

E- Channeling System

CO 328 - Software Engineering Project Report



Group 13 - E/16/039, E/16/127, E/16/087

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1. INTRODUCTION

An online doctor appointment booking system can prove to be a boon to doctors and patients alike. For those among us who have seen the waiting room of busy doctors, it will draw memories of patients and their attendants crowding around the receptionist. It was not necessarily first-in and first-out. Many times it was based on who was able to throw their weight around and seize the opportunity to stride in to meet the doctor even before the earlier patient had walked out. In some cases, tokens were given out that represented our number in the queue.

The wait could be quite long and if the patient was not quick to mark her presence when called out it could mean a further wait. Patients being sick, there was always a high probability of the attendants also falling sick as everyone was crowding around each other. This evolved to a telephone-based appointment booking, mainly managed on paper. It was hardly flexible. No-shows were very common. With the advent of Personal Computers, appointments were maintained on the desktop. This certainly brought more orders, however, appointments still required the patient to phone the receptionist to book the appointment. Widespread use of mobile phones and the internet has driven the need for doctors to offer the facility of online appointment booking – a far superior option for both doctors and patients. The aim of this project is to create a system that handles doctor-patient management system that will doctors on their works and will also help the patients to book doctor appointments and view medical progress.

2. OBJECTIVE

The main objective of this project is to develop software that covers all therapists of management and operation of clinics. It enables healthcare providers to improve operational effectiveness, reduce cost, reduce medical errors, reduce time consummation and enhance the delivery of quality of care.

3. REQUIREMENT ANALYSIS

3.1 Methodology Development

The waterfall model has been used.

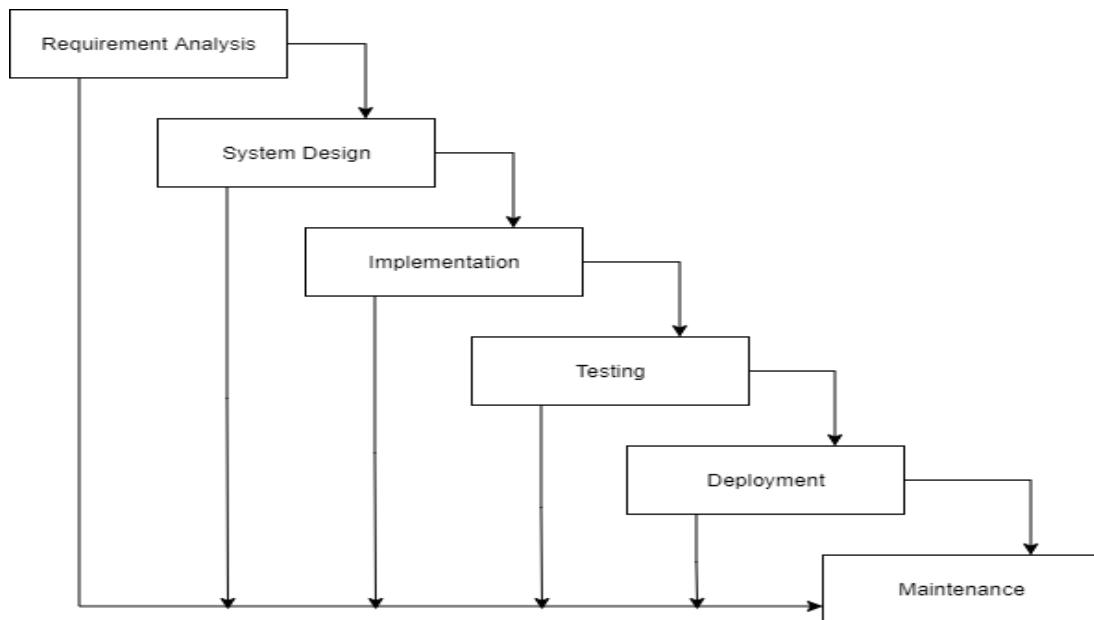


Figure 01 - waterfall model

3.2 System Analysis

It is a process of collecting and interpreting facts, identifying the problems, and decomposition of a system into its components. System analysis is conducted for the purpose of studying a system or its parts in order to identify its objectives. It is a

problem-solving technique that improves the system and ensures that all the components of the system work efficiently to accomplish their purpose. The objective of the system analysis activity is to develop structured system specifications for the proposed system. The structured system specification should describe what the proposed system would do; independent of the technology, which will be used to implement these requirements. The structured system specification will be used to implement these requirements. The essential model may itself consist of multiple models, modeling different aspects of the system. The data flow diagrams may model the data and their relationships and the state transition diagram may model the time-dependent behavior of the system.

