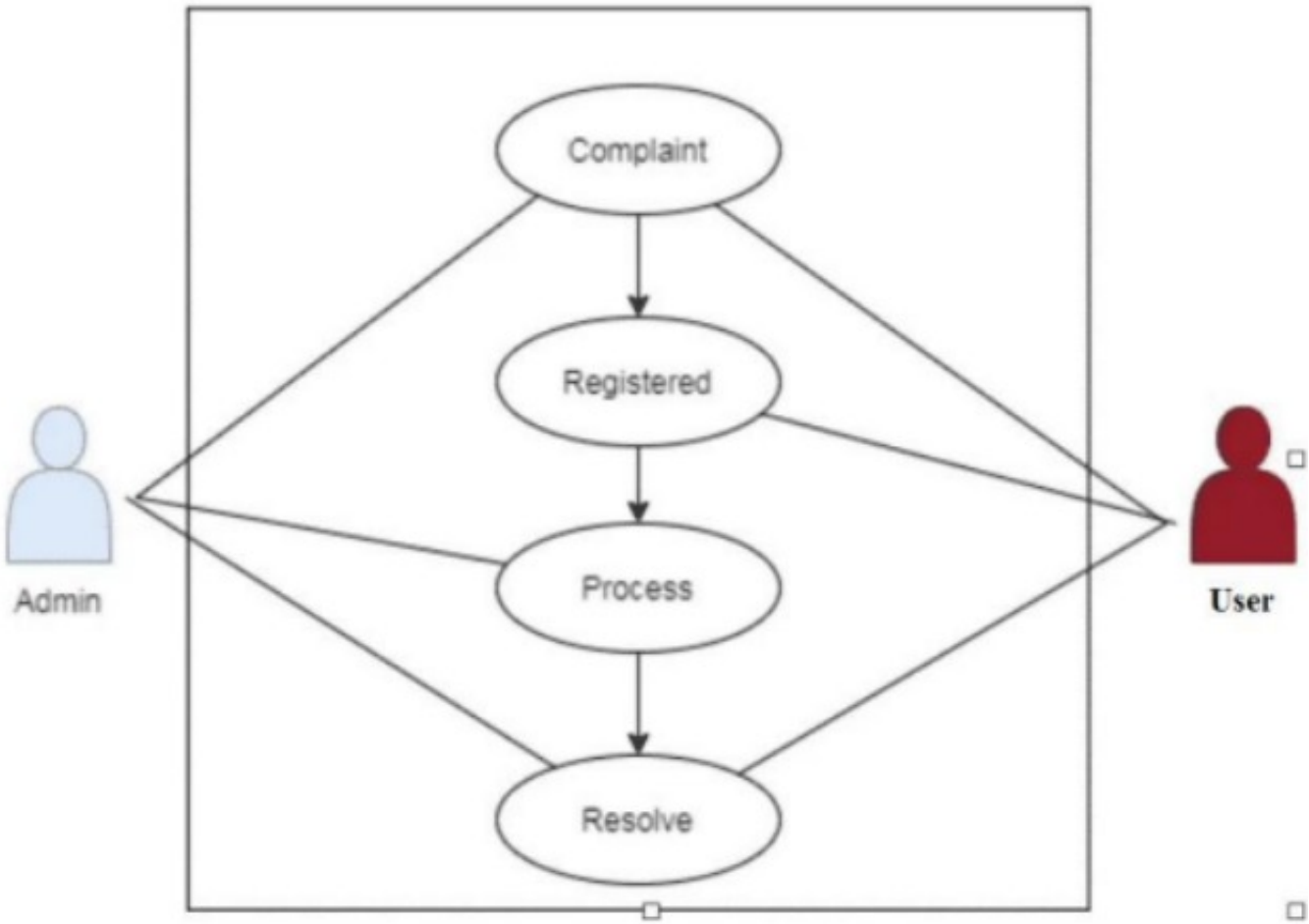

Figure 3.1: Use Case diagram

3.3.2 Activity Diagram

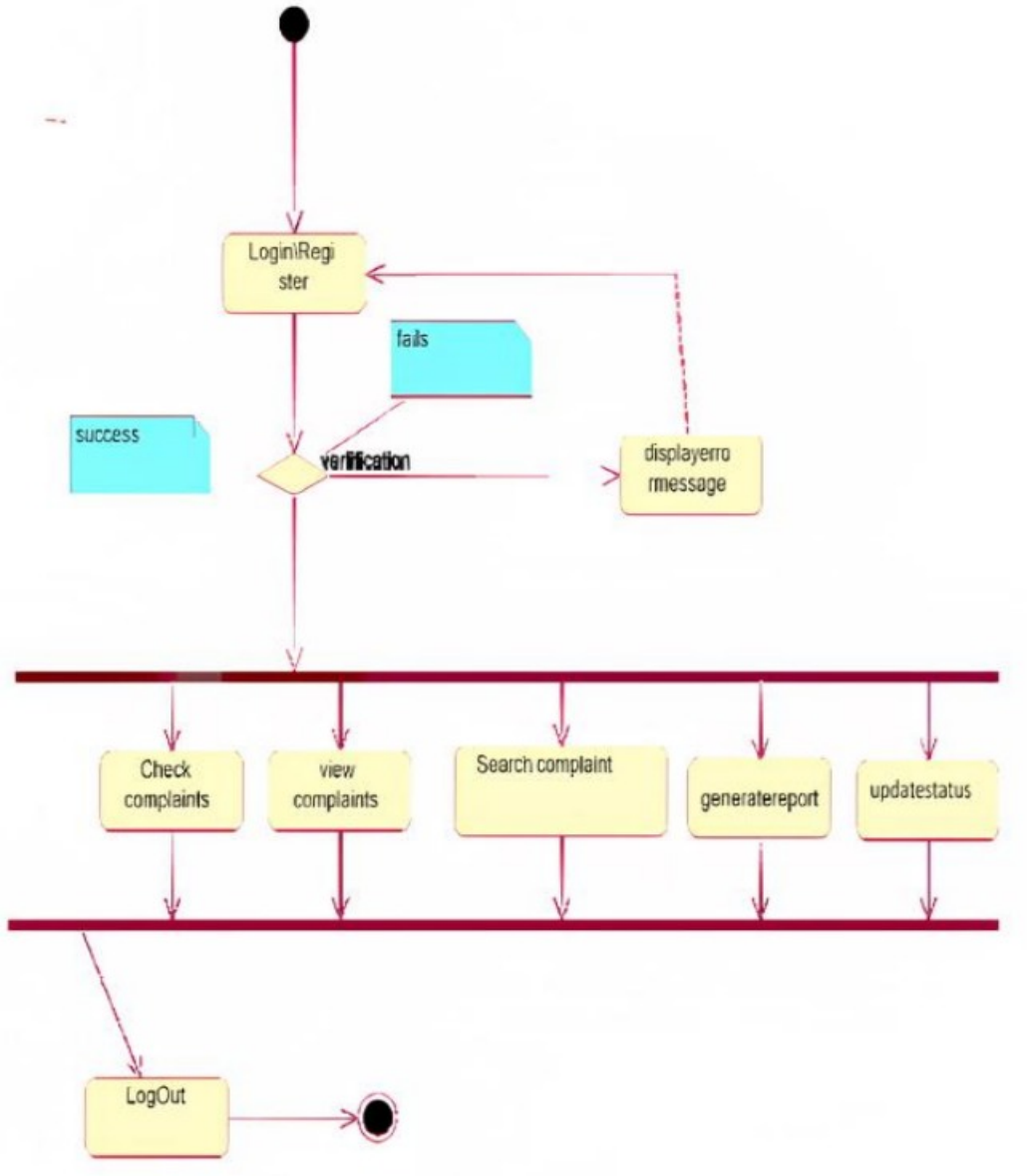

Figure 3.2: Activity Diagram

3.3.3 Data-Flow Diagram

Figure 3.3: Data-Flow Diagram

3.3.4 Class Diagram

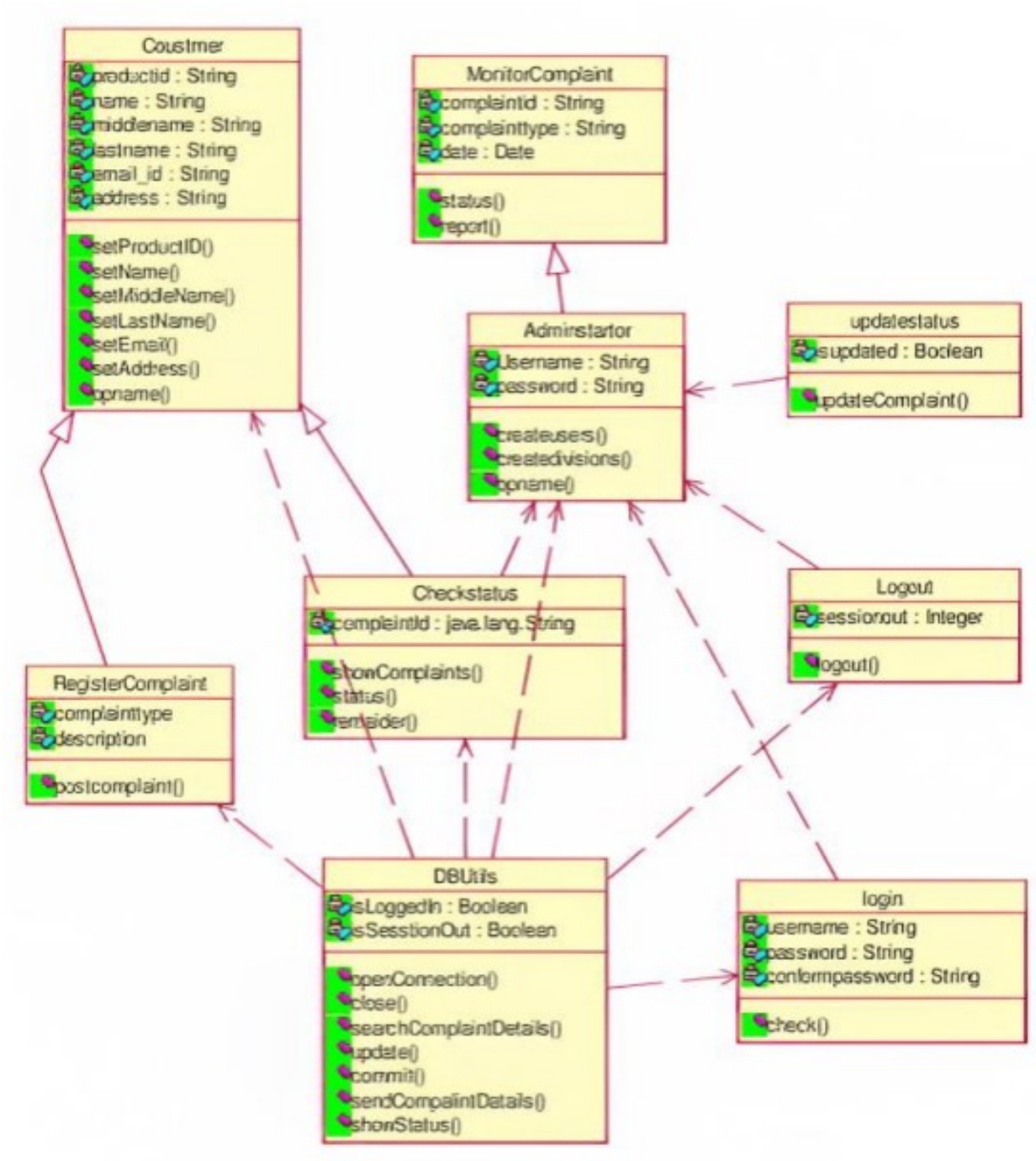

Figure 3.4: Class Diagram

3.3.5 Sequence Diagram

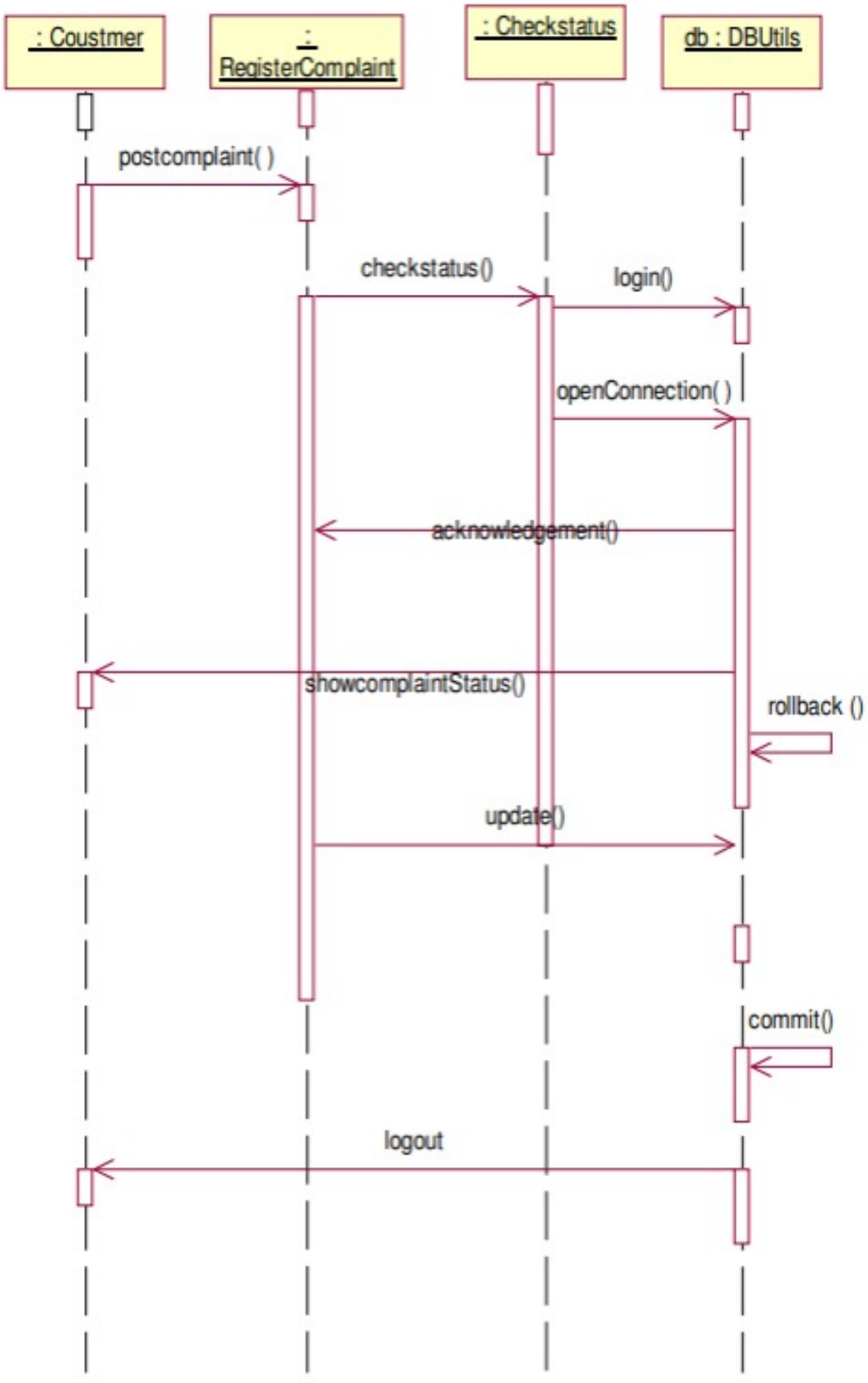

Figure 3.5: Sequence Diagram

3.3.6 Entity Relationship Diagram

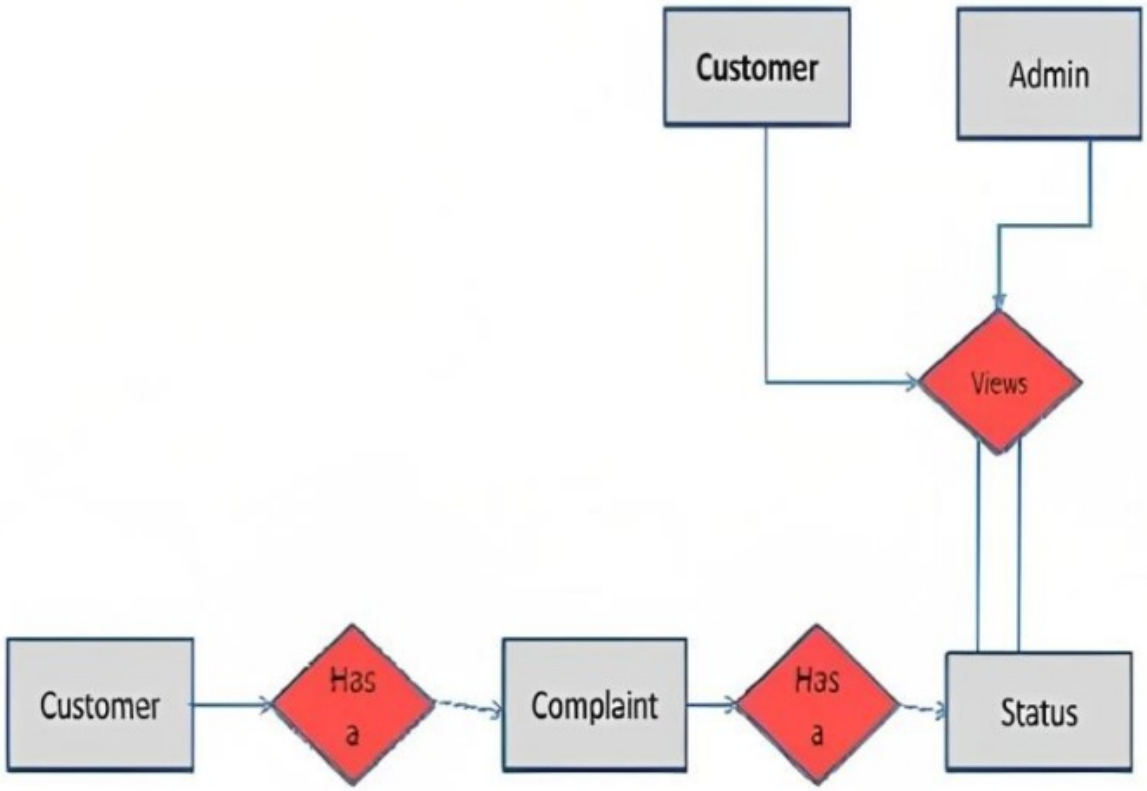

Figure 3.6: Entity Relationship

Chapter 4
Methodology and Team

4.1 Introduction to Waterfall Framework

The Waterfall Model was first Process Model to be introduced. It is also referred to as a linear-sequential life cycle model. It is very simple to understand and use. In a waterfall model, each phase must be completed before the next phase can begin and there is no overlapping in the phases. The waterfall Model illustrates the software development process in a linear sequential flow; hence it is also referred to as a linear-sequential life cycle model. This means that any phase in the development process begins only if the previous phase is complete. In waterfall model phases do not overlap. In "The Waterfall" approach, the whole process of software development is divided into separate phases. In Waterfall model, typically, the outcome of one phase acts as an input for the next phase sequentially. Following is a diagrammatic representation of different phases of waterfall model.

