# ATMIYA UNIVERSITY

**RAJKOT**

A

Report On

# JEEVARAKSHANAM CHARITABLE TRUST SYSTEM

Under subject of

## MAJOR PROJECT

B.TECH, Semester – VII

(Computer Engineering)

Submitted by:


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(Head of the Department)

Academic Year

(2022-23)

# CANDIDATE'S DECLARATION

We hereby declare that the work presented in this project entitled "**JEEVARAKSHANAM CHARITABLE TRUST SYSTEM"** submitted towards completion of project in **7th Semester** of B. Tech. (Computer Engineering) is an authentic record of our original work carried out under the guidance of "**Prof. Nirali Borad".**

We have not submitted the matter embodied in this project for the award of any other degree.

Semester: 5th

Place: Rajkot

**Signature:**

Kajal K. Karavadara (190002056)

Parmar Arti (190002076)

# ATMIYA UNIVERSITY

# RAJKOT

## CERTIFICATE

Date:

This is to certify that the "**JEEVARAKSHANAM CHARITABLE TRUST SYSTEM**" has been carried out by **ARTI PARMAR** under my guidance in fulfillment of the subject Mini Project in COMPUTER ENGINEERING (7th Semester) of Atmiya University, Rajkot during the academic year 2022.

Prof. **Nirali Borad** Prof. Tosal M. Bhalodia

**(Project Guide)** **(Head of the Department)**

# ATMIYA UNIVERSITY

# RAJKOT

## CERTIFICATE

Date:

This is to certify that the "**JEEVARAKSHANAM CHARITABLE TRUST SYSTEM**" has been carried out by **KAJAL KARAVADARA** under my guidance in fulfillment of the subject Mini Project in COMPUTER ENGINEERING ($7^{th}$ Semester) of Atmiya University, Rajkot during the academic year 2022.

GUIDE: **Prof. Tosal M. Bhalodia**

**Prof. Nirali Borad** (Head of the Department)

# ACKNOWLEDGEMENT

We have taken many efforts in this project. However, it would not have been possible without the kind support and help of many individuals and organizations. We would like to extend our sincere thanks to all of them.

We are highly indebted to **Prof. Nirali Borad** for their guidance and constant supervision as well as for providing necessary information regarding the Mini Project titled**" JEEVARAKSHANAM CHARITABLE TRUST SYSTEM".** We would like to express our gratitude towards staff members of Computer Engineering Department, Atmiya University for their kind co- operation and encouragement which helped us in completion of this project.

We even thank and appreciate to our colleague in developing the project and people who have willingly helped us out with their abilities.

Kajal K. Karavadara (190002056)

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# ABSTRACT

Hospital Management System is an organized computerized system designed and programmed to deal with day-to-day operations and management of hospital activities. The program can look after inpatients, outpatients, records, database treatments, status illness, billings in the pharmacy, and labs. It also maintains hospital information such as ward id, doctors in charge, and department administering. The major problem for the patient nowadays is to get the report after consultation, many hospitals managing reports in their system but it's not available to the patient when he/she is outside. In this project, we are going to provide the extra facility to store the report in the database and make it available from anywhere in the world.

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# CHAPTER – 1
# INTRODUCTION

## 1.1 Purpose

This software will help the company to be more efficient in registration of their patients and manage appointments, records of patients. It enables doctors and admin to view and modify appointments schedules if required. The purpose of this project is to computerize all details regarding patient details and hospital details.

## 1.2 Scope

The system will be used as the application that serves hospitals, clinic, dispensaries or other health institutions. The intention of the system is to increase the number of patients that can be treated and managed properly. If the hospital management system is file based, management of the hospital has to put much effort on securing the files. They can be easily damaged by fire, insects and natural disasters. Also could be misplaced by losing data and information.

## 1.3 Technology and tools

### 1. HTML:

· Hypertext Markup Language (HTML) is the main markup language for creating

· Web pages and other information that can be displayed in a web browser.HTML is written in the form of HTML elements consisting of tags enclosed in angle brackets (like &l t; html & gt;), within the web page content. HTML tags most commonly come in pairs like <h1> and </h1>, although some tags represent empty elements and so are unpaired, for example <img>.

· The first tag in a pair is the start tag, and the second tag is the end tag (they are also called opening tags and closing tags). In between these tags' web designers can add text, further tags, comments and other types of text-based content.

· The purpose of a web browser is to read HTML documents and compose them into visible or audible web pages. The browser does not display the HTML tags, but uses the tags to interpret the
content of the page.

### 2. CSS:

· Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation semantics (the look and formatting) of a document written in a markup language. Its most common

application is to style web pages written in HTML and XHTML, but the language can also be applied to any kind of XML document, including plain XML, SVG and XUL.CSS is designed primarily to enable the separation of document content from document presentation, including elements such as the layout, colors, and fonts.