3.3 UML Activity Diagram

This E- Channeling system involved three actors,

1. Doctor
 2. Administrator
 3. Patient
- Use cases for the Actors are as follows
 - Doctor
 - Create Appointment
 - Check Patient Details
 - Add description
 - View his/her profile
 - Administrator
 - Manage doctors
 - Manage Patients
 - Manage Appointment
 - View feedbacks
 - Patient
 - Check Doctors
 - View profile
 - Check Appointment

■ Make feedback

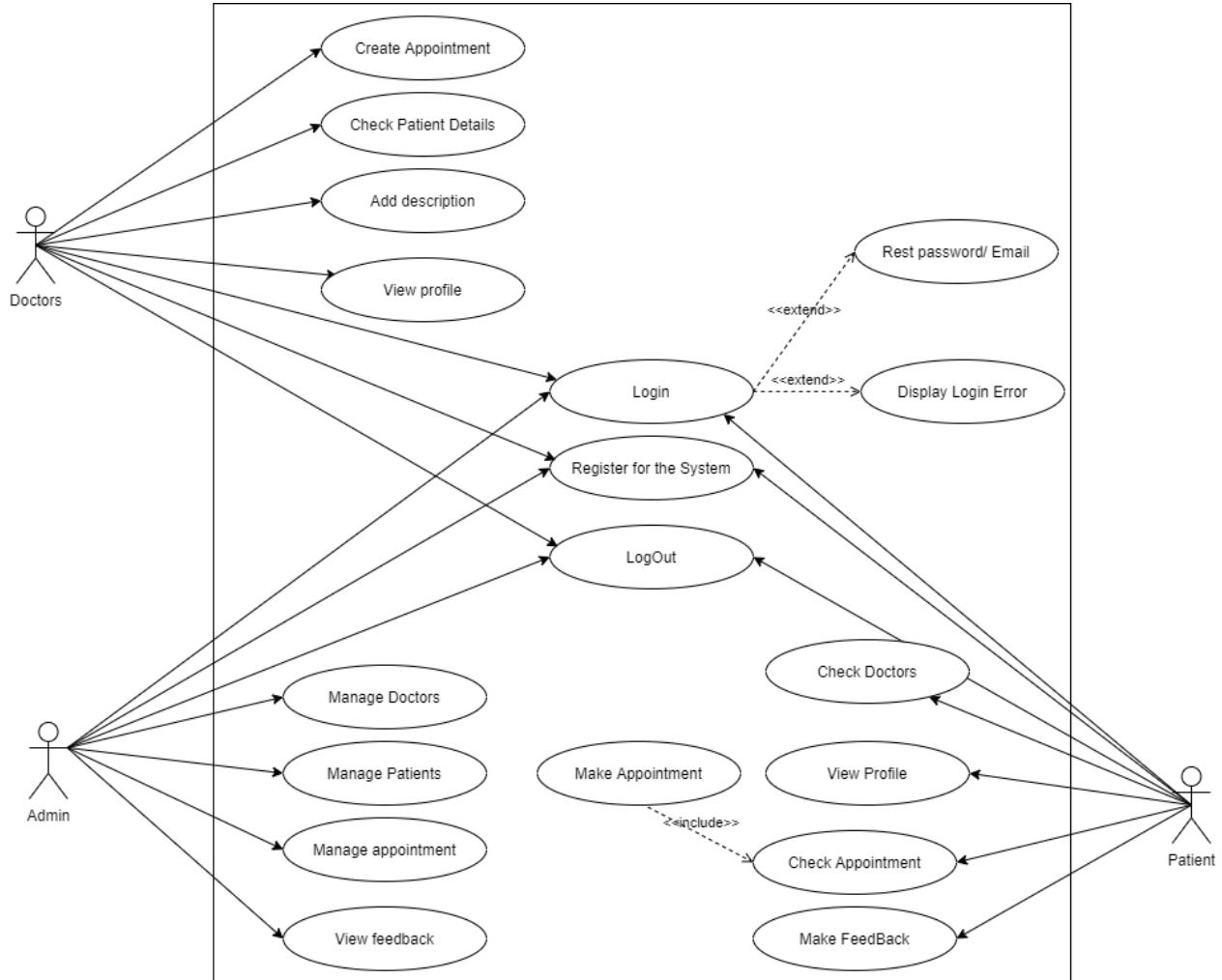


Figure 02 - User case diagram

3.4 Flow Chart

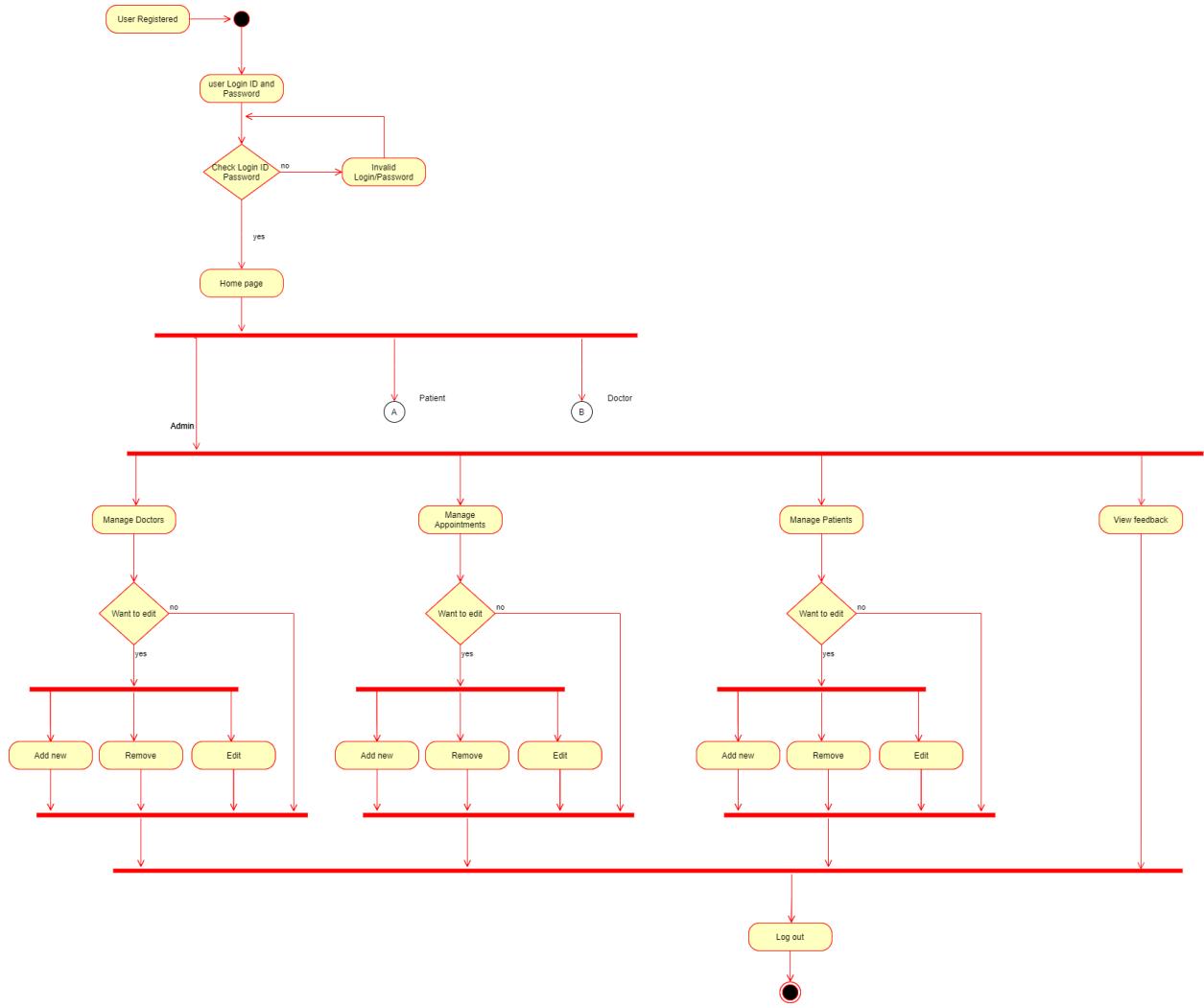


Figure 03 - flow chart part1

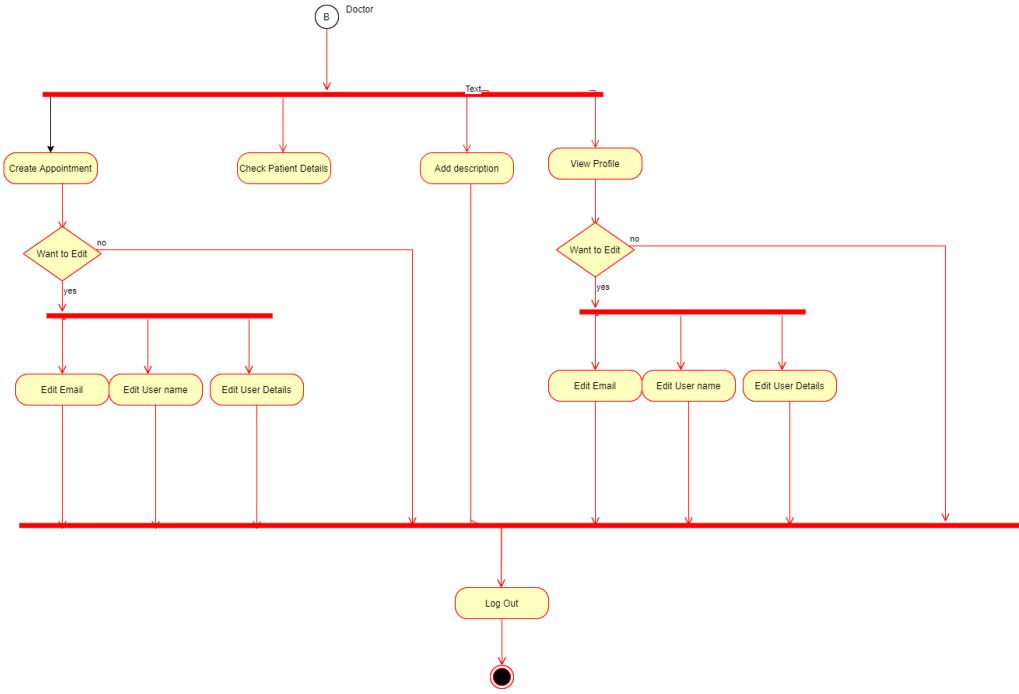
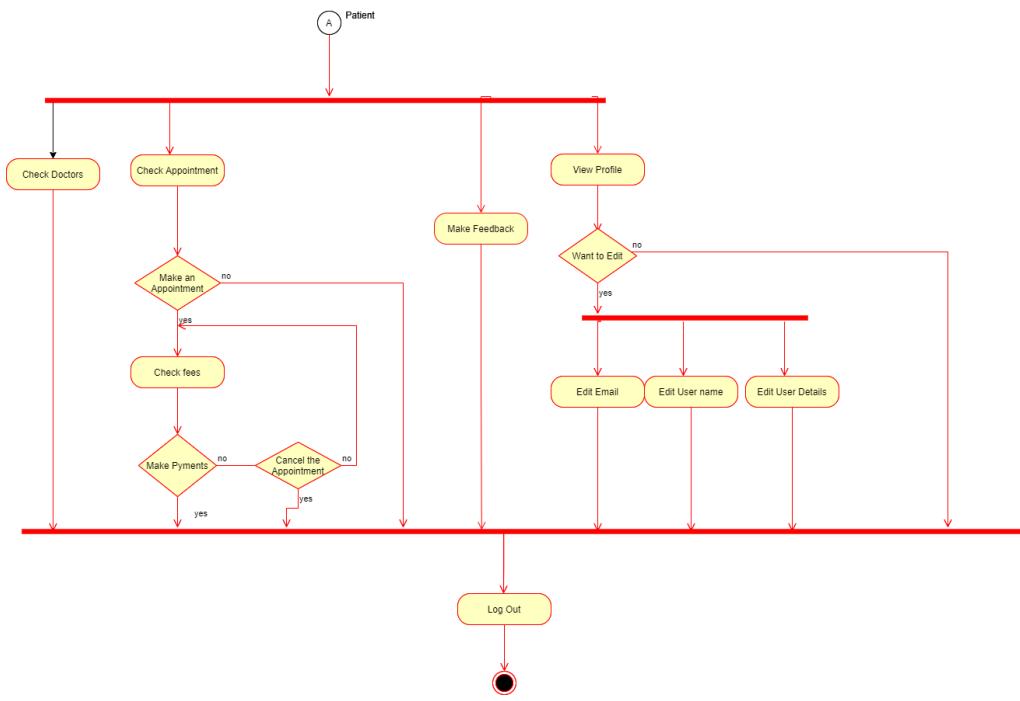