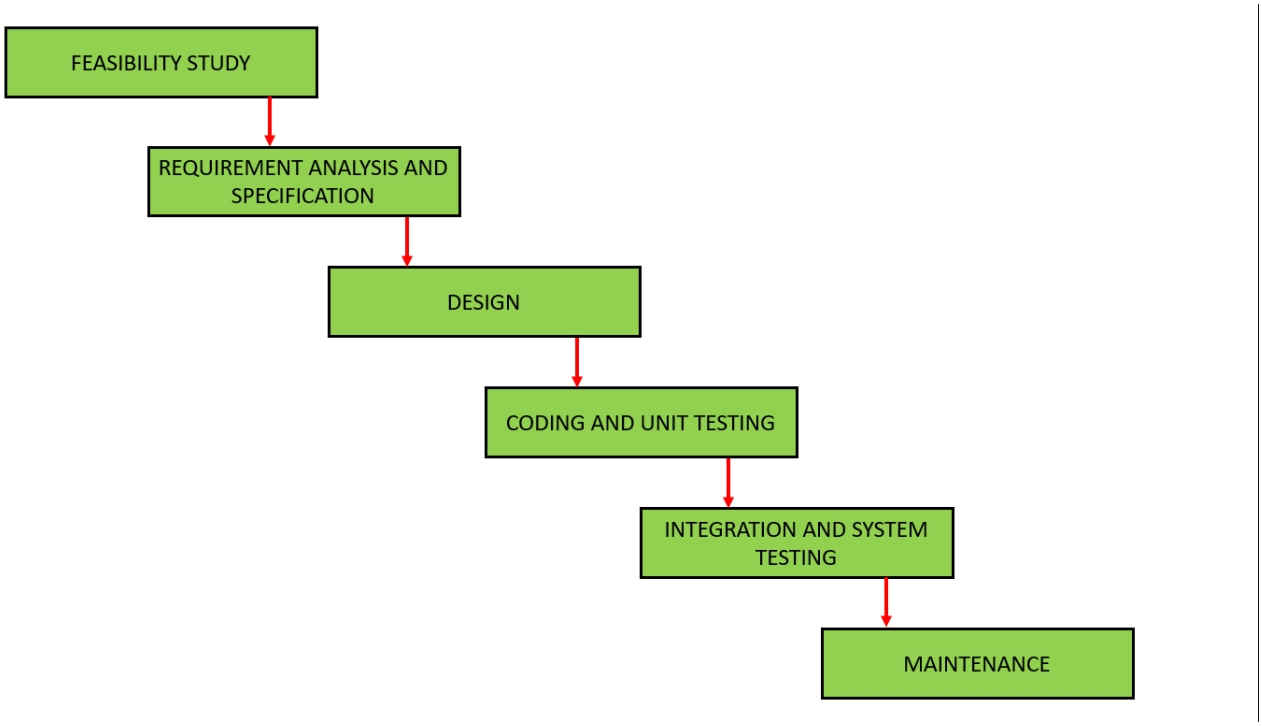

Figure 4.1: WaterFall model

The sequential phases in Waterfall model are-

1. **Requirement Gathering and analysis:** All possible requirements of the system to be developed are captured in this phase and documented in a requirement specification doc.

2. **System Design:** The requirement specifications from first phase are studied in this phase and system design is prepared. System Design helps in specifying hardware and system requirements and also helps in defining overall system architecture.

3. **Implementation:** With inputs from system design, the system is first developed in small programs called units, which are integrated in the next phase. Each unit is developed and tested for its functionality which is referred to as Unit Testing.

4. **Integration and Testing:** All the units developed in the implementation phase are integrated into a system after testing of each unit. Post integration the entire system is tested for any faults and failures.

5. **Deployment of system:** All the units developed in the implementation phase are integrated into a system after testing of each unit. Post integration the entire system is tested for any faults and failures.

6. **Maintenance:** All the units developed in the implementation phase are integrated into a system after testing of each unit. Post integration the entire system is tested for any faults and failures.

All these phases are cascaded to each other in which progress is seen as flowing steadily downwards (like a waterfall) through the phases. The next phase is started only after the defined set of goals are achieved for previous phase and it is signed off, so the name ”Waterfall Model”. In this model phases do not overlap.

Waterfall Model Pros & Cons

Advantage The advantage of waterfall development is that it allows for departmen-

talization and control. A schedule can be set with deadlines for each stage of development and a product can proceed through the development process model phases one by one. Development moves from concept, through design, implementation, testing, installation, troubleshooting, and ends up at operation and maintenance. Each phase of development proceeds in strict order.

Disadvantage The disadvantage of waterfall development is that it does not allow for much reflection or revision. Once an application is in the testing stage, it is very difficult to go back and change something that was not well-documented or thought upon in the concept stage.

4.2 Team Members, Roles & Responsibilities

1. **Manthan Jain (19ESKIT055)** - Developed Front-End components, Created login page, registration page, index page and Documentation.
2. **Nitin Jain (19ESKIT064)** - Design Back-End part, Make complain register portal, Make complain status.
3. **Nupur Mathur (19ESKIT065)** - Design Front-End components, Created categories Page, profile page and Documentation.
4. **Prasoon Khandelwal (19ESKIT069)** - Maintained all the data for the system. Created the database and also help in connecting database to the back-end as well as front-end.

Chapter 5
Centering System Testing

The designed system has been testing through following test parameters.

5.1 Functionality Testing

In testing the functionality of the web sites the following features were tested:

1. Links
   (a) Internal Links: All internal links of the website were checked by clicking each link individually and providing the appropriate input to reach the other links within.
   (b) External Links: Till now no external links are provided on our website but for future enhancement we will provide the links to the candidate's actual profile available online and link up with the elections updates online etc.
2. Forms
   (a) Error message for wrong input : Error messages have been displayed as and when we enter the wrong details (eg. Dates), and when we do not enter any details in the mandatory fields. For example: when we enter wrong password we get error message for acknowledging us that we have entered it wrong and when we do not enter the username and/or password we get the messages displaying the respective errors.
   (b) Optional and Mandatory fields : All the mandatory fields have been marked with a red asterisk (*) and apart from that there is a display of error messages when we do not enter the mandatory fields. For example: As the first name is a compulsory field in all our forms so when we do not enter that in our form and submit the form we get an error message asking for us to enter details in that particular field.