· This separation can improve content accessibility, provide more flexibility and control in the
specification of presentation characteristics, enable multiple pages to share formatting, and reduce complexity and repetition in the structural content (such as by allowing for table less web design).

· CSS specifies a priority scheme to determine which style rules apply if more than one rule matches against a particular element. In this so-called cascade, priorities or weights are calculated and assigned to rules, so that the results are predictable.

· The CSS specifications are maintained by the World Wide Web Consortium (W3C). Internet media type (MIME type) text/CSS is registered for use with CSS by RFC 2318 (March 1998), and they also operate a free CSS validation service.

## 3. php

PHP started out as a small open source project that evolved as more and more people found out how useful it was. Rasmus Lerdorf unleashed the first version of PHP way back in 1994.

- 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.
- It is integrated with a number of popular databases, including MySQL, PostgreSQL, Oracle, Sybase, Informix, and Microsoft SQL Server.
- PHP is pleasingly zippy in its execution, especially when compiled as an Apache module on the Unix side. The MySQL server, once started, executes even very complex queries with huge result sets in record-setting time.
- PHP supports a large number of major protocols such as POP3, IMAP, and LDAP. PHP4 added support for Java and distributed object architectures (COM and CORBA), making n-tier development a possibility for the first time.
- PHP is forgiving: PHP language tries to be as forgiving as possible.
- PHP Syntax is C-Like.

**Back End: Back End technologies used in the website are:**

1. **SQL:**

· SQL (Structured Query Language) is a special-purpose programming language designed for managing data held in a relational database management system (RDBMS).

· Originally based upon relational algebra and tuple relational calculus, SQL consists of a data definition language and a data manipulation language. The scope of SQL includes data insert, query, update and delete, schema creation and modification, and data access control. Although SQL is often described as, and to a great extent is, a declarative language (4GL), it also includes procedural elements. SQL was one of the first commercial languages for Edgar F. Codd's relational model, as described in his influential 1970 paper "A Relational Model of Data for Large Shared Data Banks". Despite not entirely adhering to the relational model as described by Codd, it became the most widely used database language.

· SQL became a standard of the American National Standards Institute (ANSI) in 1986, and of the International Organization for Standards (ISO) in 1987. Since then, the standard has been enhanced several times with added features. But code is not **completely** portable among different database systems, which can lead to vendor locking.

# 2. PROJECT MANAGEMENT

## 1.1 Project Planning:

Project Planning is concerned with identifying and measuring the activities, milestones and deliverables produced by the project. Project planning is undertaken and completed sometimes even before any development activity starts. Project planning consists of following essential activities:

- Scheduling manpower and other resources needed to develop the system.
- Staff organization and staffing plans.
- Risk identification, analysis, and accurate planning.
- Estimating some of the basic attributes of the project like cost, duration and efforts. The effectiveness of the subsequent planning activities is based on the accuracy of these estimations.
- Miscellaneous plans like quality assurance plan, configuration management plan, etc.

Project management involves planning, monitoring and control of the people, process, and the events that occurs as the software evolves from a preliminary concept to an operational implementation. Cost estimation is a relative activity that is concerned with the resources required to accomplish the project plan.

## 2.2 Project Scheduling:

The scheduling is the peak of a planning activity, a primary component of software project management. When combined with estimation methods and risk analysis, scheduling establishes a roadmap for project management. The characteristics of the project are used to adapt an appropriate task set for doing work.

## 2.3 Risk Management:

Risk management consists of a series of steps that help a software development team to understood and manage uncertain problems that may arise during the course of software development and can plague a software project.

Risks are the dangerous conditions or potential problems for the system which may damage the system functionalities to very high level which would not be acceptable at any cost. So in order to make our system stable and give its 100% performance we must have identify those risks, analyze their occurrences and effects on our system and must prevent them to occur.

### 2.3.1 Risk Identification:

Risk identification is a first systematic attempt to specify risks to project plan, Scheduling resources, project development. It may be carried out as a team process using brainstorming approach.

### Technology risk:

Technical risks concern implementation, potential design, Interfacing, testing, and maintenance problems

- Database Corruptness
- Garbage Collection

### People Risks:

These risks are concerns with the team and its members who are taking part in developing the system.

- Leaking an important data
- Failure of the administration
- Lack of knowledge ,
- Lack of clear product vision.
- Technical staff conflict
- Poor communication between people.

### Tools Risks:

These are more concerned with tools used to develop the system

- Tools containing virus.

## General Risks:

General Risks are the risks, which are concerned with the mentality and resources.