Figure 04 - flow chart part2

3.5 ER Diagram

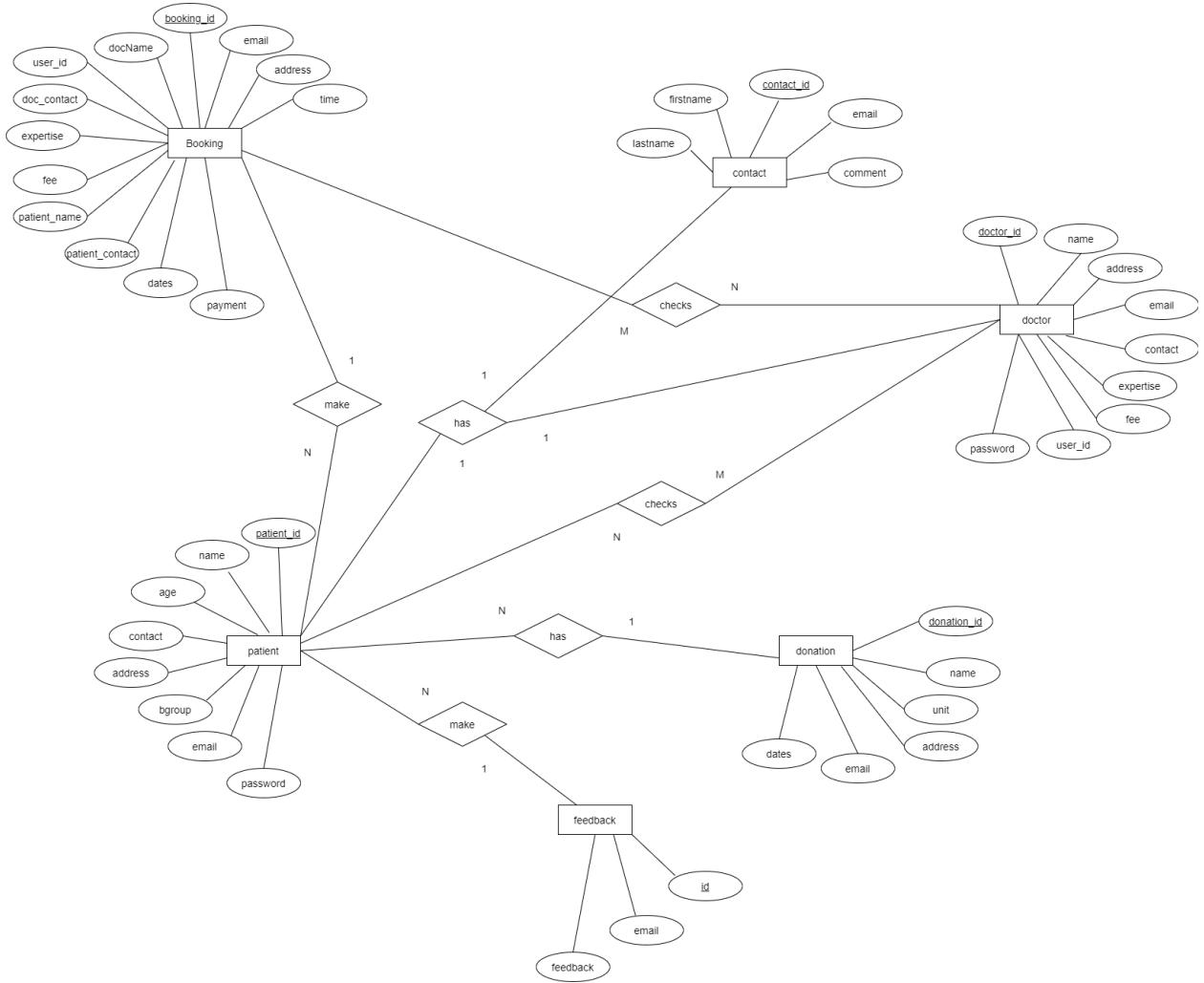


Figure 05 - ER diagram

4. SOFTWARE DESIGN

4.1 Structure of the System

- For the patient
 - The patient should add some important information to register for the system. Then the patient can login to the system by using the entered email address and the password

