E-Service Center

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DECLARATION

We hereby declare that the project entitled **"E-Service Center"** submitted for the Distributed Database Management System Lab project works in the semester, Fall 2022 in Computer Science and Engineering in the faculty of Computer Science and Engineering of Bangladesh University of Business and Technology (BUBT), is our original work and that it contains no material which has been accepted for the award to the candidates of any other degree or diploma, except where due reference is made in the next of the project to the best of our knowledge, it contains no materials previously published or written by any other person except where due reference is made in this project.

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APPROVAL

This project **"E-Service center"** report submitted by Nahid Rabbi, Humaira Gulshan Putul, Fariea Tabassum Mow and Shornali Akhi Shorna students of Department of Computer Science and Engineering, Bangladesh University of Business and Technology (BUBT), under the supervision of Fazle Rahat, Lecturer, Department of Computer Science and Engineering has been accepted as satisfactory for the partial requirements for the degree of Bachelor of Science Engineering in Computer Science and Engineering.

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ACKNOWLEDGEMENTS

We would like to express our gratitude to our honorable project supervisor Fazle Rahat. Whose help, simulating suggestions and encouragement helped us in all the time. Without his support it wouldn’t be possible to complete this project. We are very thankful to him for providing us all the facility that was required.

ABSTRACT

E-service center is the website developed for providing services of electronic products. This application is very helpful for people. It replaces the physical work into an online system. It reduces the cost of time and paperwork. E-Service Center enables services like repairing computers, TV, fridge etc. Customers can request for the services. Admin can assign work to the technician, issue assets and add technicians. And technicians also have their own profiles where they update their information. In this way our developed system works.

LIST OF FIGURES

TABLE OF CONTENTS

CHAPTER 01: INTRODUCTION

1.1 Introduction:

This project is developed for providing services of electronic products. E-Service Center enables services like repairing computers, TV, fridge etc. There are three users of this system, Registered Users, Administrator and Technician. Registered users can log in to the system and make a request for servicing. There is a facility for password change. Administrator must be an authorised user. He will handle the users request, assign technicians and update the assets. The assets can be any parts of a product which will be required for the servicing. Technicians will diagnose the problem of a product and give proper servicing.

1.2 Objectives:

- To minimize the hassle of physically visiting.
- To reduce the cost of time.
- To shrink the use of paper work.
- To find the repairment solution of different electrical products.

1.3 Motivation:

The service center gives services to the customer. A Service center is designed to be a single location where customers can access the services provided by the service center. Sometimes it becomes a great hassle to visit the center and discuss the issue of the product. After servicing the customers need to visit the center again to have the product back and every information about customers and product issues are noted down manually. Therefore we are developing this E-Service Center. By using this website customers can request for service from home, also they can check the status of the service.

1.4 Development Tools:

We used php for the logical works and also used HTML and CSS for front-end and backend development. We also used JavaScript and bootstraps classes.

Technology:

- XAMPP Server
- Visual Studio Code

Language:

- PHP
- HTML
- CSS
- Java Script

XAMPP is one of the widely used cross-platform web servers, which helps developers to create and test their programs on a local webserver. It was developed by Apache Friends.

phpMyAdmin is a free software tool written in PHP, intended to handle the administration of MySQL over the Web. phpMyAdmin supports a wide range of operations on MySQL and MariaDB. Frequently used operations (managing databases, tables, columns, relations, indexes, users, permissions, etc) can be performed via the user interface, while you still have the ability to directly execute any SQL statement.

HTML, in full hypertext markup language, a formatting system for displaying material retrieved over the Internet. Each retrieval unit is known as a Web page (from World Wide Web), and such pages frequently contain hypertext links that allow related pages to be retrieved.

CSS is the language for describing the presentation of Web pages, including colors, layout, and fonts. It allows one to adapt the presentation to different types of devices, such as large screens, small screens, or printers. CSS is independent of HTML and can be used with any XML-based markup language.

JavaScript is a text-based programming language used both on the client-side and server-side that allows us to make web pages interactive. Where HTML and CSS are languages that give structure and style to web pages, JavaScript gives web pages interactive elements that engage a user.

PHP is a recursive acronym for "PHP: Hypertext Preprocessor". PHP is a server side scripting language that is embedded in HTML. It is used to manage dynamic content, databases, session tracking, even build entire e-commerce sites

1.5 Proposed System:

The E-service center system provides quality service to the end user.
In our proposed system there are three actors. They are:

Admin: admin adds the technician, accepts the request service, assigns the request service to the technician and issues the assets. Admin updates the service status and also updates the assets quantity. The administrator will know the details of service, assets and daily income.

Technician: technician has their own profile where they can change their password and view their assigned work by searching their id.

Customer: customer can request for service and check the status of the service. The users can register and login to the system. They can also change their password.

1.6 Purpose of the system:

This project aims to develop online service management for customers with the goal that is easy to request for different electrical products repairements. With the help of this website anyone can have a service from home just by requesting for the service that he/she wants. This site helps the customers with an easy approach anyone can have a great experience by using this system.

CHAPTER 02 : EXISTING SYSTEM AND ANALYSIS

2.1 Existing System:

When we consider the existing system, we noticed that in the existing system services are provided manually. Customers have to visit physically and they have to discuss their product issues, after servicing to have the product back, the customers must have visited the service center. In the existing system all the information about product issues along with the customer is noted down manually.

2.2 Problem Analysis:

To ensure that who are our customers first we consider the registration module for the requester registration. After confirming the registration the registered user can easily log in to the system by giving their email and password which they have given while their registration. We also authorized the system for the admin panel and the technician site, they also have to provide their login information before accessing the system.

CHAPTER 3: METHODOLOGY

3.1 Model Architecture:

The system architecture of our E-Service Center is given below:

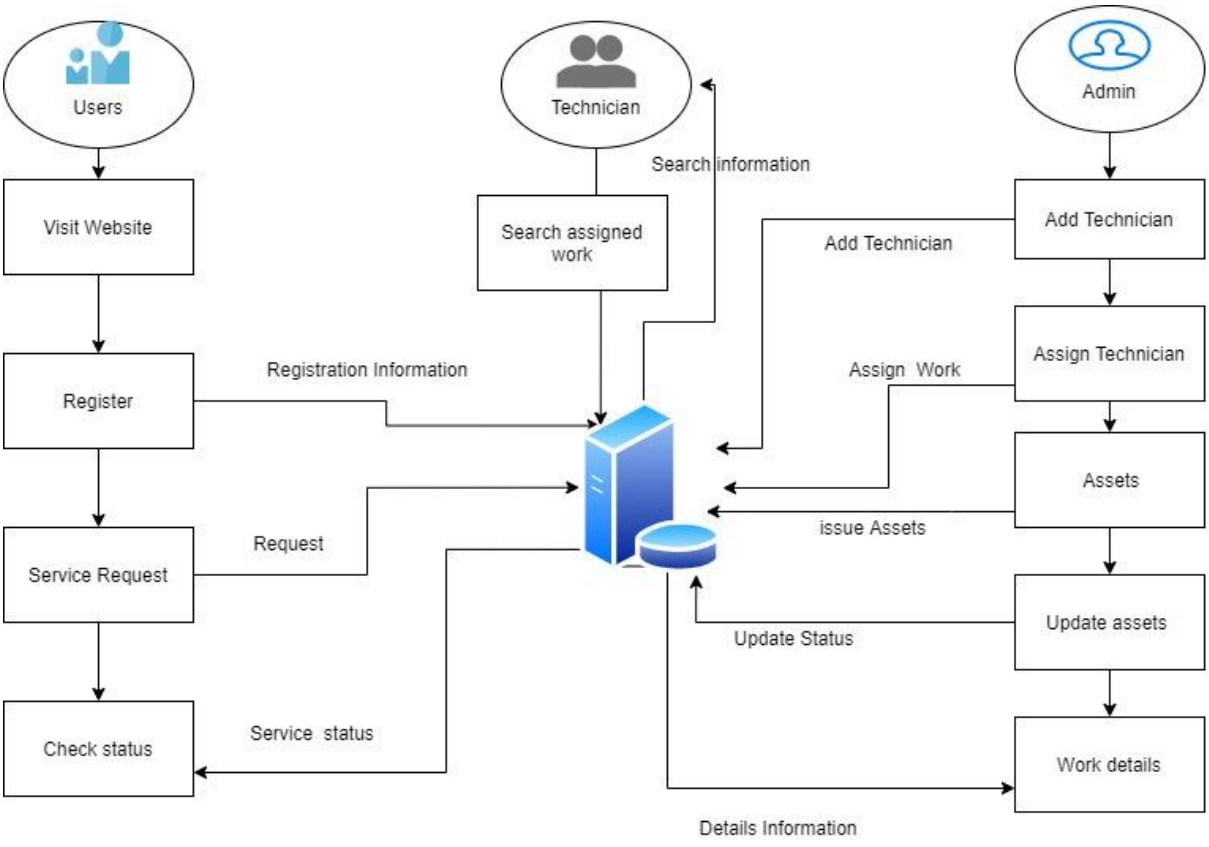


Figure 1.1: Model Architecture of ESC

3.2 ER Diagram:

The entity relationship diagram (ERD) of our E-Service Center is given below:

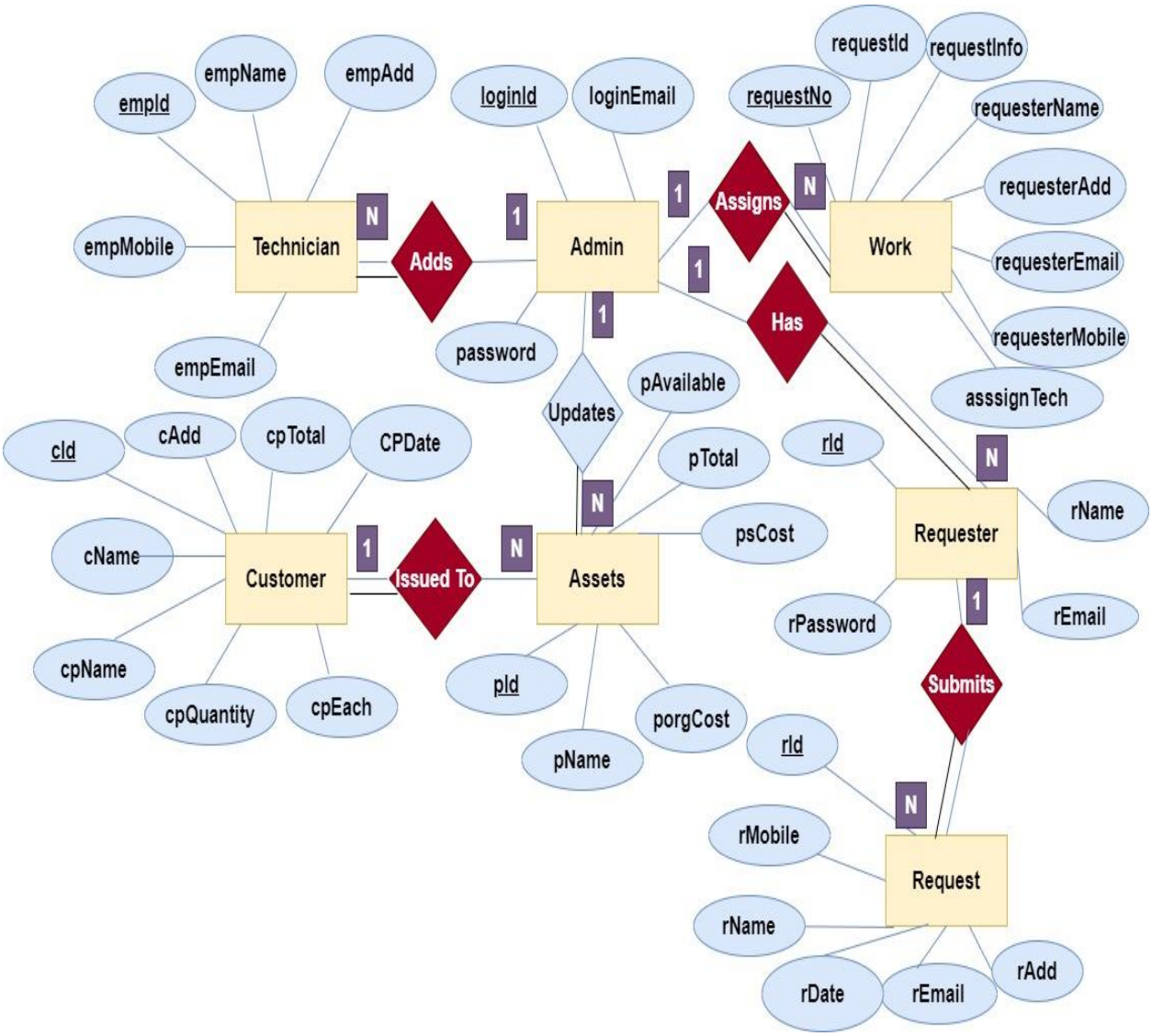


Figure 1.2: ER Diagram of ESC

3.3 Mapping:

Data mapping of our E-Service Center is given below:

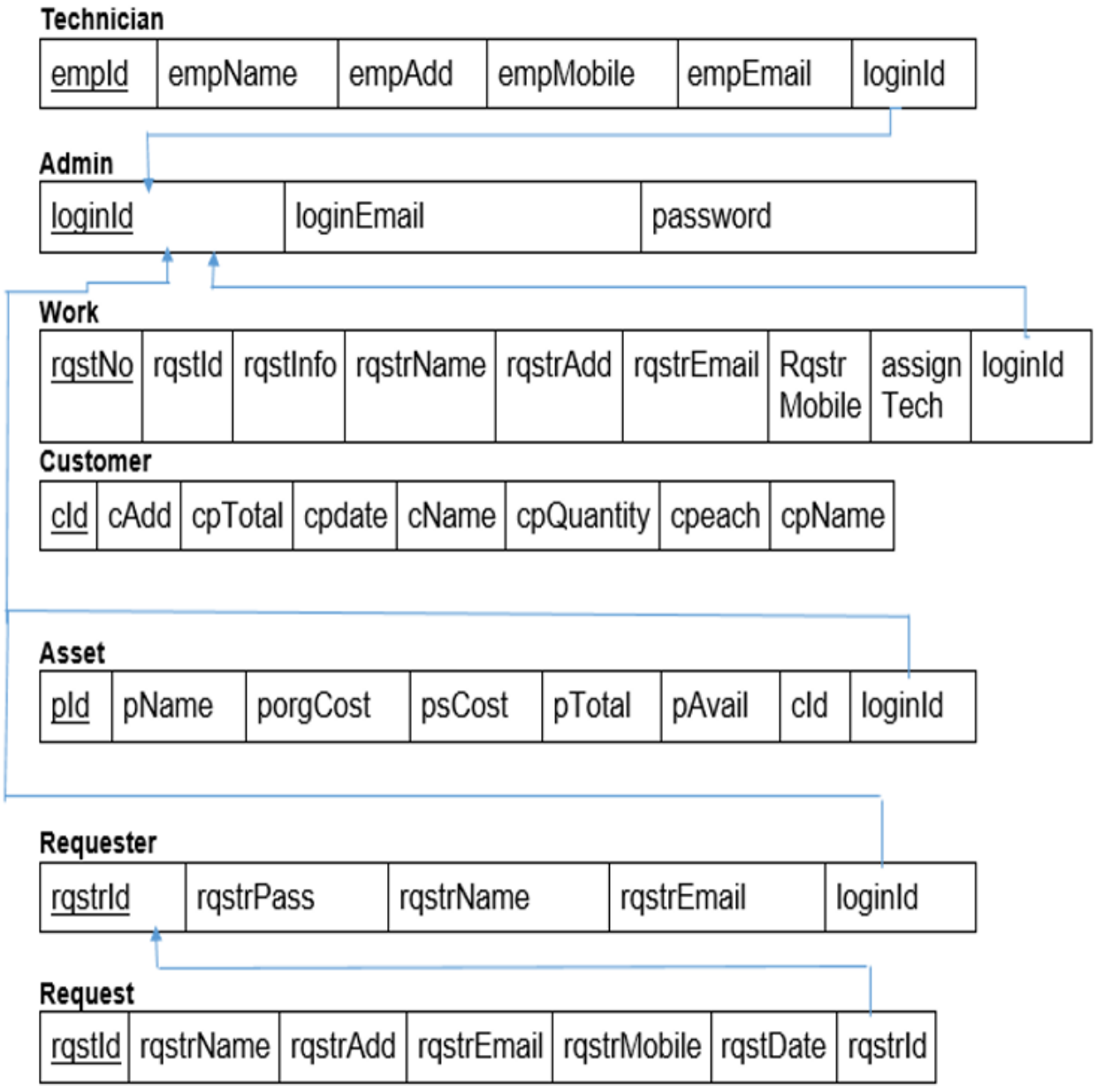
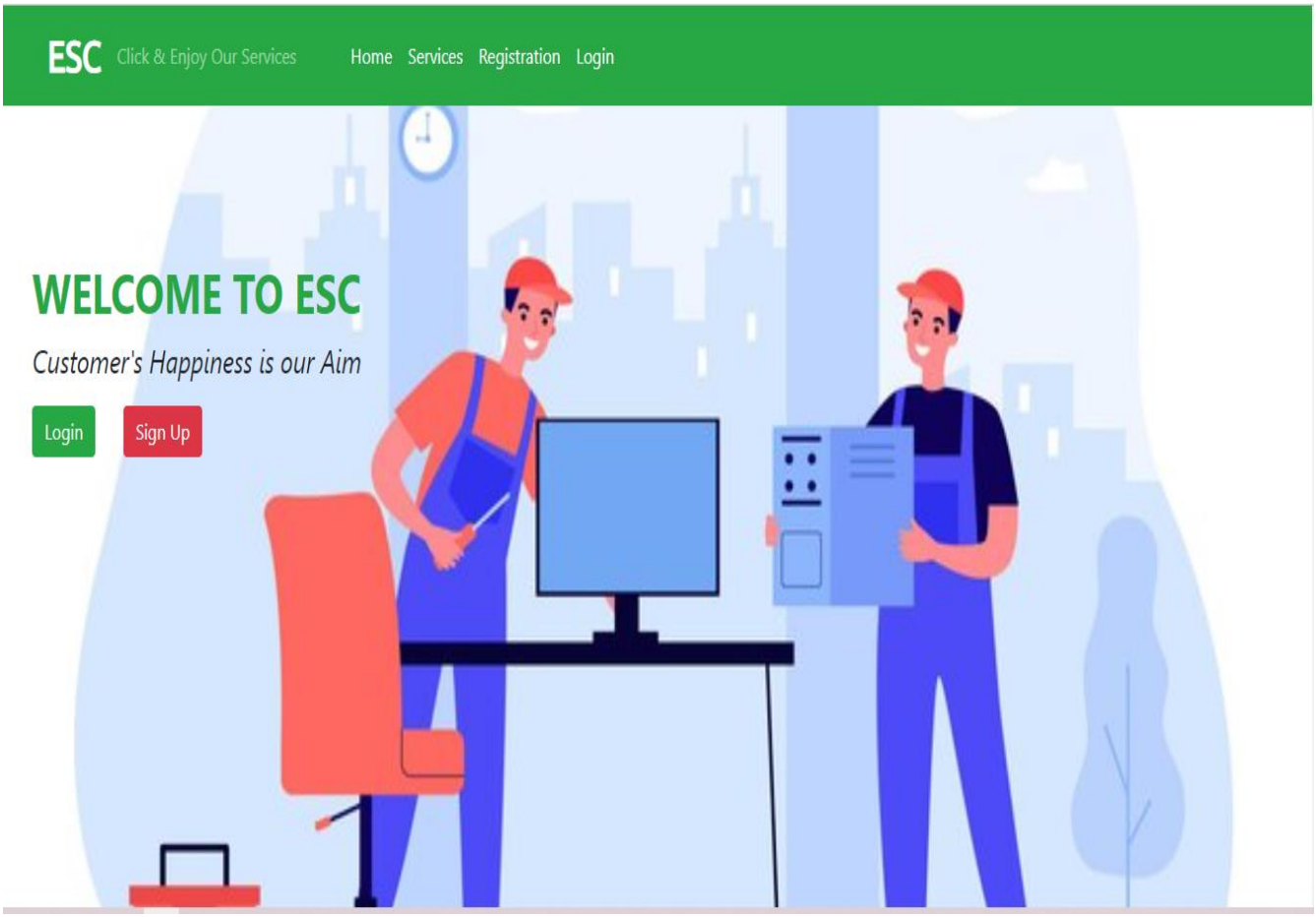