- Lack of resources can cause great harm to efficiency and timely productivity.
- Rapidly changing requirements.
- Changes in requirements can cause a great harm to implementation, designing and schedule
of developing the system.
- Insufficient planning and task identification.

### 2.3.2 Risk Analysis

"Risk analysis = risk assessment + risk management + risk communication."
Risk analysis is employed in its broadest sense to include:

## Risk assessment:

Involves identifying sources of potential harm, assessing the likelihood that harm will occur and the consequences if harm does occur. For this project It might be :-

- System Crash.

## Risk management

Evaluates which risks identified in the risk assessment process require management and
selects and implements the plans or actions that are required to ensure that those risks are controlled.

Precautions taken to make risks minimal are as under:-

- Periodical backups are taken to avoid major loss in case of system crash.

### Risk communication

Involves an interactive dialogue between stakeholders and risk assessors and risk managers which actively informs the other processes.

Steps taken for risk communication is as under:-

- Probability of certain risks is negotiated with client.

- All the possible risks are listed out during communication and project is developed taking care of that risks.

# 3. SYSTEM REQUIREMENTS STUDY

## 3.1 Hardware and Software Requirement

This shows minimum requirements to carry on to run this system efficiently.

### 3.1.1 Hardware Requirements

**Server side Hardware Requirement:**

| Devices | Description |
|---|---|
| Processor | Intel Core Duo 2.0 GHz or more |
| RAM | 512 MB or more |
| Hard Disk | 10 GB or more |

Table 3.1.1.1 Server side Hardware Requirement

### 3.1.2 Software Requirements

| For which | Software |
|---|---|
| Operating System | Windows7/8/10, Linux |
| Front End | HTML, CSS |
| Back End | MySQL Database |
| Coding Language | php |

Table 3.1.2.1 Software Requirements

### 3.1.3 Client side Requirements

| For which | Requirement |
|---|---|
| Browser | Any Compatible browser device |

Table 3.1.3.1 client side Requirements

## 3.2 Constraints

### 3.2.1 Hardware Limitations

The major hardware limitations faced by the system are as follows:

If the appropriate hardware is not there like processor, RAM, hard disks

-The problem in processing requests of client

-If appropriate storage is not there our whole database will crash due to less storage because our main requirement is large storage.

### 3.2.2 Reliability Requirements

Since many users can access the server simultaneously, load on the server becomes very high. Hence, the server should be of enough high configurations. There should be high back up storage and management of huge data for overall ideas, videos , images, multiple countries, multiple user profile.

The Reliability requirements are the validations used to protect the system against one or more incorrect activities. Without proper validation of the system, the failure possibilities of it grow higher so it is must to understand the proper validation of the system and must implement them. All the required validator controls spend very good role to keep the system secure from any unauthorized or incorrect information. In all these validation actions if system found one or more entries violating validation rules then user will be warned by proper error messages and the details or the record is not going to be saved until corrections are made to them.

# 4. SYSTEM ANALYSIS

## 4.1 Study Current System

Implementation is the stage where the theoretical design is turned into a working system. The most crucial stage in achieving a new successful system and in giving confidence on the new system for the users that it will work efficiently and effectively.

The system can be implemented only after thorough testing is done and if it is found to work according to the specification.

It involves careful planning, investigation of the current system and its constraints on implementation, design of methods to achieve the change over and an evaluation of change over methods a part from planning. Two major tasks of preparing the implementation are education and training of the users and testing of the system.

The more complex the system being implemented, the more involved will be the systems analysis and design effort required just for implementation.

The implementation phase comprises of several activities. The required hardware and software acquisition is carried out. The system may require some software to be developed. For this, programs are written and tested. The user then changes over to his new fully tested system and the old system is discontinued.

## 4.2 Problem and weakness of current system

- Inconsistency in data entry and generate errors
- System is fully dependent on skilled individuals
- Time consuming and costly to produce reports
- Entry of false information
- Lack of security
- Duplication of data entry

## 4.3 Requirements of New System

### 4.3.1 User Requirements:

The user requirement for this system is to make the system fast, flexible, less prone to error, reduce expenses and save the time.

## 4.3.2 System Requirements:

- **Functional System Requirement:**

This section gives a functional requirement that applicable to the Online shopping system.

There are three sub modules in this phase.

1. Customer module.
2. Admin module.
3. Moderator module.

- **The functionality of each module is as follows:**

1. **Customer module**: A user must login with his user name and password to the system after registration. If they are invalid, the user not allowed to enter the system.

