DOCTOR APPOINTMENT SYSTEM

A Project Report
Submitted By

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ABSTRACT

As technology is growing rapidly, most of the manual systems are being replaced and becoming automated. In this context, we are going to create an easy, faster and smooth appointment system between doctor and patient.

Though Bangladesh is a developing country, a number of internet users are in here. So, through internet if people want to get connected to their desired doctors there is a nexus will be needed. For that purpose, we have planned to build a application to get an appointment. This will help common people to get instant support without wasting time and effort even they will get this service from home and abroad.

By using this system people can easily find many doctors on various specialty and make their meeting whenever they want. Proper categorized list will make people more comfort to browse their expected doctors.

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CHAPTER 1

INTRODUCTION

1.1 Objective

Helping people to search for doctors and get appointment is my main objectives. User can search doctors which can make sure to find specific doctor an easy task.

To build a system with perfection, requirement collection is a must. The study will gives a clearer idea of people's need and the system that we are planning to build as well as how much I am going to cover. The document will also describe all the interactions between patients, doctors and admin. By above document anyone will be able to understand the project at a glance. In this project,

Patient can

- ❏ View doctors list
- ❏ Able to see categorized doctors department
- ❏ Easily take or cancel doctor appointment
- ❏ See when his/her expected doctor available

Admin can

- ❏ Login to system
- ❏ View doctors list
- ❏ Add & Delete new doctors
- ❏ Edit Doctor's Details
- ❏ View and manage all the appointments
- ❏ Search for doctor

1.2 Scope

Scope of the project is very broad in terms of other online doctor appointment portal.

Few of them are:

- ✧ There is huge collection of doctor information.
- ✧ Patients can easily find categorized doctors and take appointment in any time from anywhere.
- ✧ Doctors don't need an assistant to take their appointments.
- ✧ Doctors won't need to be online all time. He can check his appointments anytime in the day.

1.3 Problems in Existing System

My experience has shown that hospitals face many challenges that emerge as long waiting times and poor patient experiences.

In some clinics, there is specific time in the which is about 1 or 2 hour for appointment booking which creates hassle for patients.

patients are often placed in long waiting lines while receiving minimal information throughout their stay.

When many patients arrive at the same time, for a drop-in consultation, there is a risk of crowding, which contributes to long wait times.

With manual booking routines, many hospitals have a problem with patients not showing up for an appointment.

CHAPTER 2

BACKGROUND

2.1 Proposed System

The main goal of the system is to automate the process of doctor patient handling management system that will help patients to easily find doctors and book doctor appointments anytime. There is different module such as Adminand Patient. They have separate area in the system. Admincan work in all side of the system. Patients are allowed to book empty slots online and those slots are reserved in their name. The system manages the appointment data for multiple doctors of various date and times.

2.2 Why is our system better?

We implement this system for better user experience. This system is very easy to access. Also for establish real time communication, using modern and updated technology. So, user can see the update without reload or refresh.The doctors won't need their own assistant to make appointments. They don't even need to manage by themselves. One Admincan mange the whole system. Patients can also search for doctors. They won't have any hassle while taking appointments and won't have to wait in along queue.

So, user can easily access the system anytime anywhere. This system is very simple & user friendly so, any user can use this system easily.

CHAPTER 3

METHODOLOGY

3.1 Introduction of Methodology

A methodology or system development methodology in software engineering is a framework that is used to structure, plan and control the process of developing an information system.a methodical approach to software development results in fewer defects and ultimately provides shorter delivery times and better value. The documented collection of policies, processes and procedures used by a development team or organization to practice software engineering is called its software development methodology (SDM) or system development life cycle (SDLC)

3.2 Software Development Life Cycle (SDLC)

Software Development Life Cycle gives us an overview and guidelines to develop quality software. For FSCECS, we follow SDLC to make it reliable for the user.

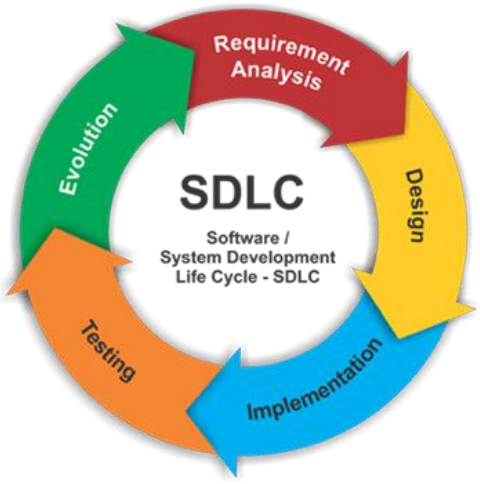

Figure 3.1 : Software Development Life Cycle

Developing the Doctor Appointment System, I have followed the agile model. Agile is an iterative, team-based approach to development. This approach emphasizes the rapid delivery of an application in complete functional components. Rather than creating tasks and schedules, all time is "time-boxed" into phases called "sprints." Each sprint has a defined duration (usually in weeks) with a running list of deliverables, planned at the start of the sprint. Deliverables are prioritized by business value as determined by the customer. If all planned work for the sprint cannot be completed, work is re-prioritized and the information is used for future sprint planning. As work is completed, it can be reviewed and evaluated by the project team and customer, through daily builds and end-of-sprint demos. Agile relies on a very high level of customer involvement throughout the project, but especially during these reviews.

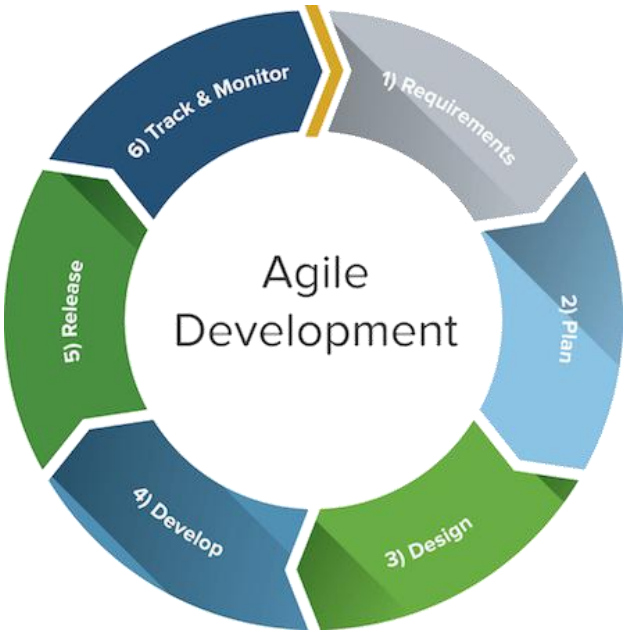

Figure 3.2 : Agile Method

3.3 Requirement collection and analysis

The study was carried out at Patient, Doctors and Hospital the main purposed of the study was to find out how the process of recording patient's data is carried out. The system that is currently being used in Patient, Doctor and Hospital is entirety manuals. When a patient requests all the information is recorded manually from the appointment then the system are very lazy and more hesitation from the real information, doctor availability and proper time maintenance of the doctor appointment system.