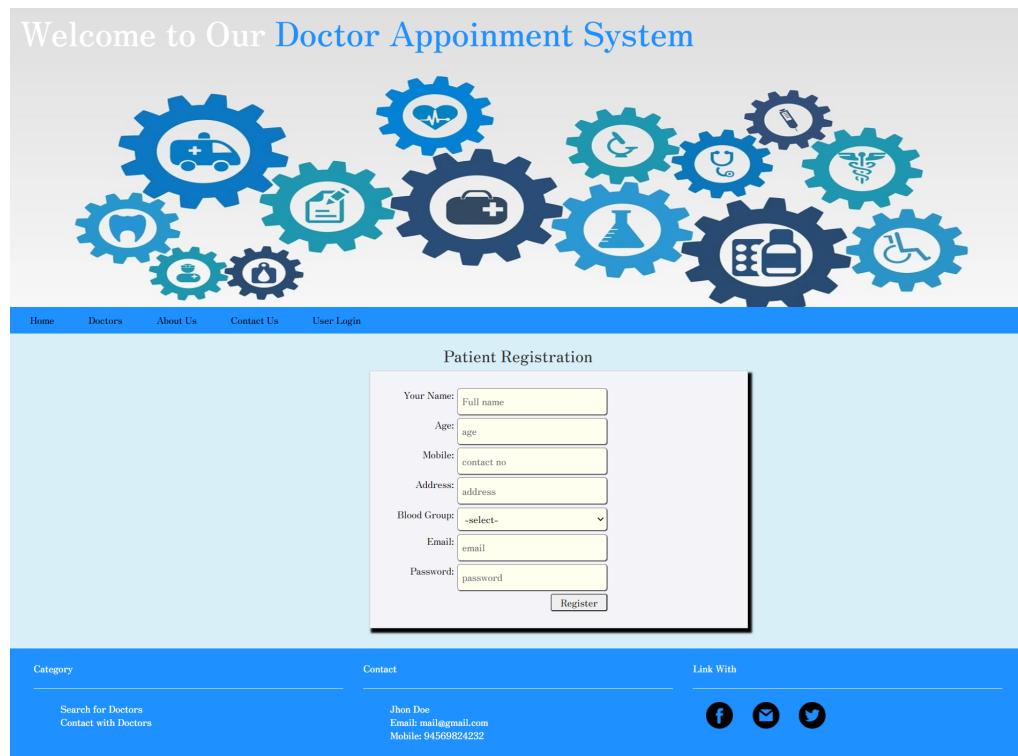


Figure 06

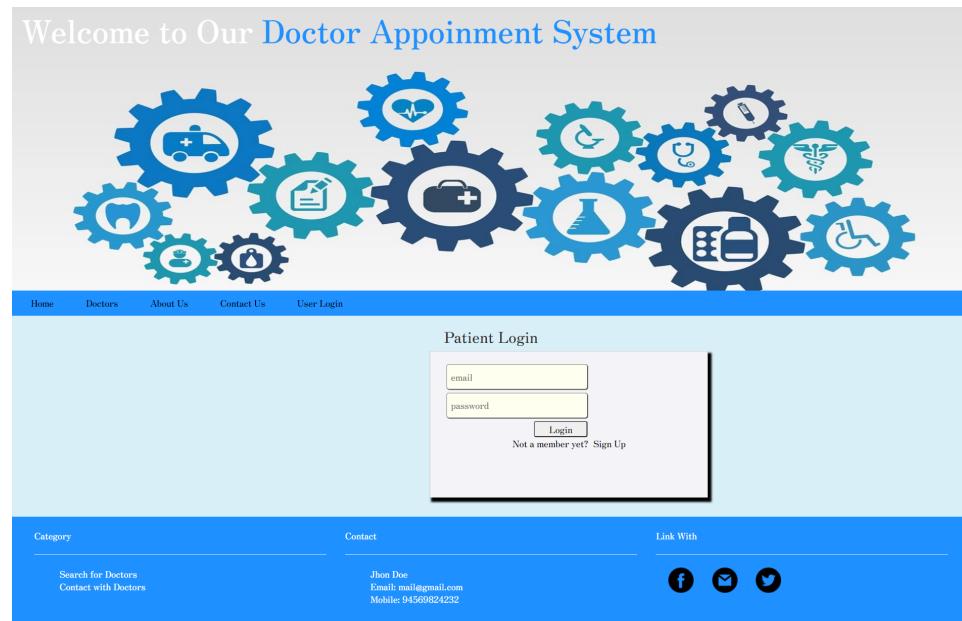


Figure 07

- After login to the system patient can search for the doctors, make an appointment, and can add feedback.
- For the Administrator
 - Administer can add doctors, view doctors and patients, view appointments and view feedback.

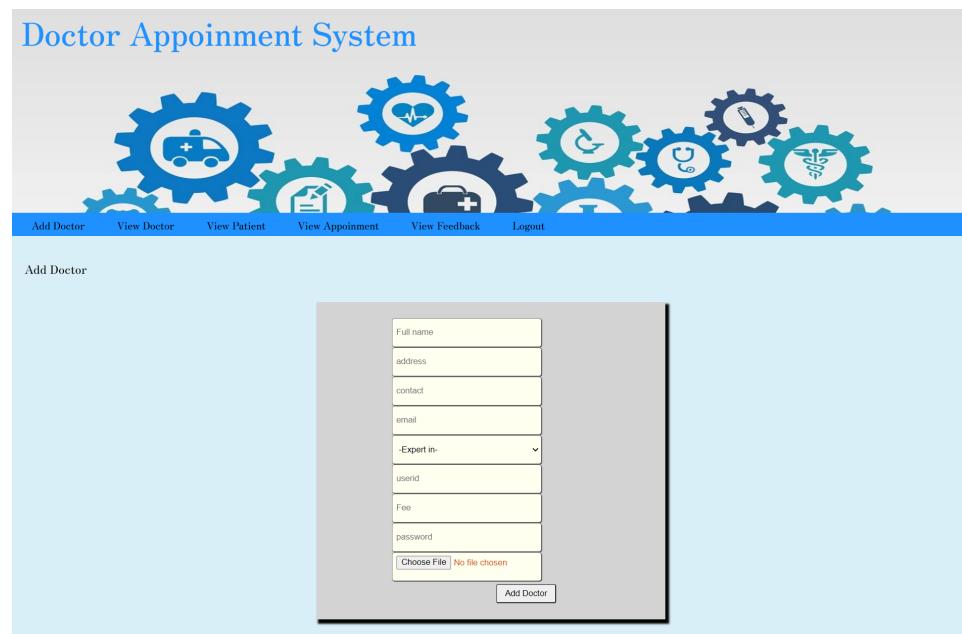


Figure 08

- For doctors
 - After registering for the system doctors can view his/her appointment details, patient details and can edit their profiles.