• Username and password will be provided after user registration is confirmed.
• A new user will have to register in the system by providing essential details in order to view the products in the system.
• The system must encrypt the password of the customer to provide security.
• The user can add the desired product into his cart by clicking add to cart option on the product. He can view his cart by clicking on the cart button.
• User can remove an item from the cart by clicking remove.
• After confirming the items in the cart the user can submit the cart by providing a delivery address. On successful submitting the cart will become empty.
• System must ensure that, only a registered customer can purchase items.

2. **Admin module**: The administrator can add user, delete user, view user and block user.
• The administrator can add product, delete product and view product.
• The administrator can view orders and delete orders.
• The system must identify the login of the admin.
• Admin account should be secured so that only owner of the shop can access that account.

3. **Moderator module**: A moderator is considered as a staff who can manage orders for the time being. As a future update moderator may give facility to add and manage his own products.
• Moderator has all the privilege of an admin having except managing other moderators.
• He can manage users and manage products. He can also check the orders and edit his profile.
• The system must identify the login of a moderator.

- **Non-Functional System Requirements:**

**i. EFFICIENCY REQUIREMENT:**

When an online shopping cart android application implemented customer can purchase product in an efficient manner.

**ii. RELIABILITY REQUIREMENT:**

The system should provide a reliable environment to both customers and owner. All orders should be reaching at the admin without any errors.

**iii. USABILITY REQUIREMENT:**

The android application is designed for user friendly environment and ease of use.

**iv. IMPLEMENTATION REQUIREMENT:**

Implementation of the system using css and html in front end with jsp as back end and it will be used for database connectivity. And the database part is developed by mysql. Responsive web designing is used for making the website compatible for any type of screen.

**v. DELIVERY REQUIREMENT:**

The whole system is expected to be delivered in four months of time with a weekly evaluation by the project guide.

## 4.4 Feasibility Study

The feasibility study of any system is mainly intended to study and analyze the proposed system and to decide whether the system under consideration will be viable or not after implementation. That is it determines the usability of the project after deployment. To come to result a set of query is answered keeping the efficiency of the software and its impact on the domain for which it was developed.

**Technical Feasibility:**

In technical feasibility, we study all technical issues regarding the proposed system. It is mainly concerned with the specifications of the equipments and the software, which successfully satisfies the end-user's requirement. The technical needs of the system may vary accordingly but include:

- The feasibility to produce outputs in a given time.
- Response time under certain conditions.
- Ability to process a certain volume of the transaction at a particular speed.
- Facility to communicate data.

## 4.5 Selection of Hardware and Software and Justification

The configuration of the existing systems is:

Processor : Pentium III, 500 MHz (or above)

Memory : 128 MB (or above)

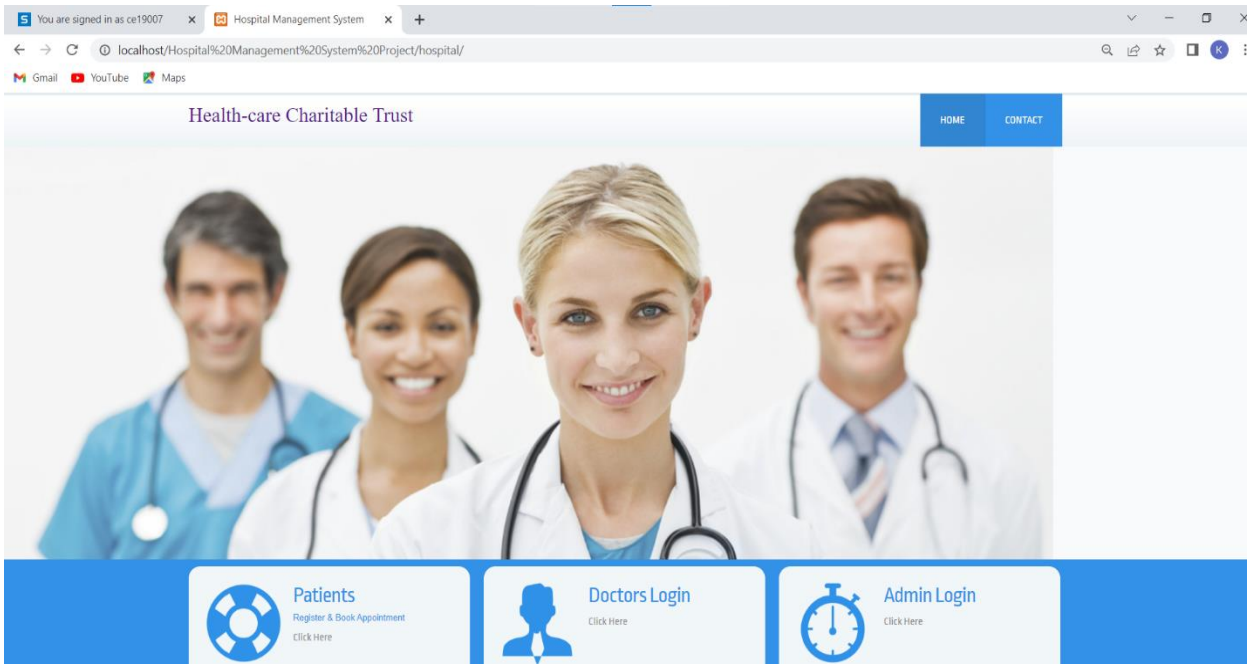
Secondary storage : 20 GB (or above)