3. Database Testing is done on the database connectivity.

5.2 Performance Testing

Performance testing was conducted to evaluate the system's response time, throughput, and resource utilization under different load conditions. The goal was to ensure that the system performs efficiently and meets the required performance standards. Key performance metrics were measured, and the results were analyzed to identify any bottlenecks or areas for improvement.Any performance issues or bottlenecks were identified and addressed to optimize system performance.

5.3 Usability Testing

Usability testing was conducted to assess the system's ease of use, efficiency, and user satisfaction. Representative users and customers were involved in the testing process, where they performed specific tasks and provided feedback on their experience. The test results were analyzed to identify usability issues and make necessary improvements to enhance the overall user experience.

5.4 Test Planning:

Test objectives were defined, including functional testing, performance testing, and usability testing.Test scenarios and test cases were created based on the system requirements and specifications. Test data and test environments were prepared.

5.5 Test Execution Outcome:

The functional testing phase resulted in the identification and resolution of several defects and issues. Performance testing provided insights into the system's scalability and performance under different load conditions. Usability testing revealed areas for improvement to enhance the system's user experience. Test execution helped validate the system's functionality, performance, and usability, ensuring it meets the required quality standards.

5.6 Test Reporting and Documentation:

Test execution results, including defects, test logs, and performance metrics, were documented in detail. Test reports were generated to provide a comprehensive overview of the testing process, outcomes, and recommendations. All relevant documentation and artifacts were organized and stored for future reference.

Chapter 6

Test Execution Summary

Execution Test Summary Report is an overall view of Testing Process from start to end. Test Plan comes at the starting of project while Test Summary Report comes at the end of the testing process. This report is given to the client for his understanding purpose. The Test Summary Report contents are :

1. Test Case ID generated
2. Total number of resources consumed
3. Passed Test Cases
4. Failed Test Cases
5. Status of Test Cases

S.No	Test Case Id	Test Case Description	Test Case Status	No. of Resources Consumed
1	6	87837	787	2
2	7	78	5415	4
3	545	778	7507	3
4	545	18744	7560	2
5	88	788	6344	5