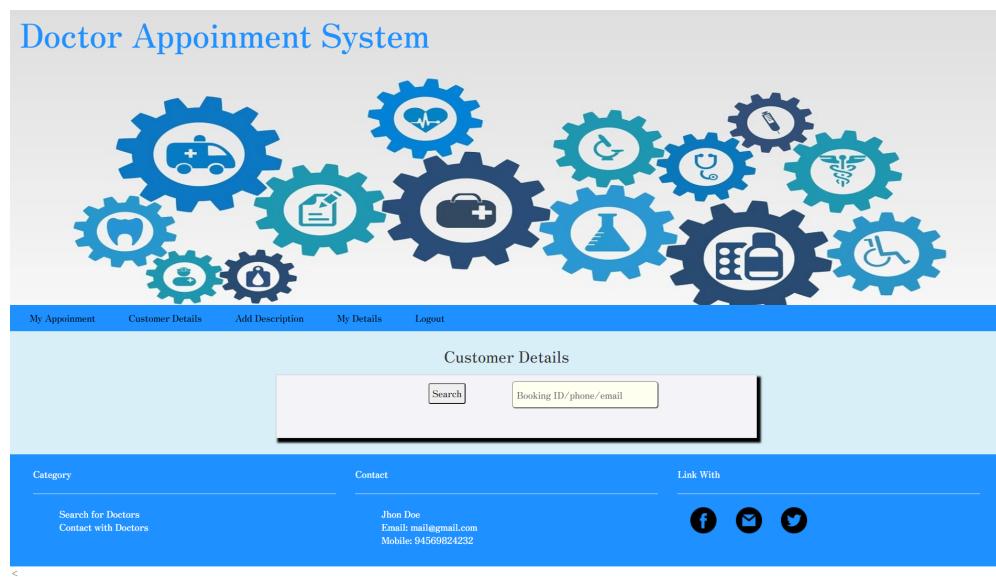


Figure 09

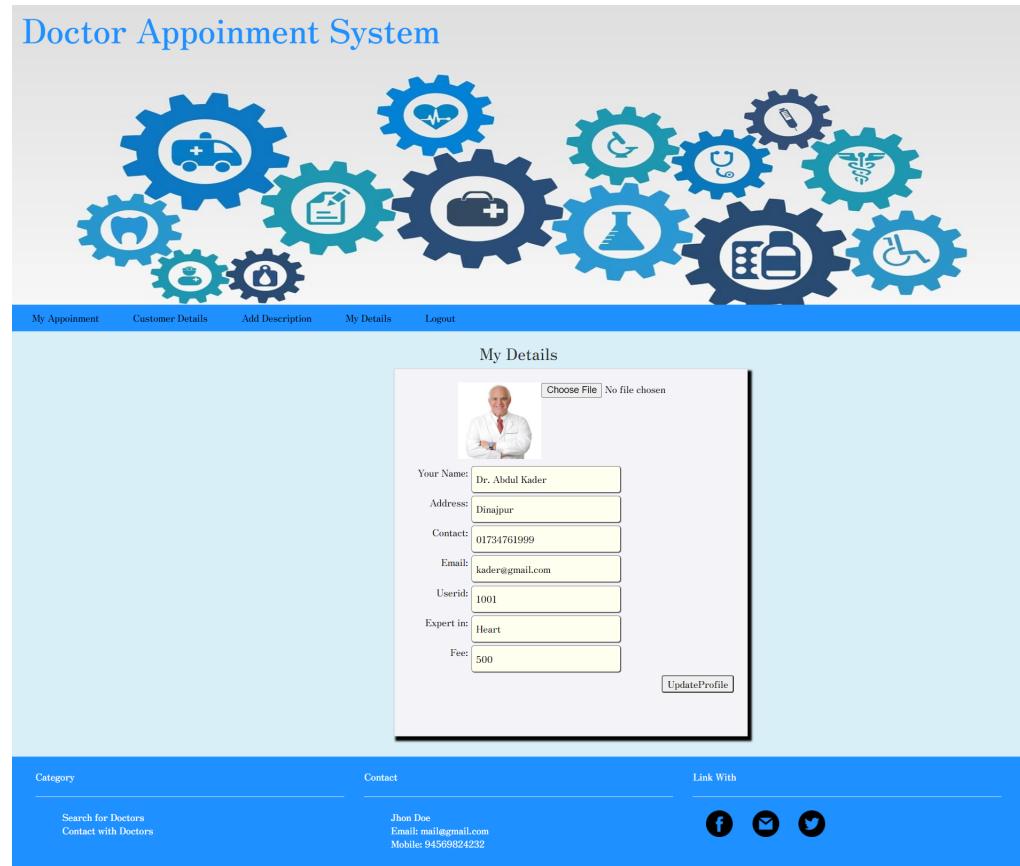


Figure 10

5. USED TECHNOLOGIES

- HTML

MySQL Workbench is a unified visual tool for database architects, developers, and DBAs. MySQL Workbench provides data modeling, SQL development, and comprehensive administration tools for server configuration, user administration, backup, and much more. MySQL Workbench is available on Windows, Linux, and Mac OS X.