Figure 1.3: Data mapping of ESC

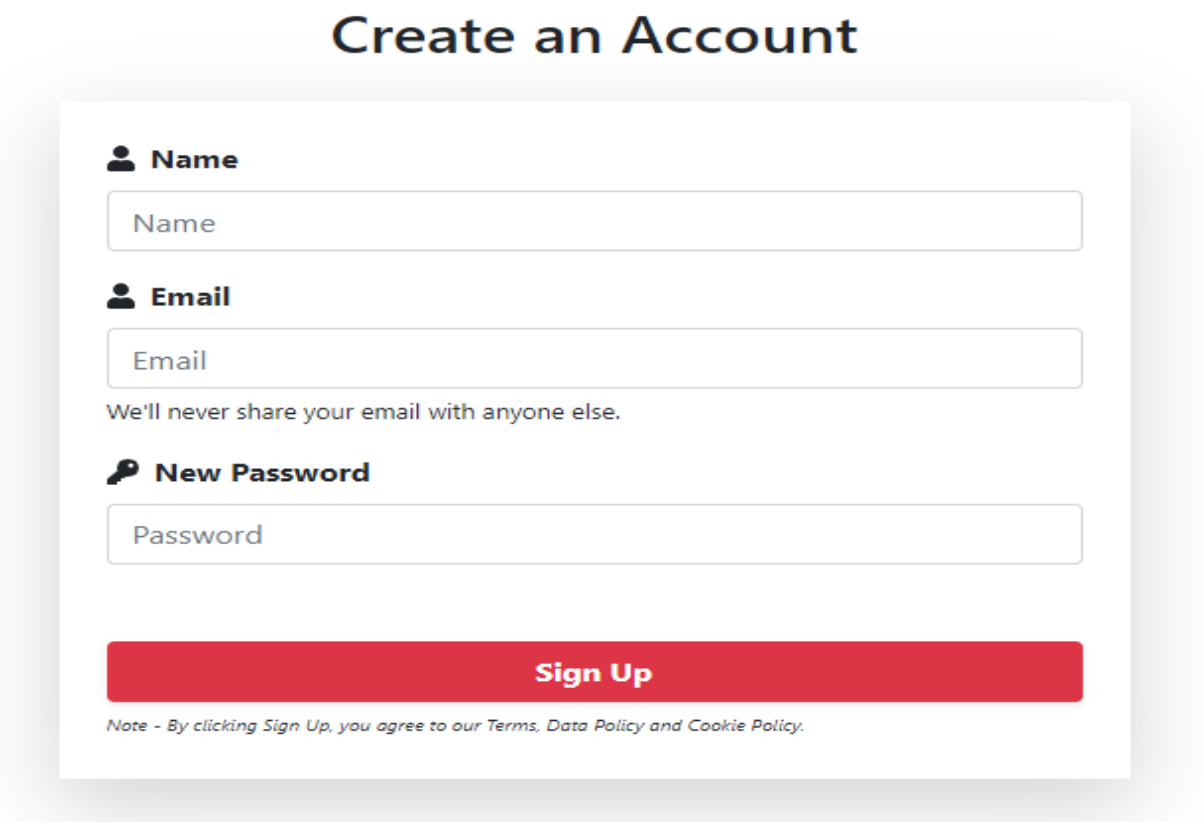
CHAPTER 4: USER MANUAL AND TESTING

4.1 User Manual:

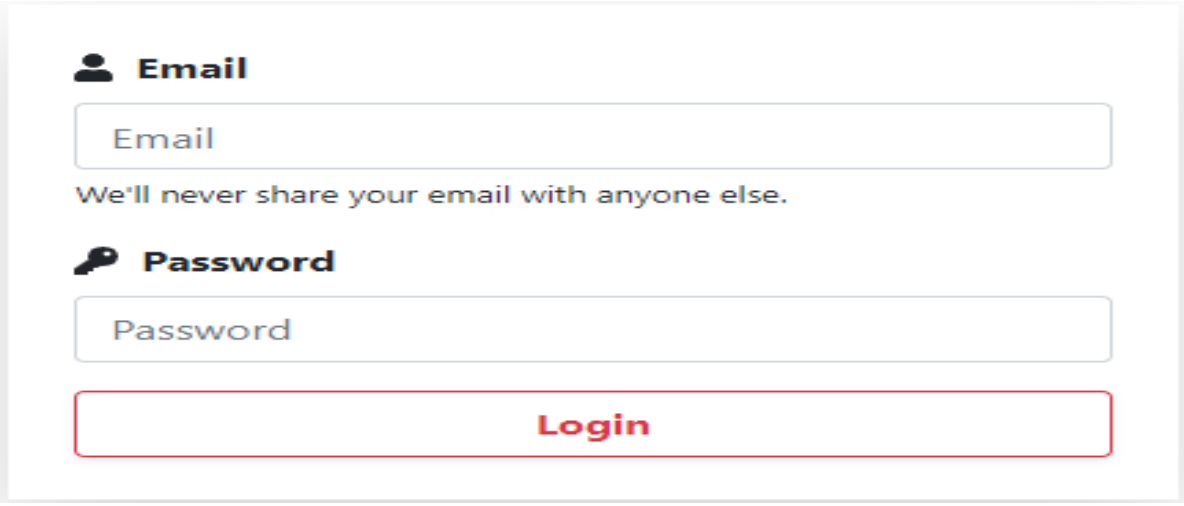
4.1.1 Home Page: This page contains the overall view of our system.