For Software there are following alternatives:

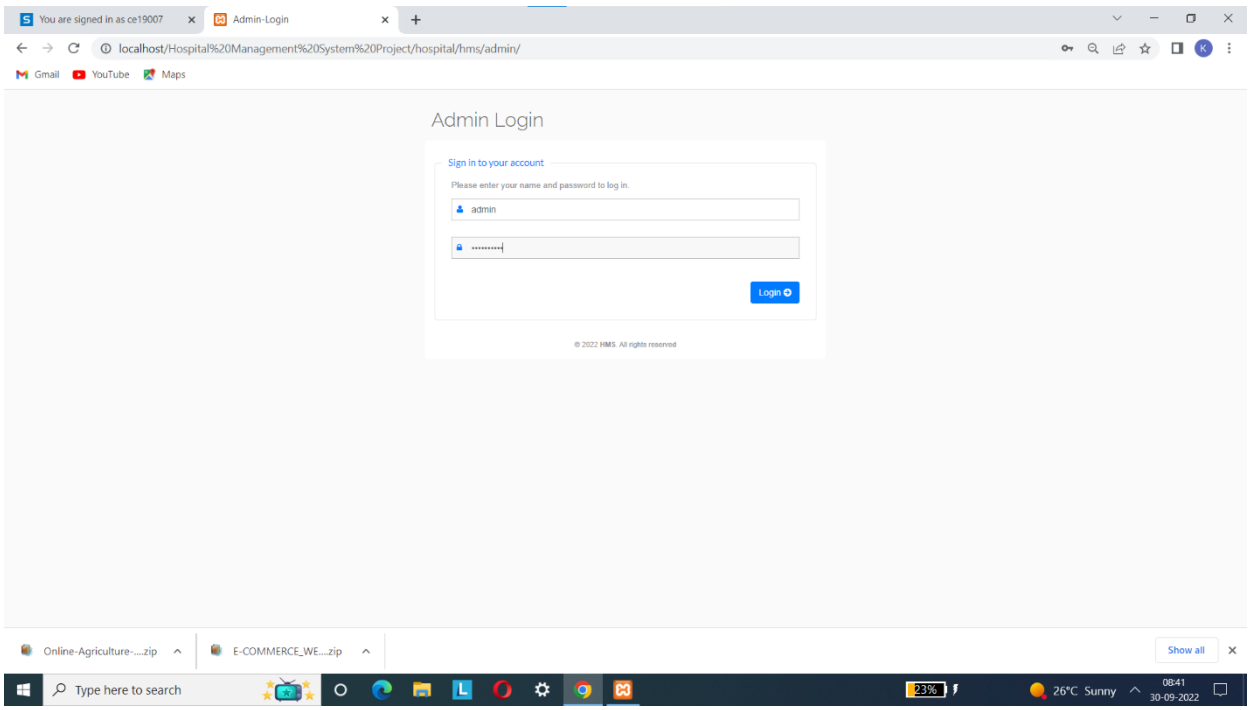
Operating System : Window 98, 2000, XP, NT
Development tools :php, CSS, HTML
Database :SQL
Documentation tool :MS-Word