During data collection, the we investigated and found out how the current system operates, not only that but also tried out which problems are faced and how best they can be settled. The users described some of the basic requirements of the system this includes Search for Patients, Register Patient, Update record, Doctor information record, view doctor availability record and view all types of reports.

After analyzing the data collected, we formulated a number of requirements namely user requirement, system hardware software attribute. These were grouped as user, functional, non-functional and systems requirements.

3.4 Feasibility study

The cost of using this software will be minimal as it will be used by the people staying in remote areas and urban areas. Using this software will save the doctoral fees and extra charges that are above the reach of common people.

This included the study of function, performance and constraints that may affect the ability to achieve an acceptable system.

No doubt the proposed system is fully GUI based that is very user friendly and all inputs to be taken all self-explanatory even to a layman.

3.5 Use Case Diagram

A use case is simple method which is used to identify and organize system requirements in system analysis. This method is made up the possible sequences of interactions between the systems and users in a particular goal.

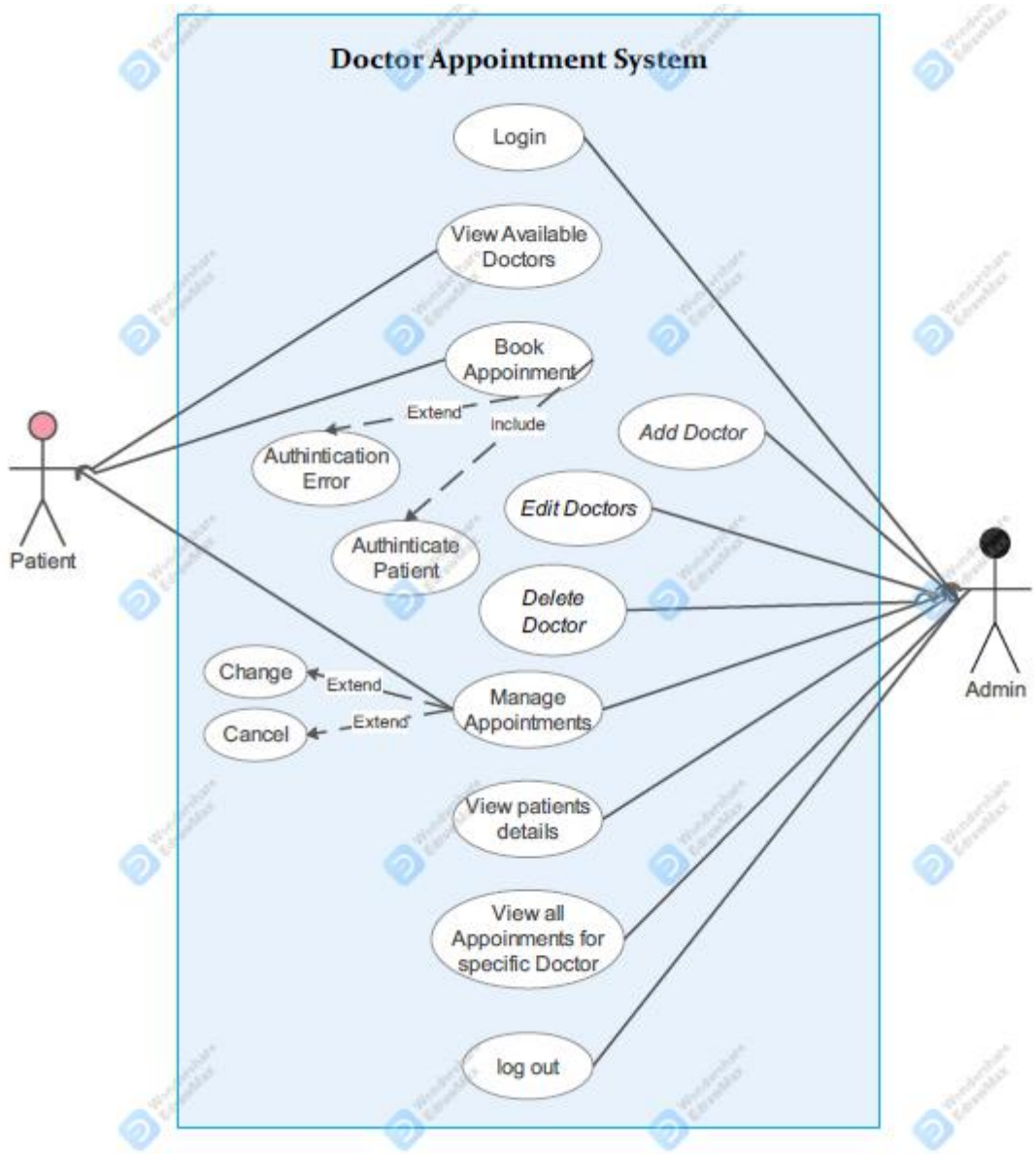

Figure 3.3 : Use Case Diagram

CHAPTER 4

SOFTWARE DESIGN & IMPLEMENTATION

4.1 Data Flow Diagram (DFD)

Data Flow Diagram (DFD) provides a visual representation of the flow of information (i.e. data) within a system.By drawing a Data Flow Diagram,we can tell the information provided by and delivered to someone. The system has two-part Patient and Adminand also divided their work.