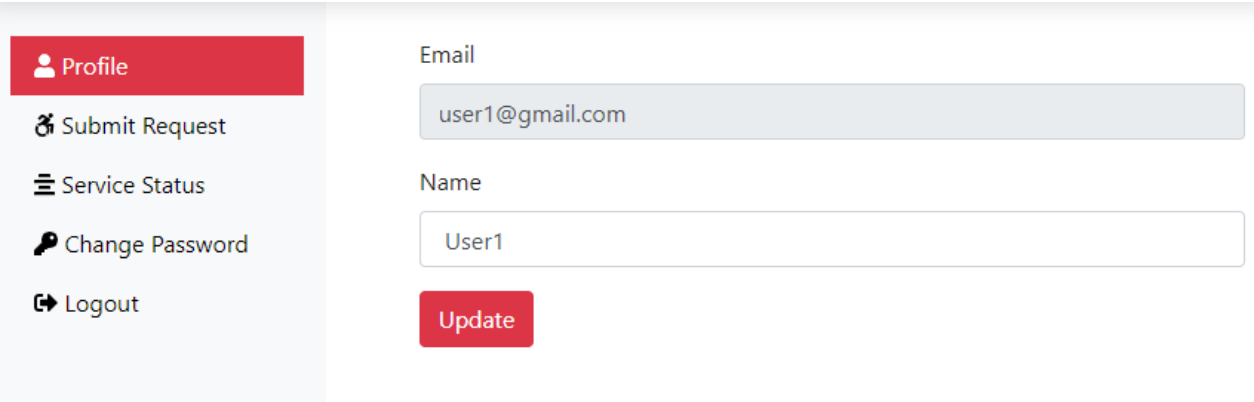
4.1.2 User Registration: The first step to access our system for a customer.



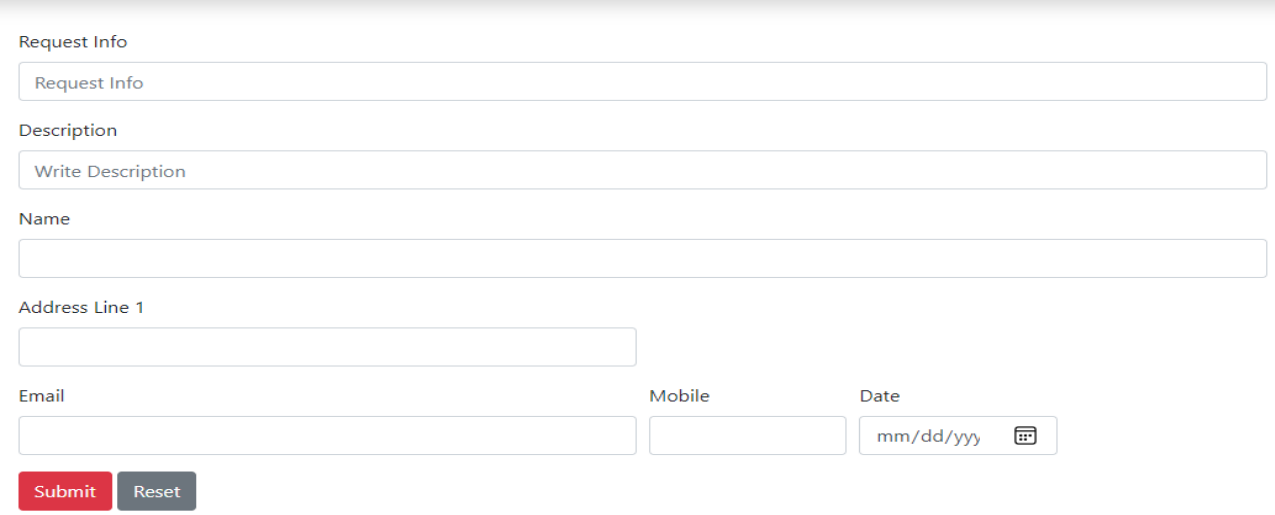
4.1.3 User Login: Validation step before login the system as a customer.



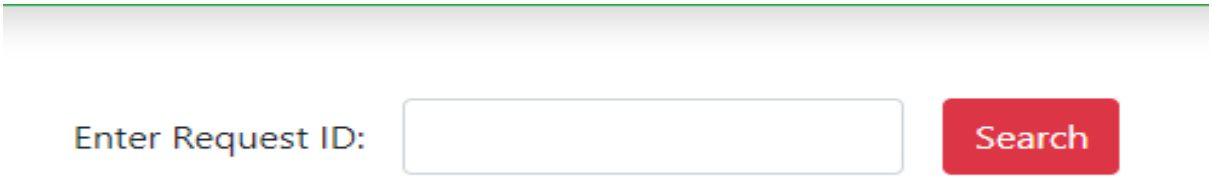
4.1.4 User Profile: This page contains few options for a specific user such as updating his information,requesting for service and checking the service status.



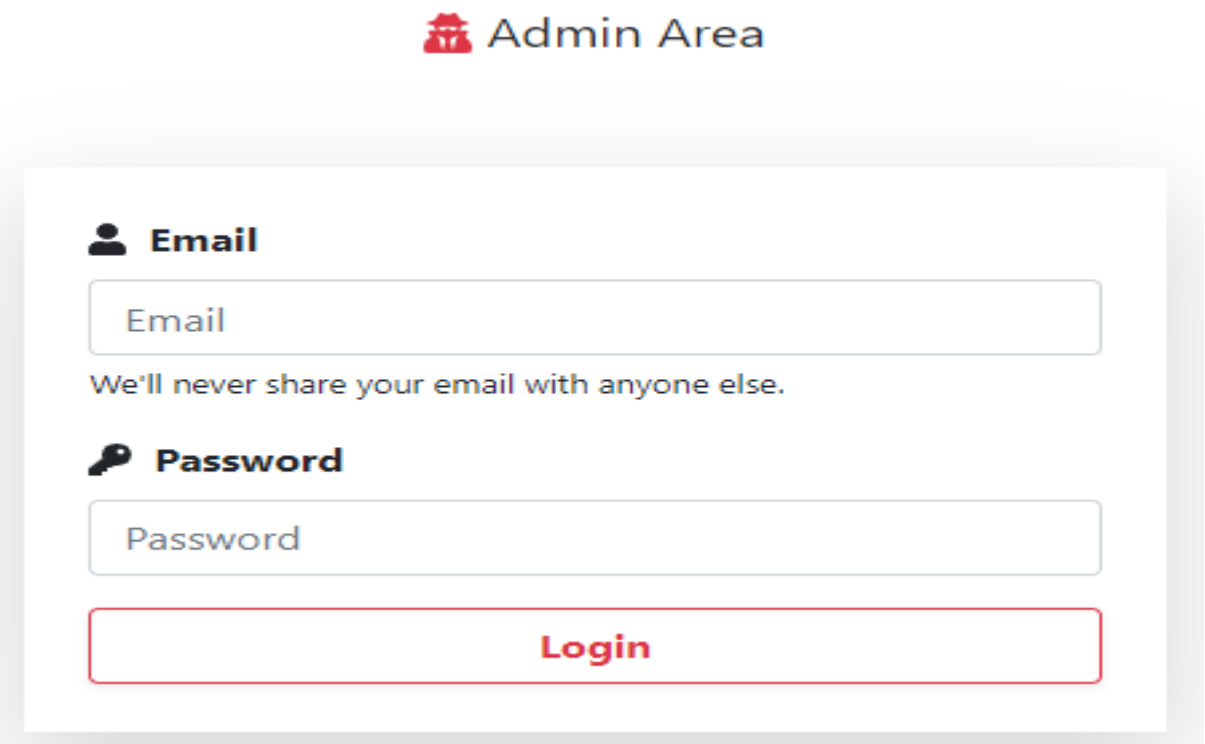
4.1.5 Submit Request: Request submitting page for a registered user.