# 5. System Design

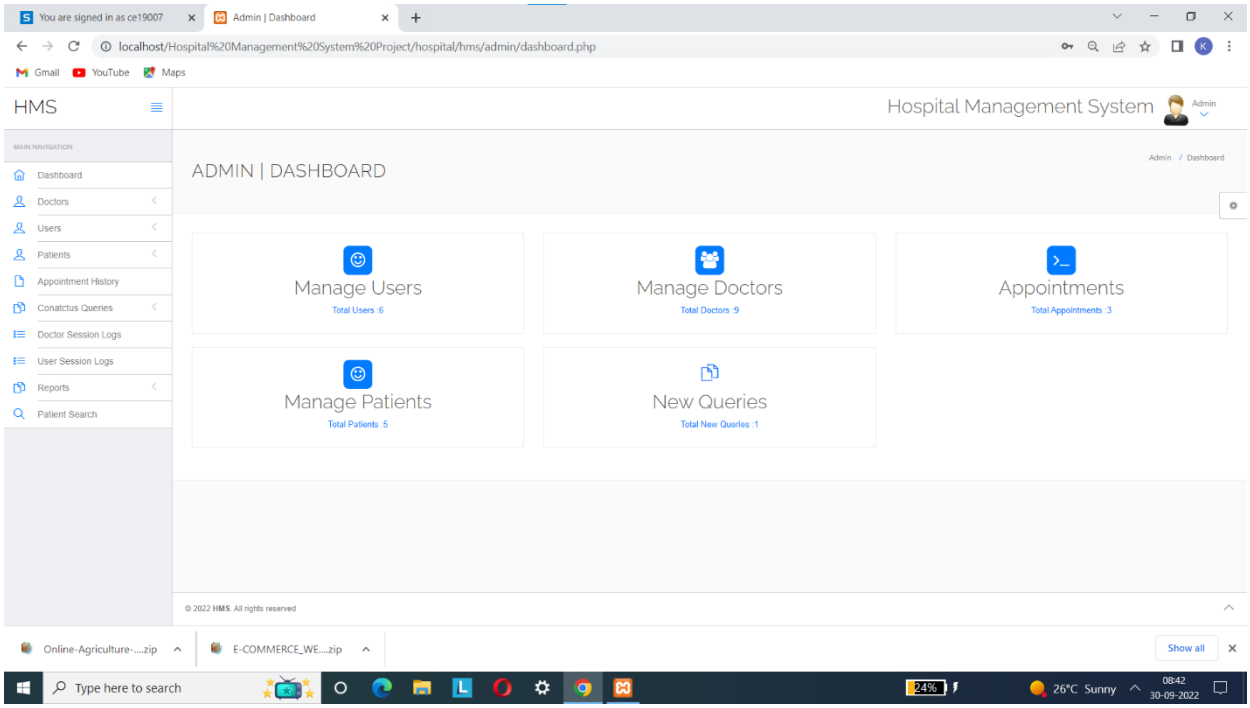
## 5.1 input/output interface



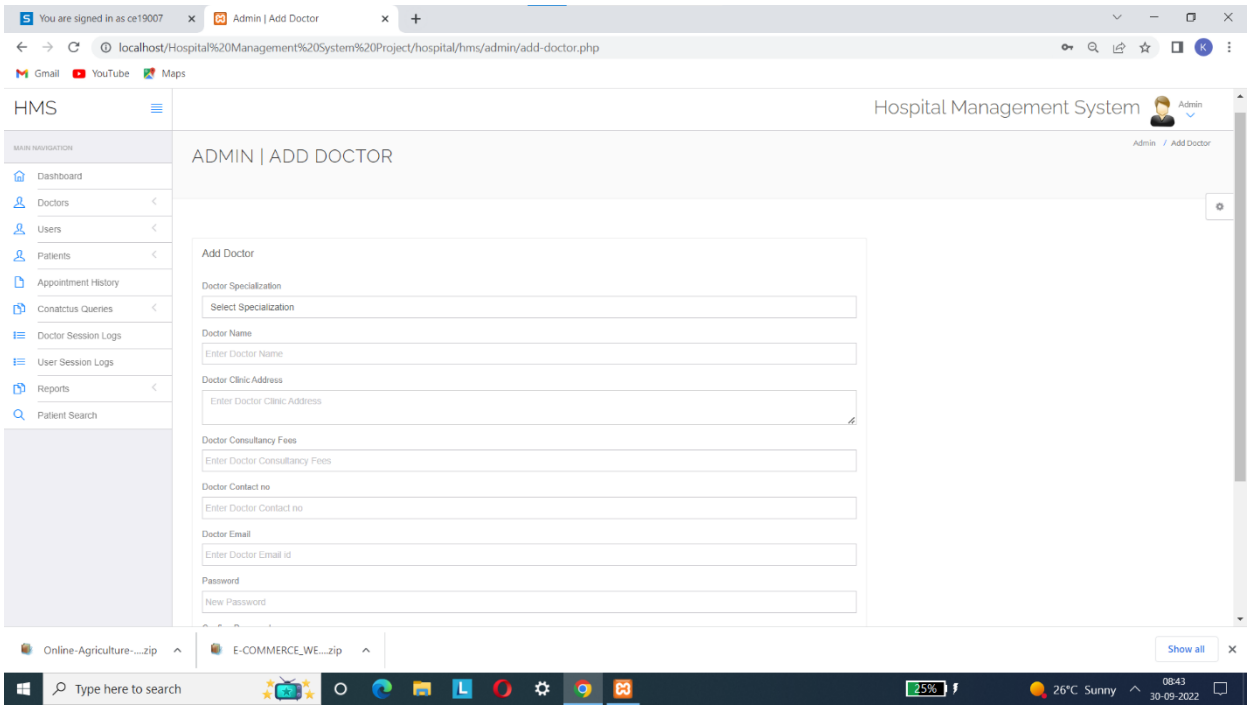