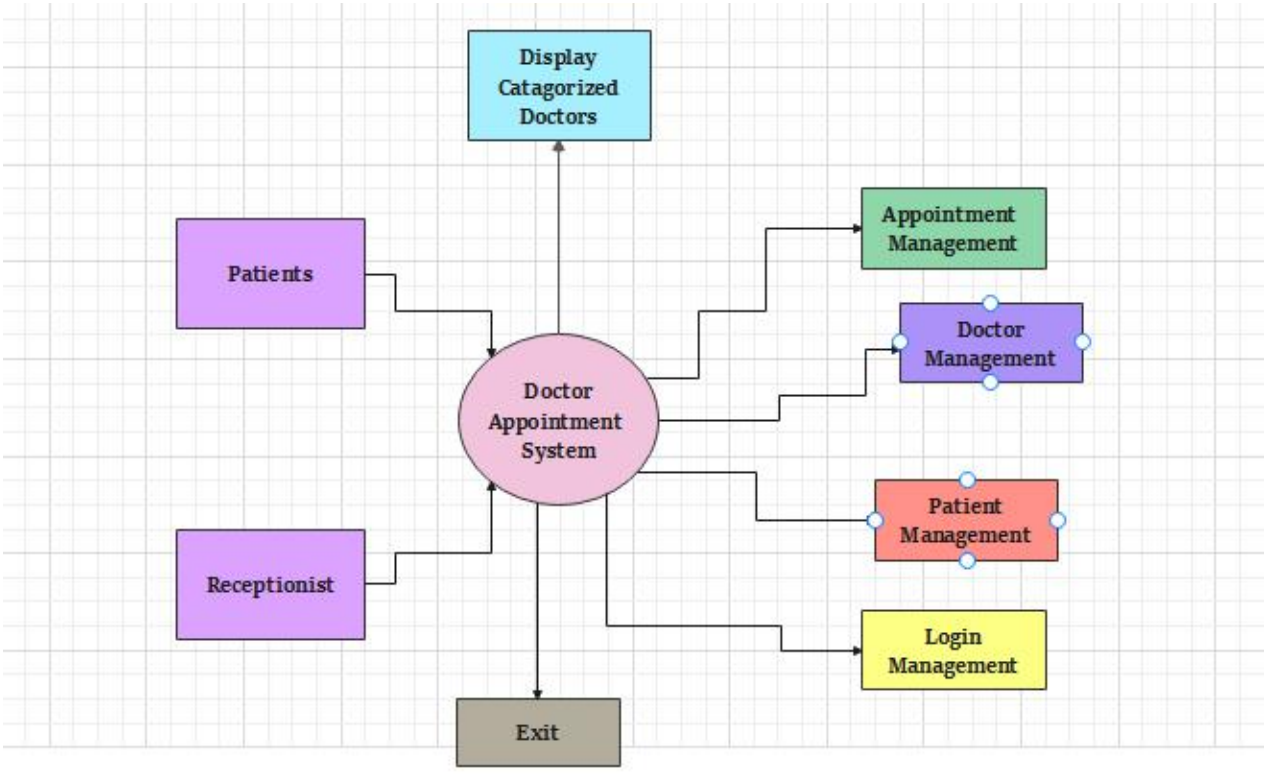

Figure 4.1 : Data Flow Diagram

4.2 Entity Relationship Diagram

Entity relationship model is used to represent the conceptual schema of the database. The important method of entity relationship model is entity relationship model in which set of entities are represented by relation in a graphical form.

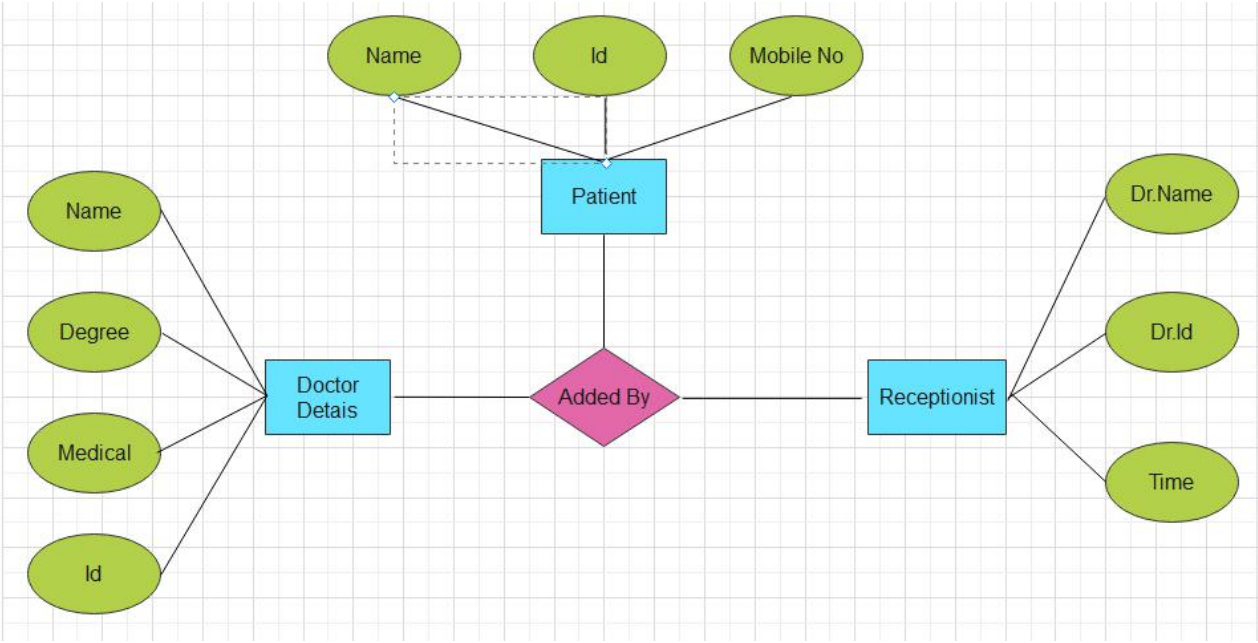

Figure 4.2 : Entity Relationship Diagram

4.3 SOFTWARE IMPLEMENTATION

Implement my software using given below:

- ✓ C++
- ✓ File Handling

4.3.1 C++

C++ is a cross-platform language that can be used to create high performance applications. C++ was developed by Bjarne Stroustrup, as an extension to the C language. It can be used to develop operating systems, browsers, games, and so on. C++ supports different ways of programming like procedural, object-oriented, functional, and so on. This makes C++ powerful as well as flexible. The prime purpose of C++ programming was to add object orientation to the C programming language, which is in itself one of the most powerful programming languages. The core of the pure object-oriented programming is to create an object, in code, that has certain properties and methods.