Table 6.1: Table to test captions and labels

Chapter 7

Project Screen Shots

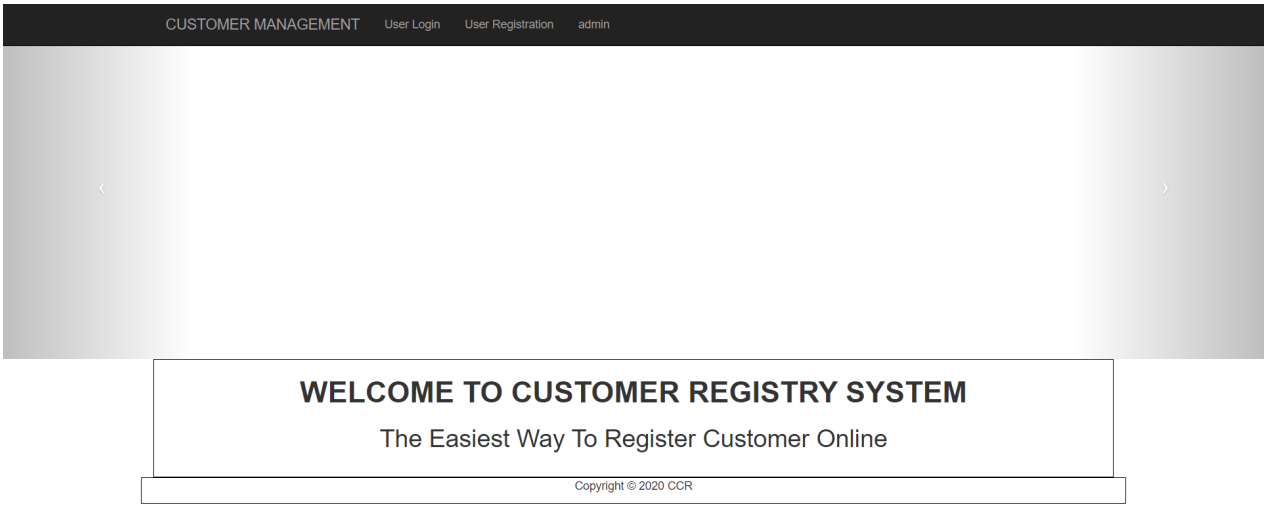

Figure 7.1: Landing page

Figure 7.2: User Registration

Figure 7.3: Sign in

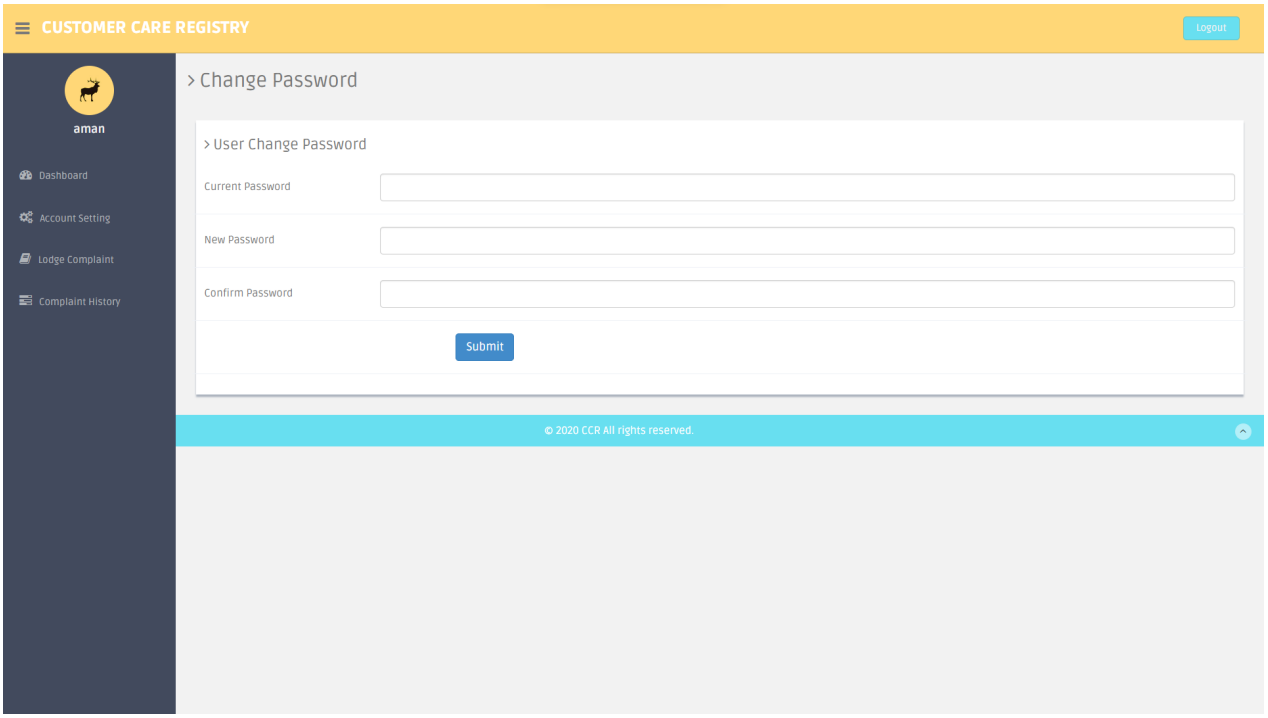

Figure 7.4: User Dashboard

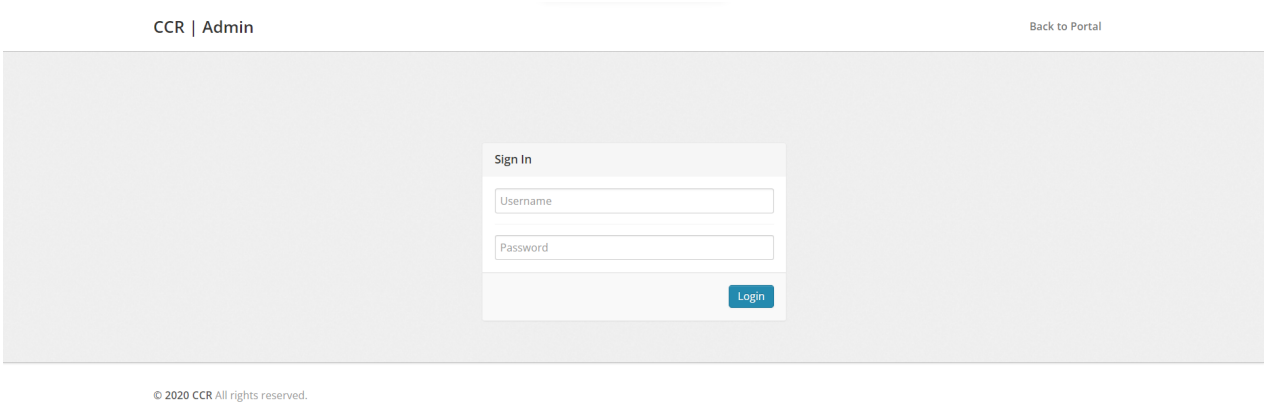

Figure 7.5: Admin Login

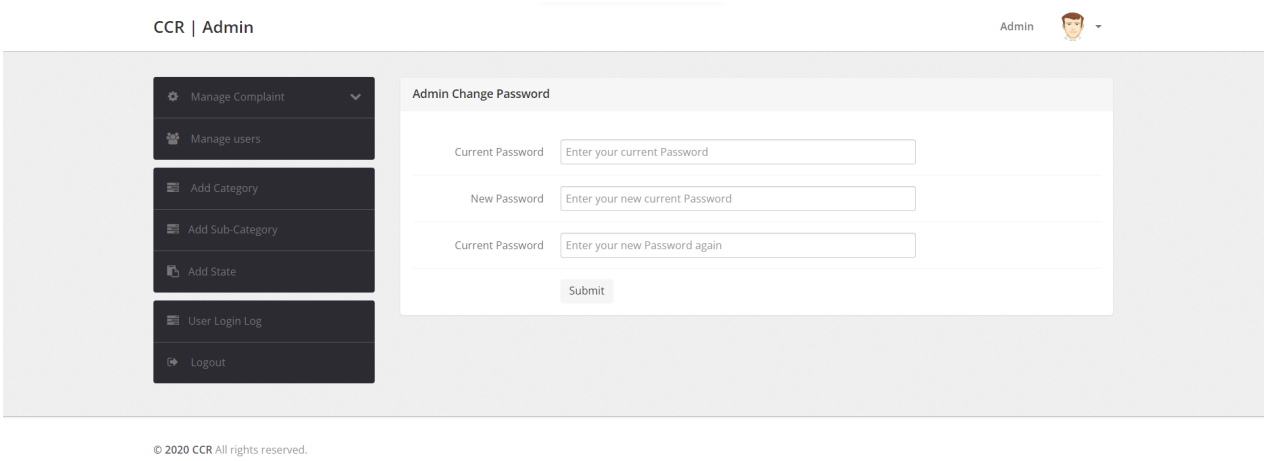

Figure 7.6: Admin Interface

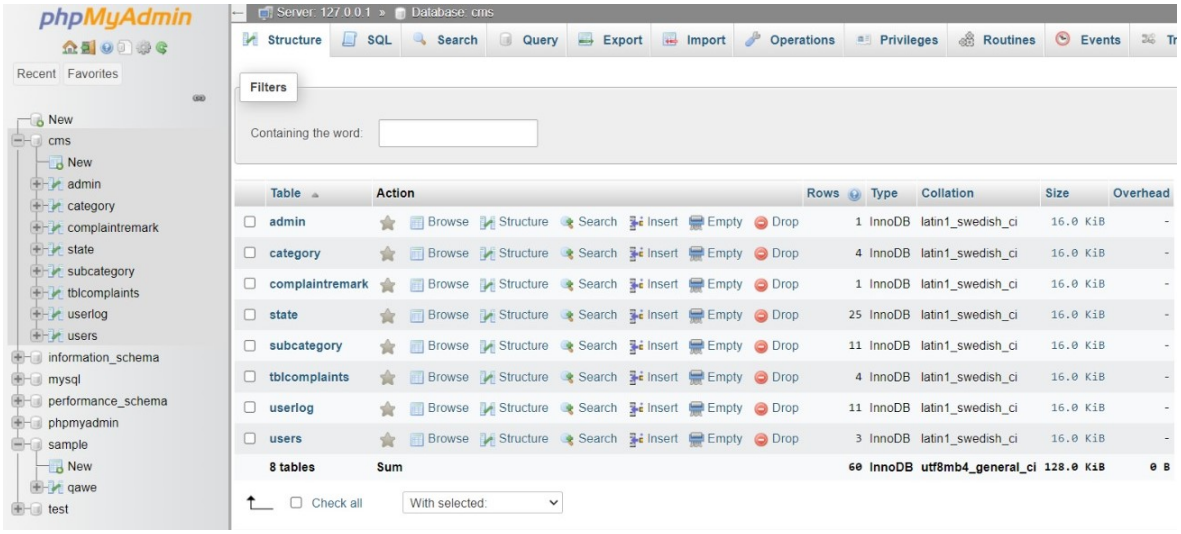

Figure 7.7: Database Tables

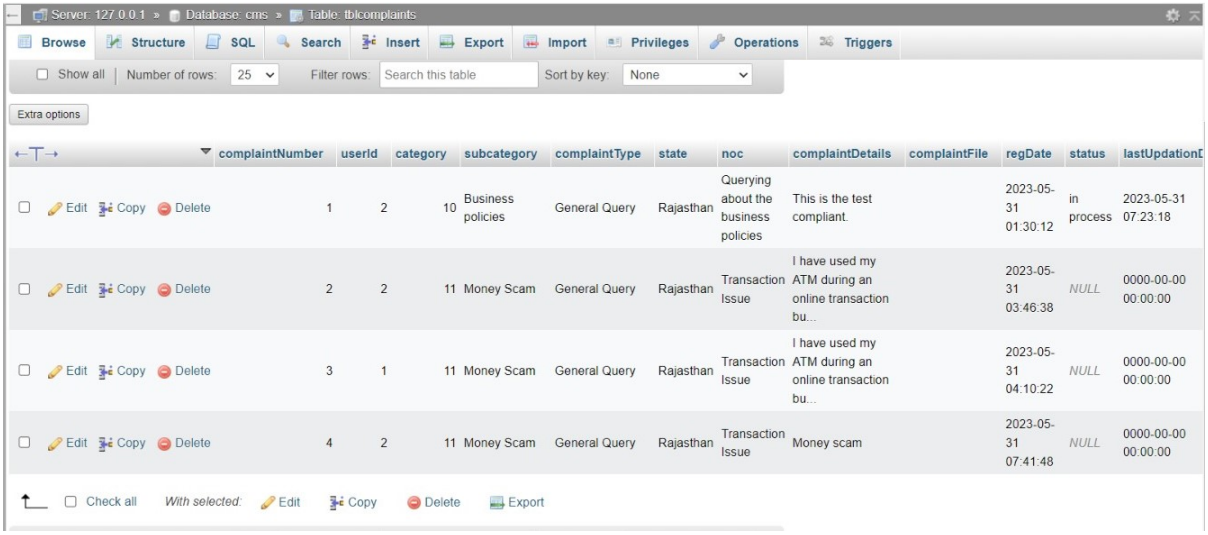

Figure 7.8: Complaints in Database

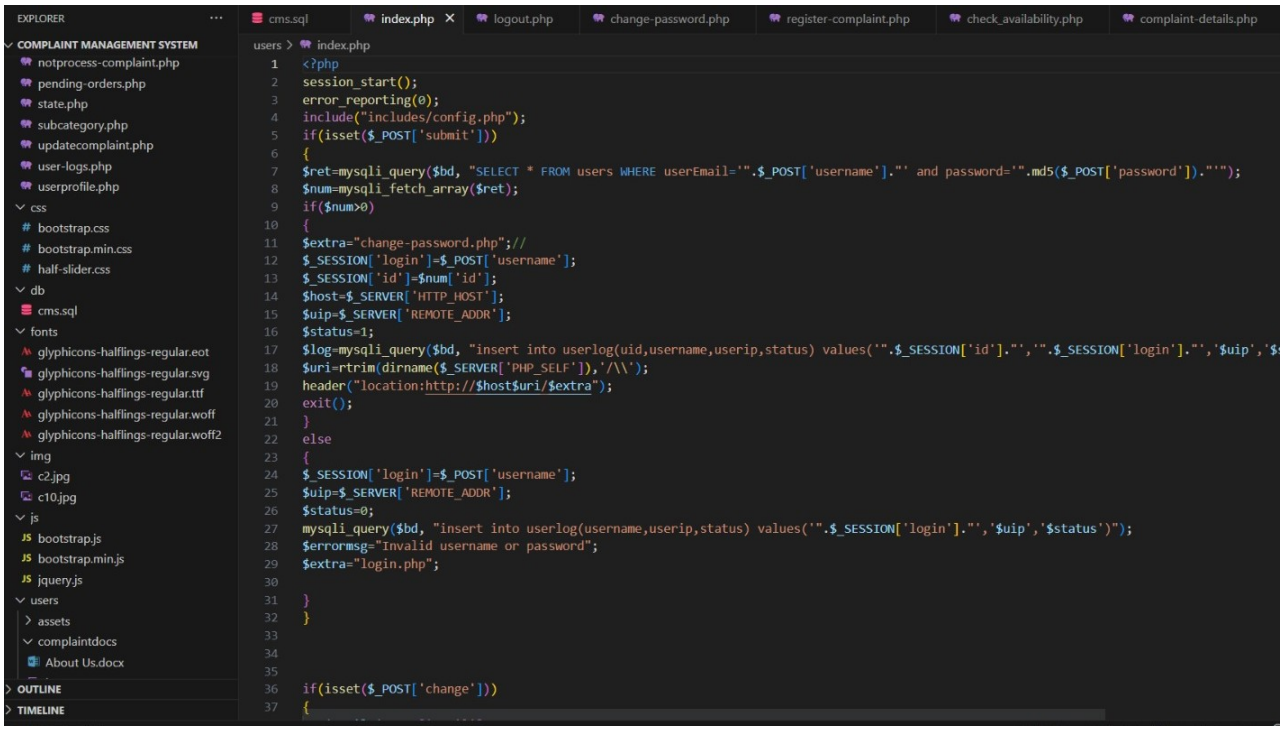

Figure 7.9: Back-end Code

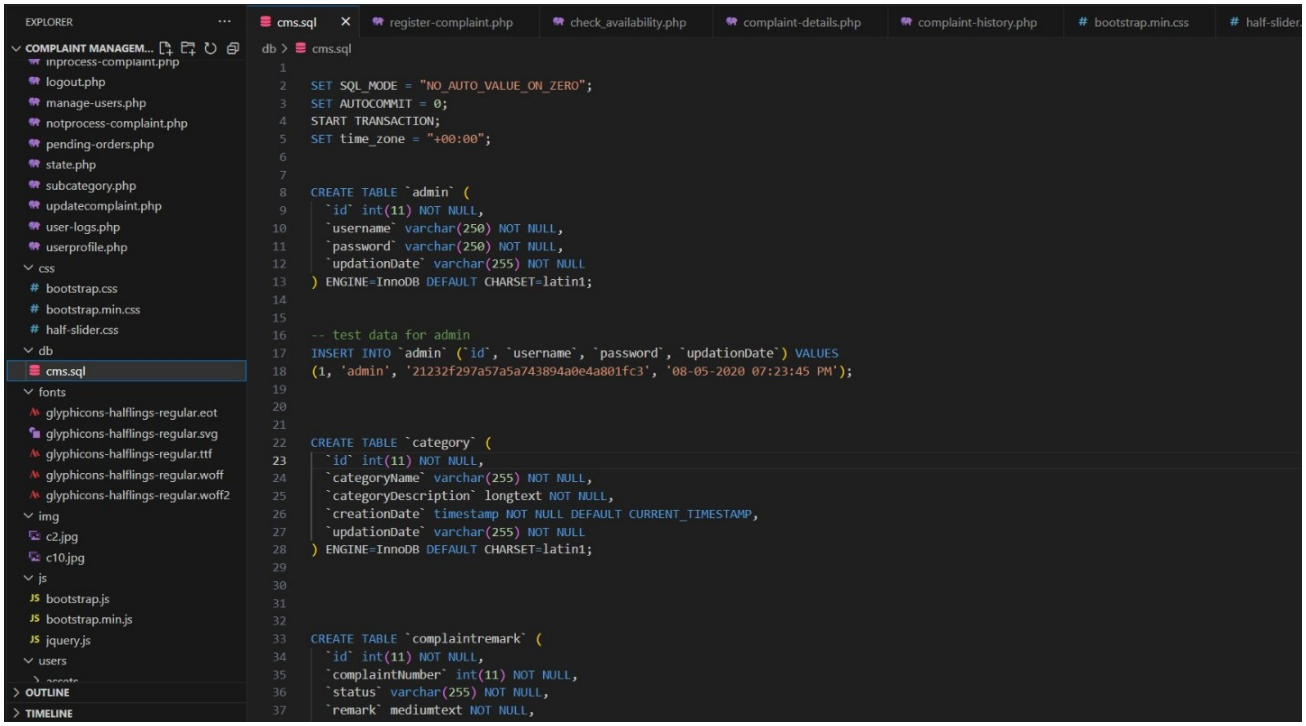

Figure 7.10: Database Code

Chapter 8
Project Summary and Conclusions

8.1 Conclusion

In conclusion, the Customer Care Registry system represents a significant advancement in improving customer care operations and enhancing customer satisfaction. Throughout the development and implementation process, careful consideration was given to various aspects, including system interfaces, constraints, operations, and user characteristics. The system has been designed to streamline customer care processes, optimize query management, and facilitate efficient resolution of customer issues.

The system's user interfaces cater to both customer care representatives and customers, ensuring a user-friendly experience. Representatives can easily access customer information, track queries, and manage service requests, while customers can conveniently submit queries, receive updates, and provide feedback. These interfaces have been developed with the aim of enhancing communication and providing seamless interactions between customers and representatives.

Performance testing has been conducted to evaluate the system's response time, throughput, and resource utilization under different load conditions. This testing ensures that the system performs efficiently and meets the required performance standards. By identifying potential bottlenecks and areas for improvement, the system can be optimized to deliver a smooth and responsive user experience.

Usability testing has also played a crucial role in the development process, assessing the system's ease of use, efficiency, and user satisfaction. By involving representative users and customers, valuable feedback has been gathered to enhance the system's usability and overall user experience. Usability issues have been identified and addressed, resulting in a more intuitive and user-friendly interface.