## 5.2 ADMIN LOGIN



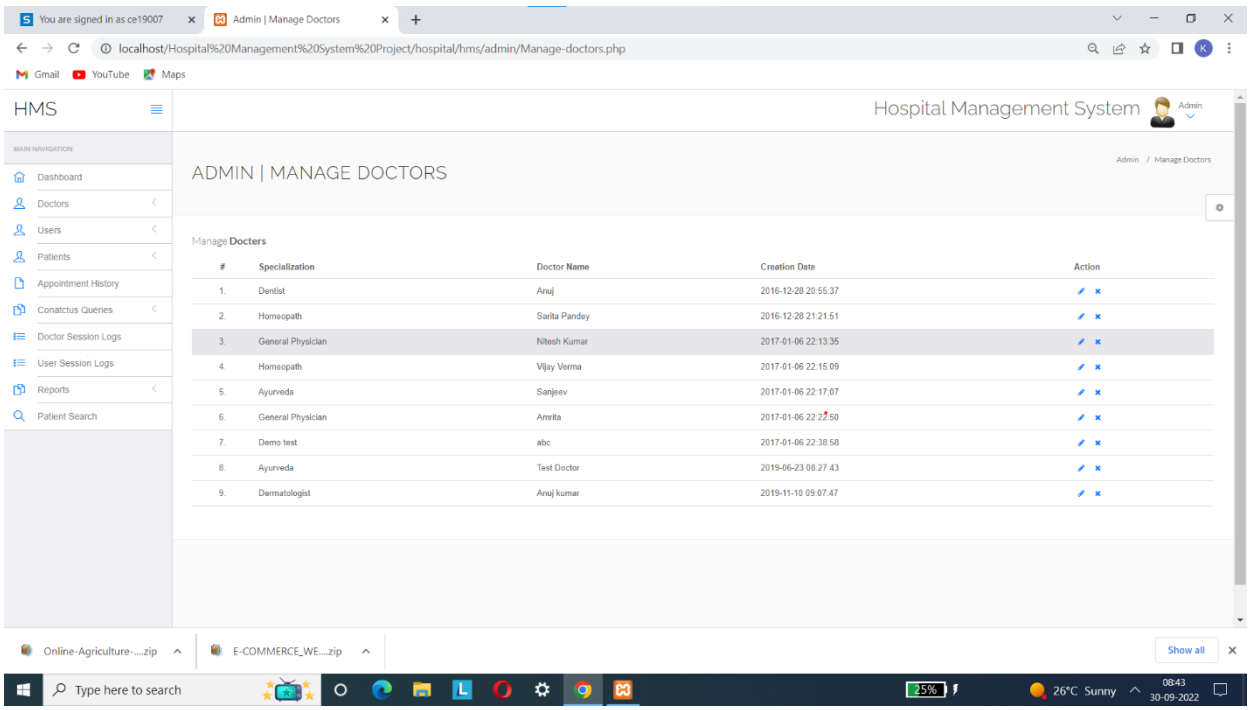

## 5.3 ADMIN DASHBOARD