4.3.2 File Handling

Files are used to store data in a storage device permanently. File handling provides a mechanism to store the output of a program in a file and to perform various operations on it. A stream is an abstraction that represents a device on which operations of input and output are performed. A stream can be represented as a source or destination of characters of indefinite length depending on its usage. In C++ we have a set of file handling methods. These include ifstream, ofstream, and fstream. These classes are derived from fstrembase and from the corresponding iostream class. These classes, designed to manage the disk files, are declared in fstream and therefore we must include fstream and therefore we must include this file in any program that uses files.

4.4 Technologies used

- ❏ Windows operating system
- ❏ Codeblocks
- ❏ Wondershare Edraw Max

4.5 Tools Used

- ❏ The user should have the appropriate version of windows.
- ❏ The system should have up to 1 GB RAM minimum required for the application

4.6 Interface Design

4.6 .1 Home & Login Page

When the software is run then this page is shown. We have divided their role who is Patient or Admin. Patients will enter 1 and easily proceed to next page. Admin must enter valid data and login to proceed.

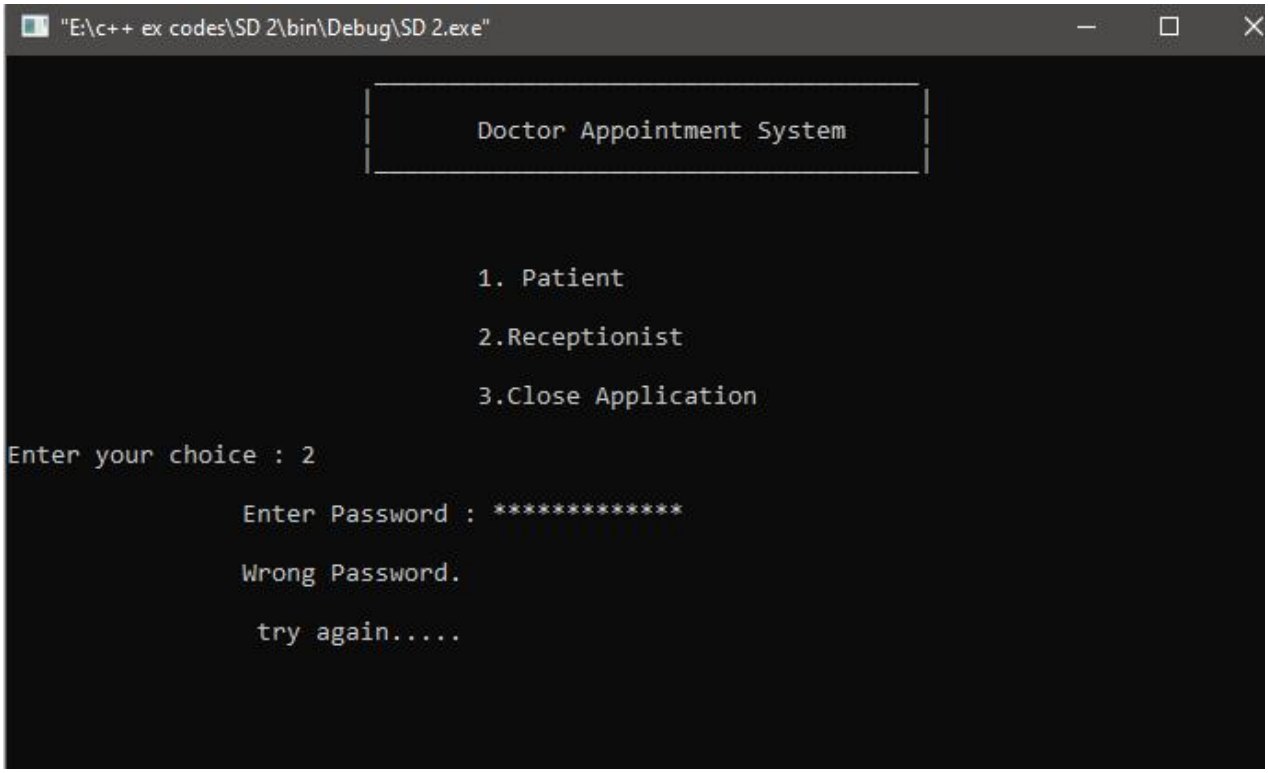

Figure 4.6 .1 : Login page

4.6 .2 Patient Page

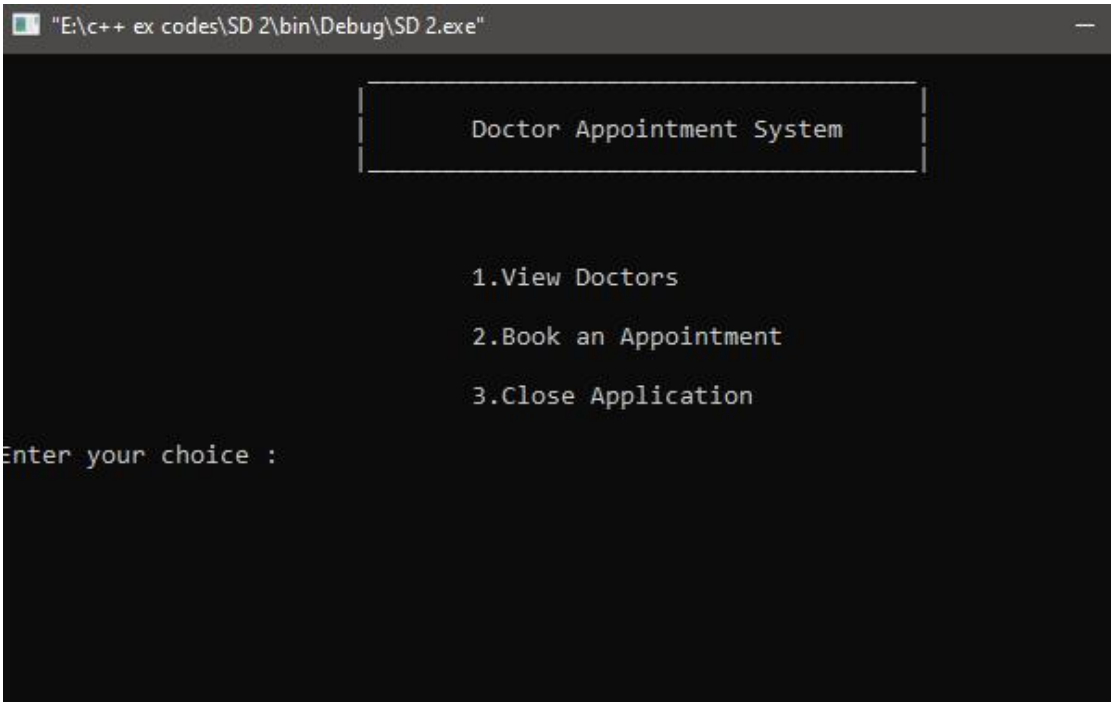

Figure 4.6.2 : Patient page

By pressing 1, Users can find Doctors city wise and in the next page ,specialties are listed.After pressing the number for required speciality,Specialist from that criteria are shown .

Figure 4.6.3 : City page

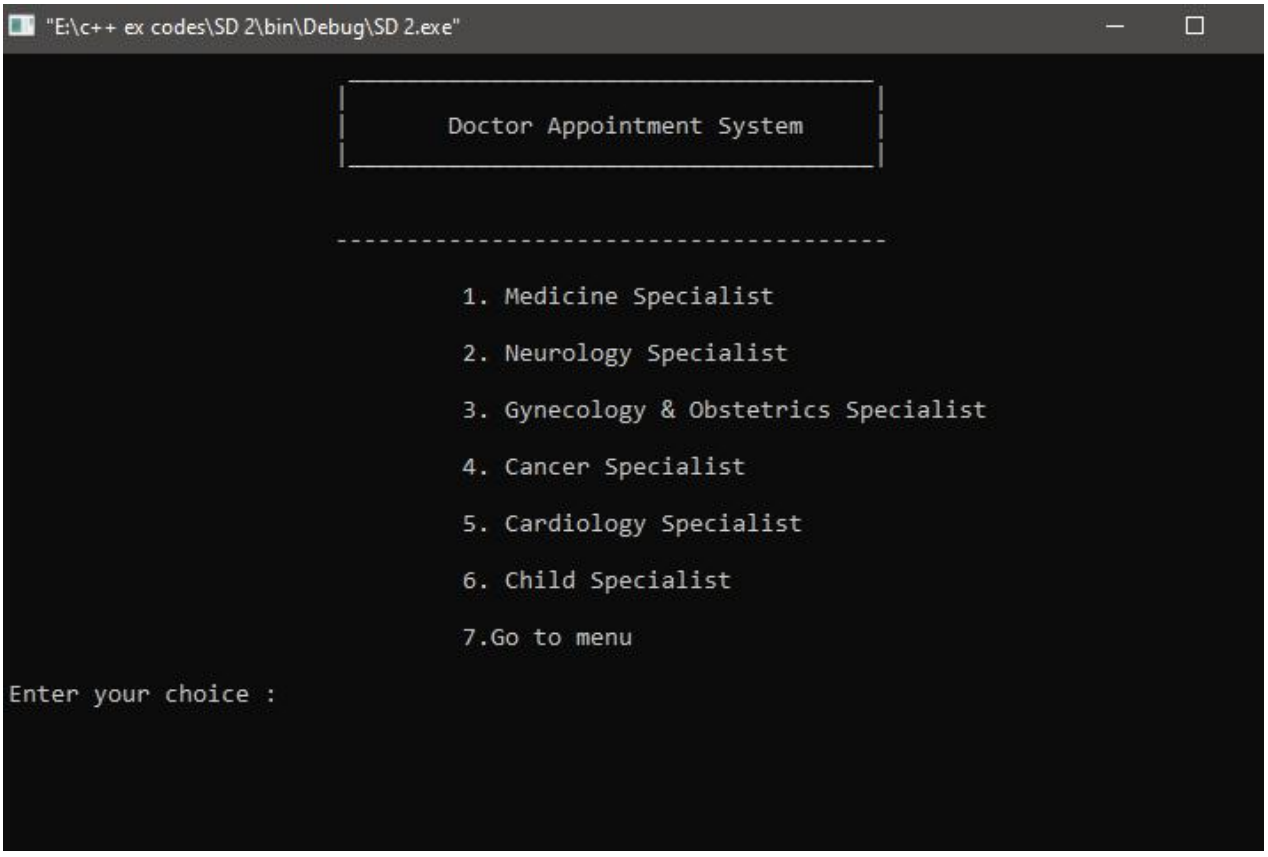

Figure 4.6.4 : Speciality page

In this page , patients an view different Doctor's details from the selected criteria and can go back to patient page by pressing any key.