The successful implementation of the Customer Care Registry system is ex-

pected to have a positive impact on customer care operations. The system's ability to effectively manage customer queries, retrieve customer information, and analyze feedback will enable representatives to provide more efficient and personalized support. Customers will benefit from improved responsiveness, better query tracking, and enhanced communication channels.

In conclusion, the Customer Care Registry system represents a significant step forward in customer care management. It offers a robust and efficient solution that optimizes operations, improves customer satisfaction, and strengthens the overall customer experience. With its well-designed interfaces, comprehensive functionality, and performance-driven approach, the system is poised to make a positive and lasting impact on customer care services.

Chapter 9
Future Scope

The Customer Care Registry system has the potential for further enhancements and expansions to meet evolving customer needs and technological advancements. Here are some future scope areas for the system:

- AI-Powered Customer Support: Implementing artificial intelligence (AI) technologies such as chatbots and virtual assistants can enhance customer support. AI algorithms can analyze customer queries, provide instant responses, and offer personalized recommendations. This would automate routine interactions and provide faster resolutions, improving overall customer satisfaction.
- Integration with CRM Systems: Integrating the Customer Care Registry system with Customer Relationship Management (CRM) systems can provide a comprehensive view of customer data. This integration would enable representatives to access customer purchase history, preferences, and previous interactions, allowing for more personalized and efficient support.
- Omni-channel Support: Expanding the system to provide omni-channel support would enable customers to interact with representatives through various channels such as phone calls, emails, live chat, social media, and mobile applications. This ensures consistent support across multiple touchpoints, providing a seamless customer experience.