- CSS

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language like HTML. CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript. CSS is designed to enable the separation of presentation and content, including layout, colors, and fonts. This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple web pages to share formatting by specifying the relevant CSS in a separate CSS file and reduce complexity and repetition in the structural content.

- Java Script

JavaScript often abbreviated as JS, is a high-level, interpreted programming language. It is a language that is also characterized as dynamic, weakly typed, prototype-based, and multi-paradigm. Alongside HTML and CSS, JavaScript is one of the three core technologies of the World Wide Web. JavaScript enables interactive web pages and thus is an essential part of web applications. The vast majority of websites use it, and all major web browsers have a dedicated JavaScript engine to execute it.

- Mysql

MySQL Workbench is a unified visual tool for database architects, developers, and DBAs. MySQL Workbench provides data modeling, SQL development, and comprehensive administration tools for server configuration, user administration, backup, and much more. MySQL Workbench is available on Windows, Linux, and Mac OS X.

- Xampp

XAMPP is a free and open-source cross-platform web server solution stack package developed by Apache Friends, consisting mainly of the Apache HTTP Server, MariaDB database, and interpreters for scripts written in the PHP and Perl programming languages. XAMPP stands for Cross-Platform (X), Apache (A), MariaDB (M), PHP (P), and Perl (P). It is a simple, lightweight Apache distribution that makes it extremely easy for developers to create a local web server for testing and deployment purposes. Everything needed to set up a web server – server application (Apache), database (MariaDB), and scripting language (PHP) – is included in an extractable file. XAMPP is also cross-platform, which means it works equally well on Linux, Mac, and Windows. Since most actual web server deployments use the same components as XAMPP, it makes transitioning from a local test server to a live server extremely easy as well.

- Php

Hypertext Preprocessor (or simply PHP) is a server-side scripting language designed for Web development but also used as a general-purpose programming language. It was originally created by Rasmus Lerdorf in 1994,] the PHP reference implementation is now produced by The PHP Group. PHP originally stood for Personal Home Page,] but it now stands for the recursive acronym PHP: Hypertext Preprocessor.

PHP code may be embedded into HTML code, or it can be used in combination with various web template systems, web content management systems, and web frameworks. PHP code is usually processed by a PHP interpreter implemented as a module in the web server or as a Common Gateway Interface (CGI) executable. The web server combines the results of the interpreted and executed PHP code, which may be any type of data, including images, with the generated web page. PHP code may also be executed with a command-line interface (CLI) and can be used to implement standalone graphical applications.

- Boostrap

Bootstrap is a free and open-source front-end framework for designing websites and web applications. It contains HTML- and CSS-based design templates for typography, forms, buttons, navigation, and other 6 interface components, as well as optional JavaScript extensions. Unlike many web frameworks, it concerns itself

with front-end development only.

- VS code

6. TESTINGS

For the testing, we generate a set of data, which can be used to test the new system before accepting it. In the test generation phase, all the parts come which are to be tested to ensure that system does not produce any error. If there are some errors then we remove them and further it goes for accepting.

Login Information System

- This system will maintain the login information of its user to enter in the software
- Validation
 - Administrators need to login using the unique id and password
 - Contact number should have 10 digits
 - All the details must be filled up
 - Email address should be in the proper format
- Login information should be filled in before the user allowed
- Error handling
 - If the user doesn't fill up validated information then the system displays an error message for the user and request to enter the validation information.

Performance required

- Security
 - The system should be Protected from unauthorized access Where the valid Username and Password are required so no other can access it.

The system is tested according to the above features.

7. USED TOOLS

- System Designing

- Draw io

draw.io is proprietary software for making diagrams and charts. The software allows us to choose from an automatic layout function, or create a custom layout. They have a large selection of shapes and hundreds of visual elements to make your diagram or chart one-of-a-kind. The drag-and-drop feature makes it simple to create a great-looking diagram or chart.

- Version Control - Github

Github Project Repository -

<https://github.com/cepdnaclk/e16-CO328-e-channelling-System>

8. REFERENCES

1. Online Doctor Appointment System -
[https://www.academia.edu/26066176/Design and Development of Online Doctor Appointment System](https://www.academia.edu/26066176/Design_and_Development_of_Online_Doctor_Appointment_System)
2. <https://www.freeprojectz.com/uml-diagram/doctor-appointment-system-uml-diagram>
3. <https://onix-systems.com/blog/how-to-develop-a-doctor-appointment-booking-system>