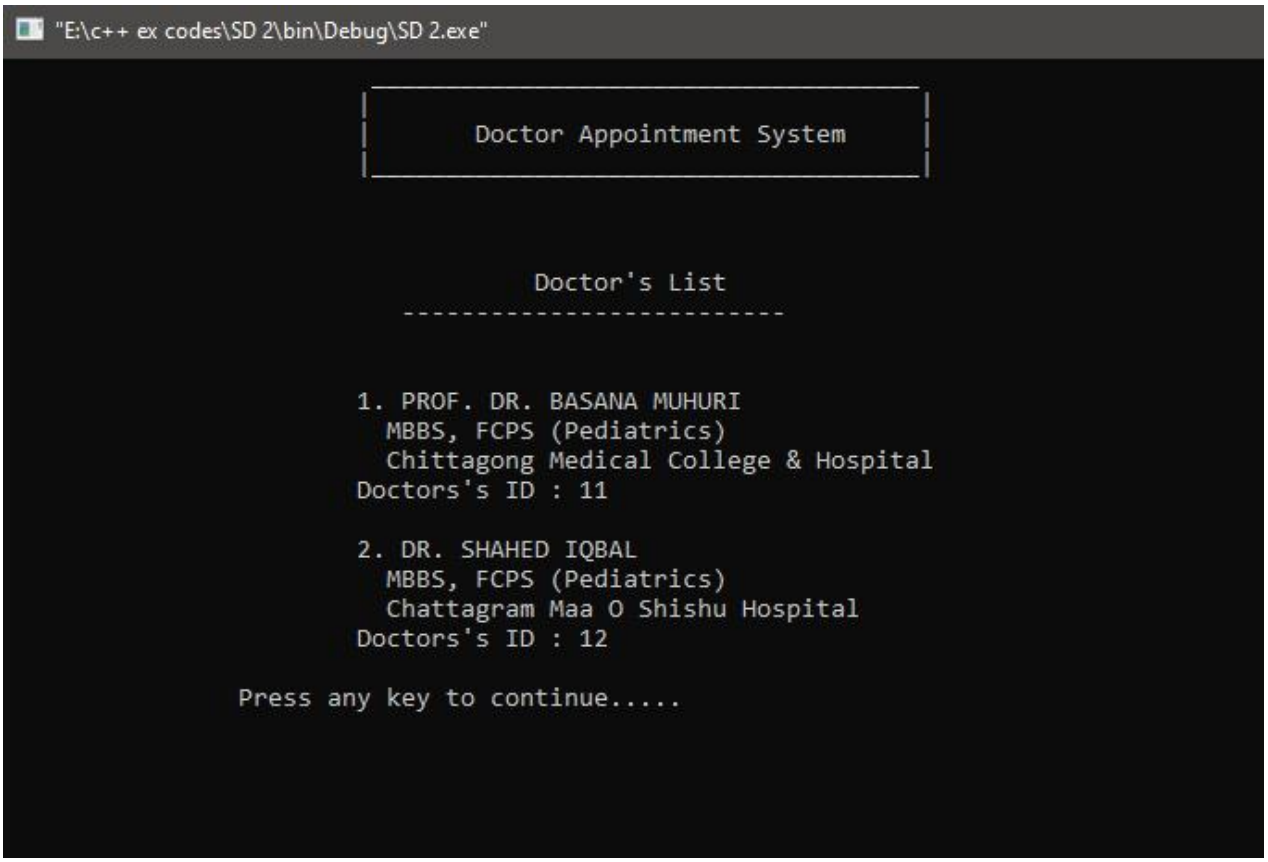

Figure 4.6.5 : Specialists name page

4.6.3 Appointment Page

By pressing 2, in patient page, Users can Book Appointment.