- Advanced Analytics and Reporting: Enhancing the system's analytical capabilities can provide valuable insights into customer behavior, trends, and service performance. Advanced reporting features can help identify areas for improvement, measure key performance indicators, and optimize customer care processes.
- Integration with IoT Devices: With the rise of the Internet of Things (IoT),

integrating the system with IoT devices can enable proactive customer support. For example, connecting the system with smart home devices can allow representatives to receive notifications about device issues or provide remote troubleshooting, enhancing convenience for customers.

- Voice Recognition and Natural Language Processing: Implementing voice recognition and natural language processing technologies can improve customer interactions. Voice recognition can facilitate hands-free communication, while natural language processing can enable the system to understand and respond to customer queries more accurately.

- Self-Service Portals: Developing self-service portals for customers can empower them to find solutions to common queries and perform basic tasks on their own. Providing comprehensive knowledge bases, FAQs, and tutorials would reduce the dependency on customer care representatives and offer customers the flexibility to resolve issues at their convenience.

- Integration with Feedback and Survey Systems: Integrating the system with feedback and survey systems would enable the collection of customer feedback at various touchpoints. This data can be used to gauge customer satisfaction, identify areas for improvement, and make data-driven decisions to enhance the quality of customer care services.

- In conclusion, the future scope of the Customer Care Registry system involves leveraging emerging technologies, integrating with other systems, and expanding its capabilities to provide enhanced customer support, personalized experiences, and efficient operations. By incorporating these future developments, the system can continue to adapt to changing customer expectations and deliver exceptional customer care services.

References

[1] *https://www.geeksforgeeks.org/*

[2] *https://www.ibm.com/topics/customer-care*