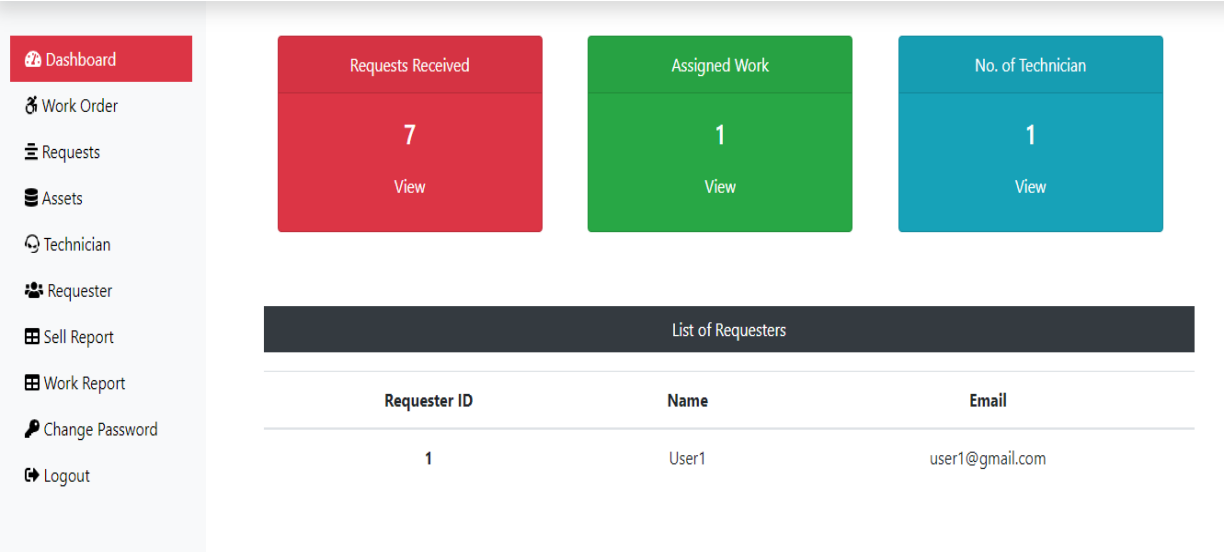
4.1.6 Search Status: By using this option a registered user can easily know his service status by searching through his request id.



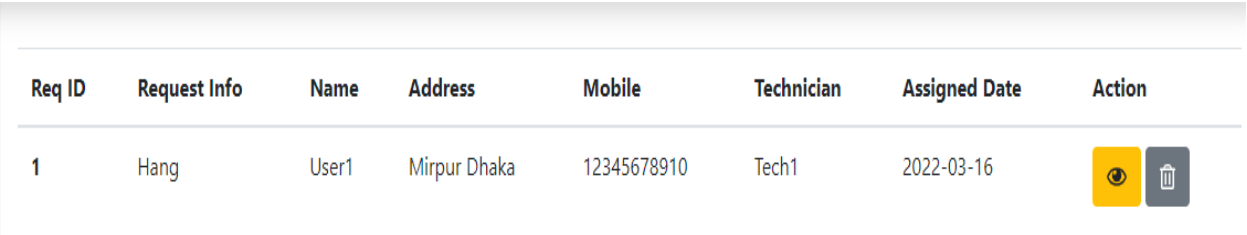
4.1.7 Admin Login: This page negotiates the validation before doing any changes in the admin section.