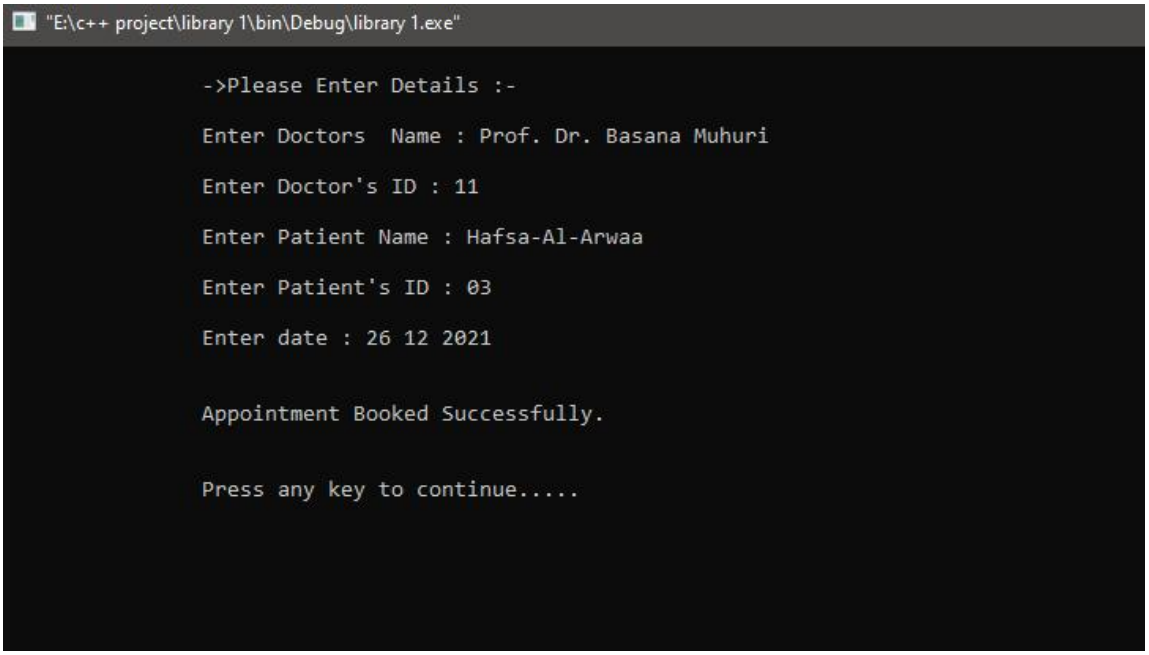

Figure 4.6.6 : Appointment page

4.6.3 Admin Page

After logging in , Admin has the following options available

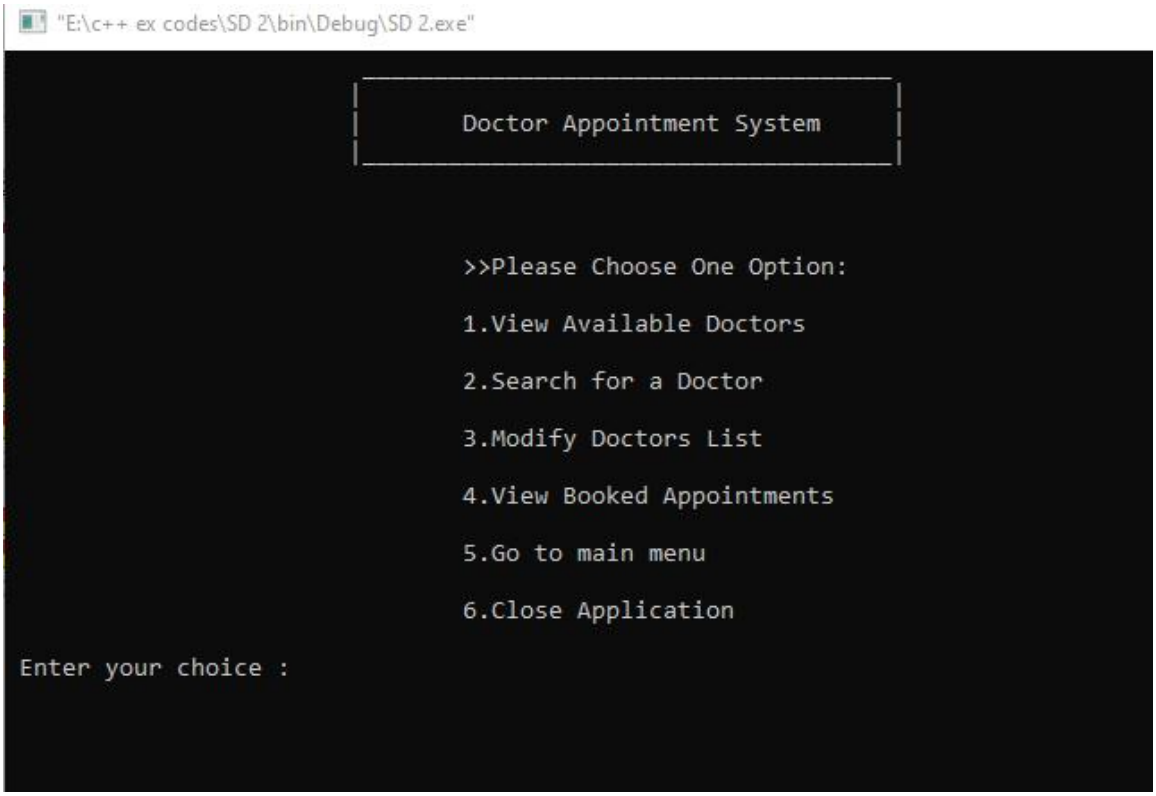

Figure 4.6.7 : Admin menu page

Modify Doctors list page

Here Admin can Edit Doctors details, Add or Delete Doctors from the system.