4.1.8 Admin Profile : This page contains a proper reflection of a validated admin.

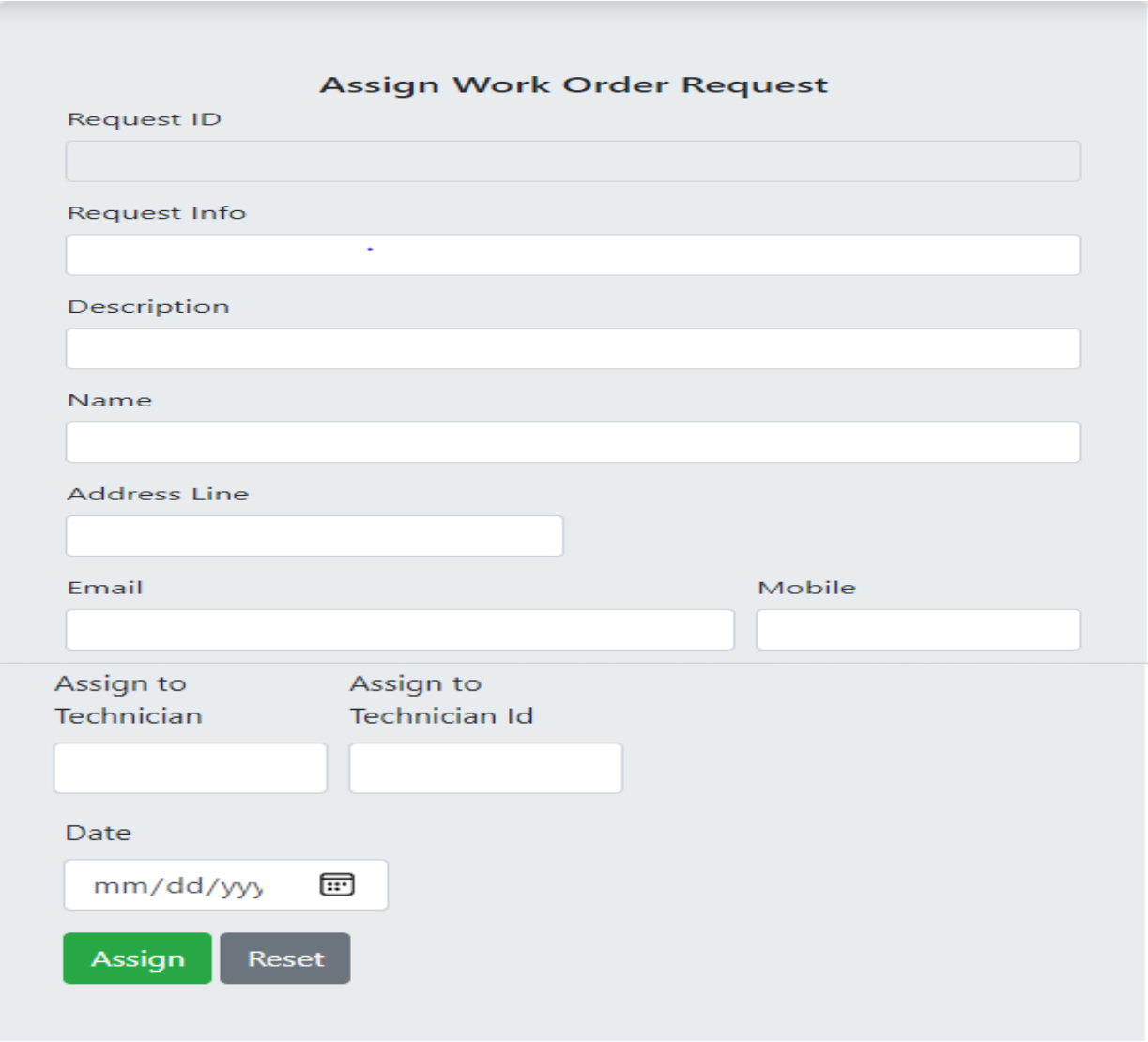


4.1.9 Work Order: This page illustrates the detailed information of an assigned work.

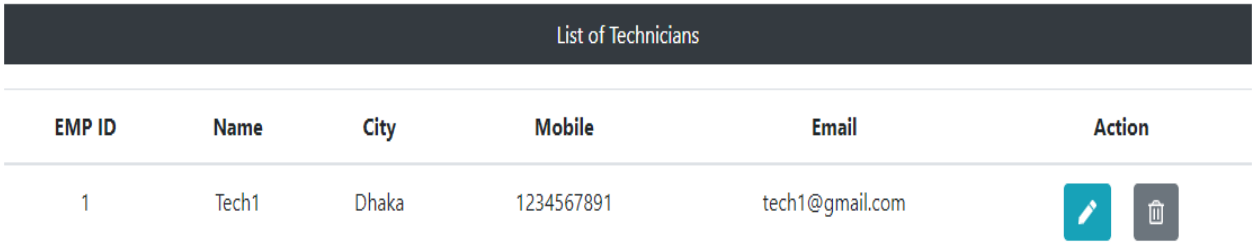


Req ID	Request Info	Name	Address	Mobile	Technician	Assigned Date	Action
1	Hang	User1	Mirpur Dhaka	12345678910	Tech1	2022-03-16	

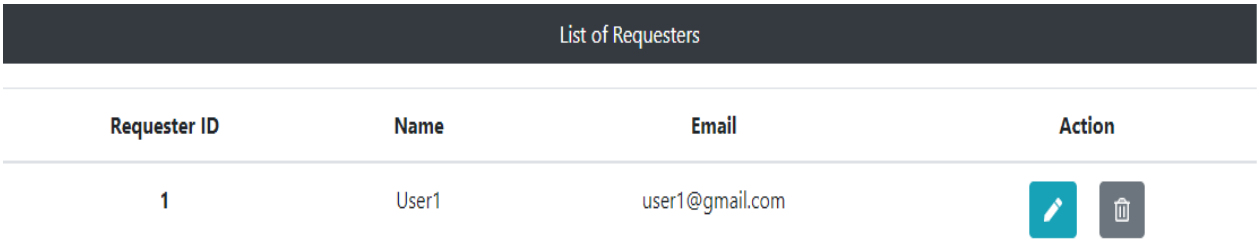
4.1.10 Assign Request : By using this page admin can assign the requested work.



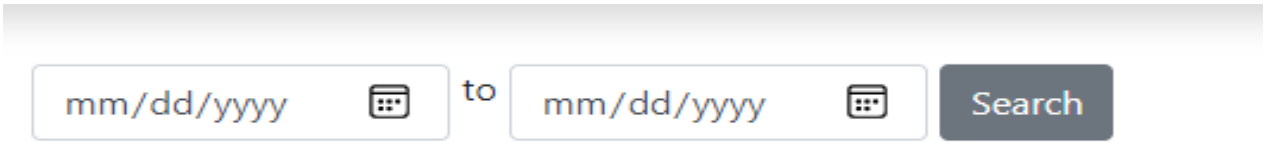
4.1.11 Technician: This page contains detailed information about technicians of the service center.



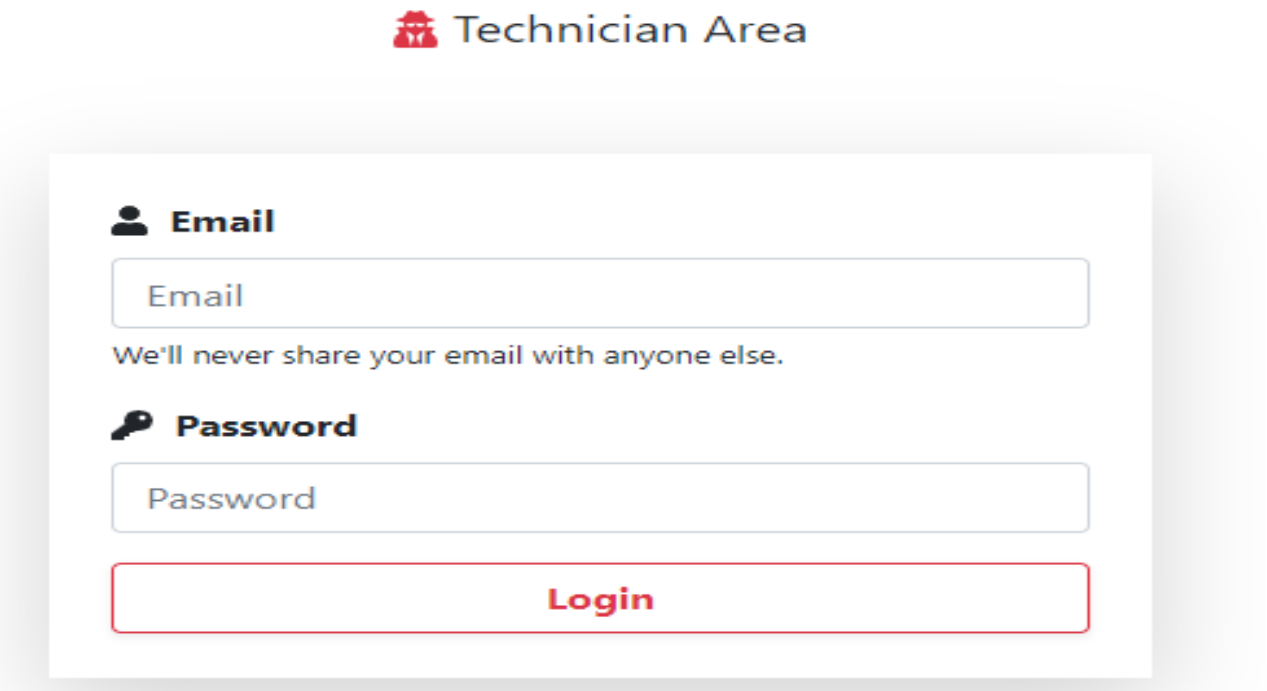
4.1.12 Requester: Admin can view all information of the users by having this page.



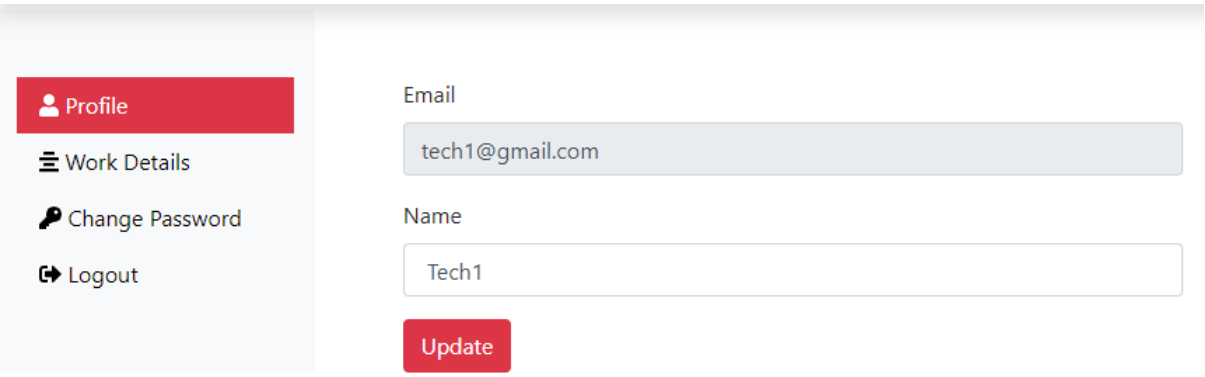
4.1.13 Sell/Work Report: Two different pages having the same design illustrates the sell report and work report also.



4.1.14 Technician Login : Since Technician is an authorized user he has to login before accessing the system.



4.1.15 Technician Profile : This page contains the technician profile which consists of different facilities like updating his personal information and checking work details.



4.2 Testing:

Testing is the process of executing the program with the intention of finding out errors. During testing ,the program to be tested is executed with a set of set cases and the output of the programs for the test case is evaluated to determine if the program is performing as it is expected to be.
The success of testing in revealing errors in a program depends critically on the test cases. In software systems the use of testing is not limited to the testing phase. The results of testing are used later on during maintenance also.

In our project we tested two different levels of testing.
1.Unit testing
2.Integration testing.

4.2.1 Unit testing:

The 1st level of testing is called unit testing. In this,different modules are tested against the specifications produced during design for the modules. Unit testing is essential for the code produced during the coding phase, and hence the goal is to test internal logic of the modules.

4.2.2 Integration testing:

The next level of testing is called integration testing.In this,many tested modules are combined into subsystems, which are then tested. The goal here is to see if the modules can be integrated properly ,the emphasis being on testing interfaces between modules. This testing actively can be considered as testing design,and hence the emphasis on testing modules interactions.

CHAPTER 5: REQUIREMENT ANALYSIS

Requirements analysis is a very critical process that enables the success of a system or software project to be assessed. Requirements are generally split into two types: Functional and Non- Functional.

5.1 Functional Requirements:

These are the requirements that the end user specifically demands as basic facilities that the system should offer. All these functionalities need to be necessarily incorporated into the system as a part of the contract. These are represented or stated in the form of input to be given to the system, the operation performed and the output expected. They are basically the requirements stated by the user which one can see directly in the final product, unlike the non-functional requirements.

Our system consists of many functional requirements. Our first functional requirement is a login system as an admin, technician or as a user. Admin and technician can login to the system, the users can register and after registration, users can log in to the system. Admin will assign the technician for the servicing. Users will be able to see the status of the service.

5.2 Non-functional Requirements

These are basically the quality constraints that the system must satisfy according to the project contract. The priority or extent to which these factors are implemented varies from one project to another. They are also called non-behavioral requirements.

Recoverability

A good system must recover easily from any kind of issue.

System Availability

The system should be a designed in such a way that the system is available 24*7 and it should not undergo any downtime due to the excessive use.

Security

The system will be secured from the outside attacks and unauthorized access. The system should be protected from all other outside premises.The main security concern is for users' accounts hence proper login mechanism should be used to avoid hacking.

Reliability

The factors needed to establish the software expected reliability are

1. The user inputs should be valid and within the given range.
2. Normal termination of program.

5.3 System Requirements:

This system requires some hardware, software, and source.

H/W Requirements: To complete this project, we needed some hardware like laptop, computer.

S/W Requirements: The tools and technologies used in this application are Visual Studio Code, Xampp .

CHAPTER 6: CONCLUSION AND FUTURE WORKS

6.1 Conclusion:

E-Service Center is developed to replace the manual process of Servicing Center. In the manual process of the service center, the paper document is less secure compared to an online system. Manually managing is a very tough and time-consuming process. By using this system customers can service their product very easily and comfortably.

This website provides a friendly graphical user interface. It gives appropriate access to the authorized users depending on their permissions. Updating information is also easier. System security and reliability are the striking features of this website.

6.2 Future Works:

Our website is built for the convenience of the users. We tried our level best to make this website convenient, secure and efficient for the clients. It was not possible to accomplish all planned functionalities for the lack of time. The functionalities to be implemented in the future are given below:

- Providing asset facilities for all users.
- Offering online live chat support to every single customer
- Adding customers feedback options to see customers review
- Tracking queries and complaints

References:

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