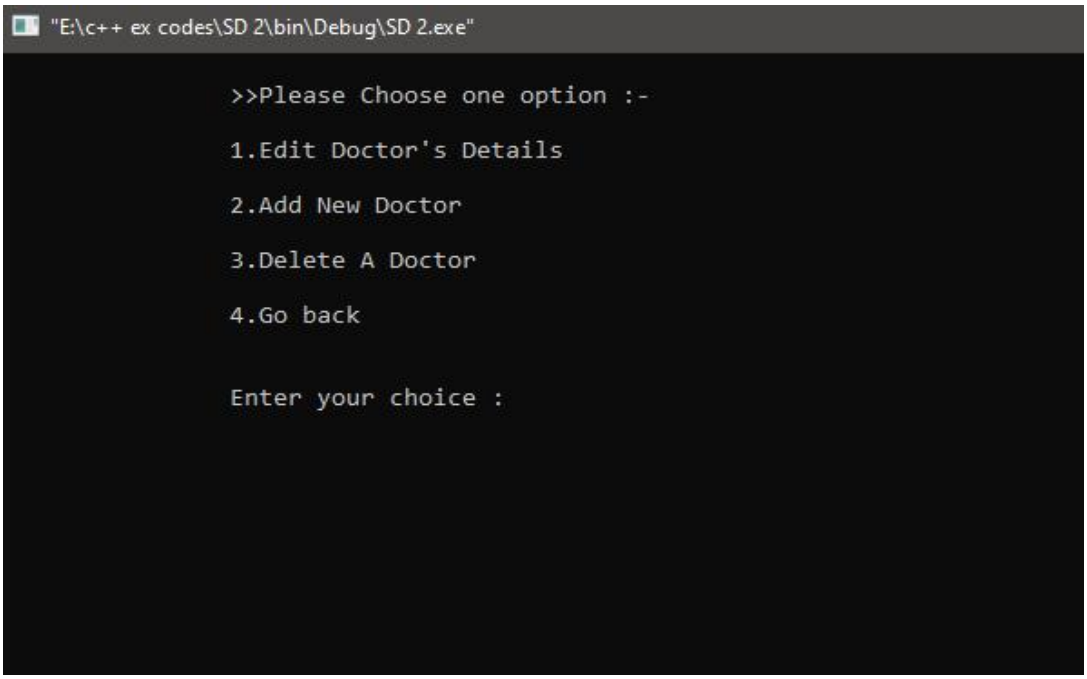

Figure 4.6.8 : Modify page

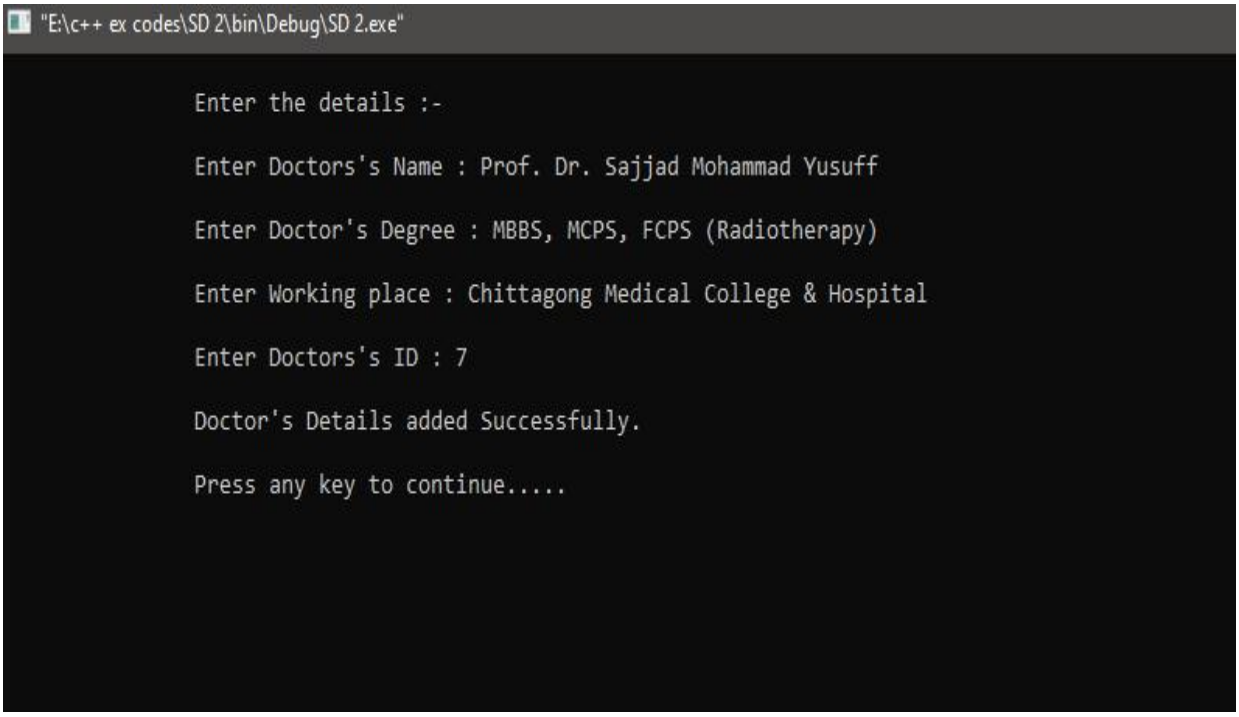

Figure 4.6.9 : Add Doctor page

Modify Doctors list page

Here,Admin can view All the appointments, patients details, Date etc of all the doctors.

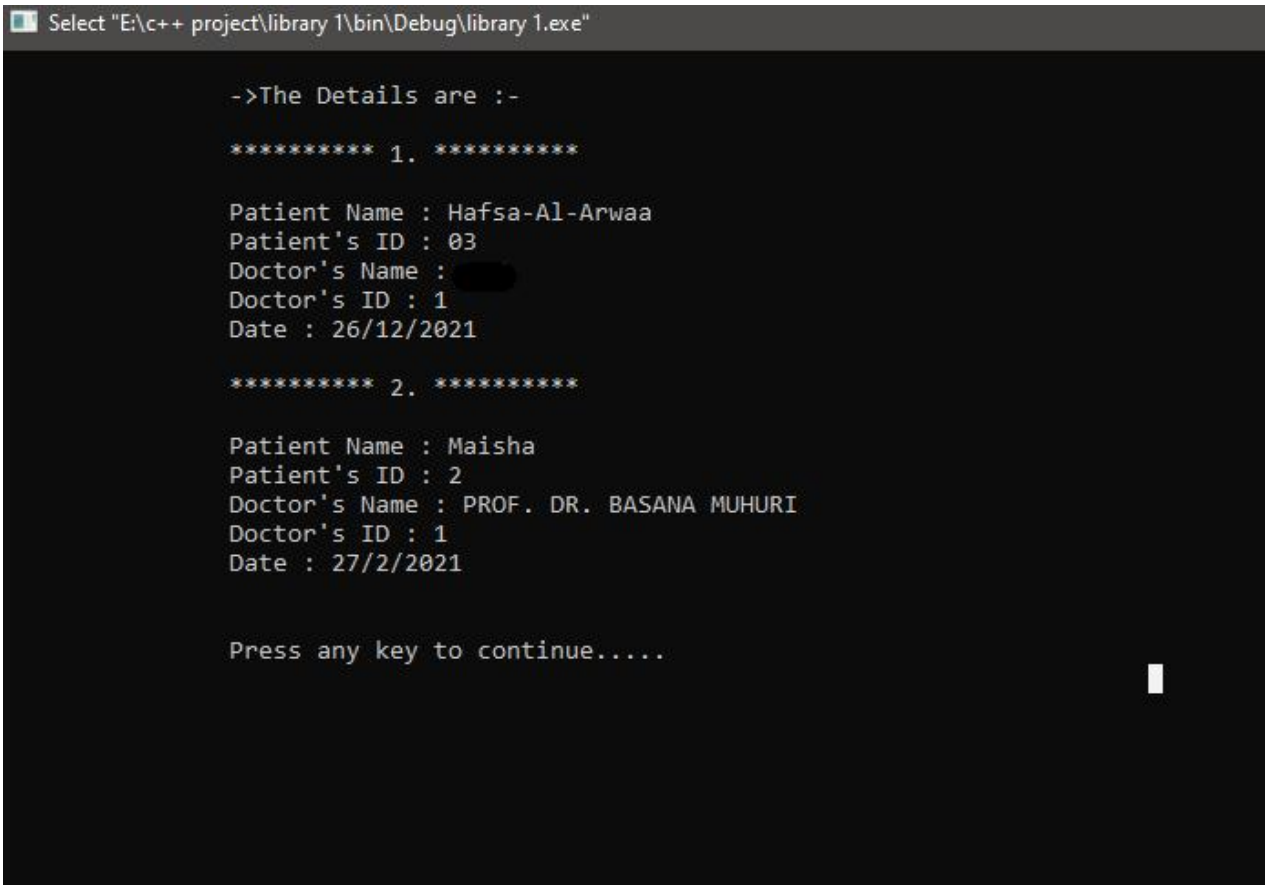

Figure 4.6.10 : View Appointment page

CHAPTER 5

CONCLUSION

Our project is only a humble venture to satisfy the needs to manage. Several user-friendly coding has also adopted. This package shall prove to be a powerful package in satisfying all the requirements of the library. The objective of software planning is to provide a framework that enables the user to make reasonable estimates made within a limited time frame at the beginning of the software project and should be updated regularly as the project progress.

5.1 Future Plan of Project

Some of the future work of the project below:

- ✧ We can give more advance features for the system including more facilities according to user demand.
- ✧ We will increase the range to online platform from one district to all district of our country.
- ✧ Integrate multiple load balancer to distribute the loads of the system.
- ✧ Implement the backup mechanism for taking backup of codebase and database on regular basis on different servers.

5.2 Conclusion

Finally, we have completed the whole system for DAS. The system has different modules for the user. User means Patients and Student. We have clearly described the process such as how to use. Another important part is transaction which is also clear where we can see specific data of od Doctors. We can also search any Doctors by name or id . We can say that our system is very user-friendly.Considerable efforts have made the software easy to operate even for the people not related to the field of computers but it is acknowledged that a layman may find it a bit problematic at the first instance. The user is provided help at each step for his convenience in working with the software.

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