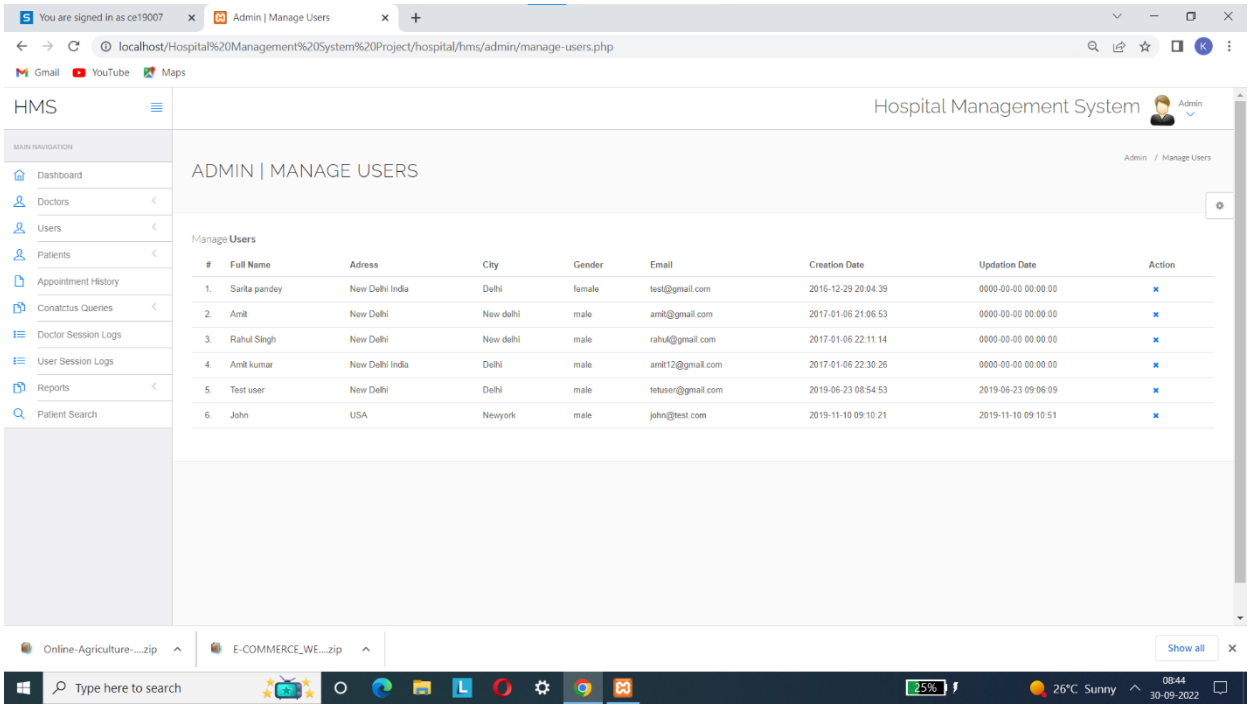

## 5.4 ADD DOCTOR



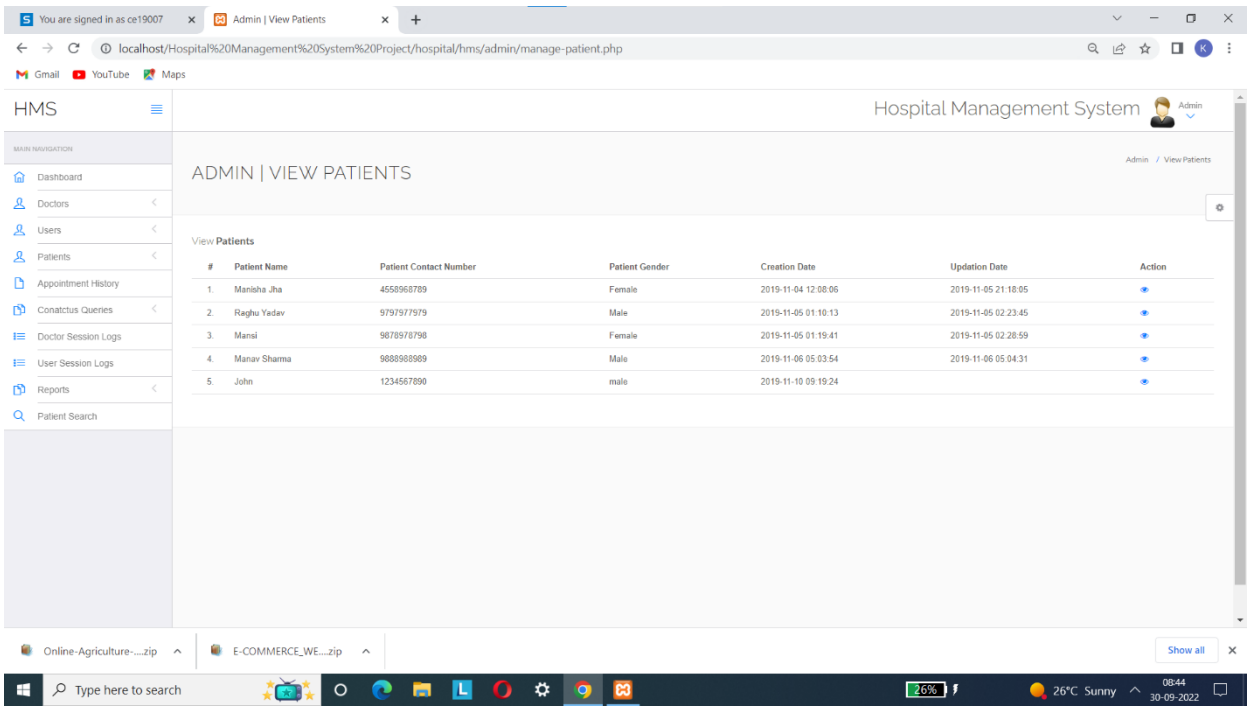

## 5.5 MANAGE DOCTORS



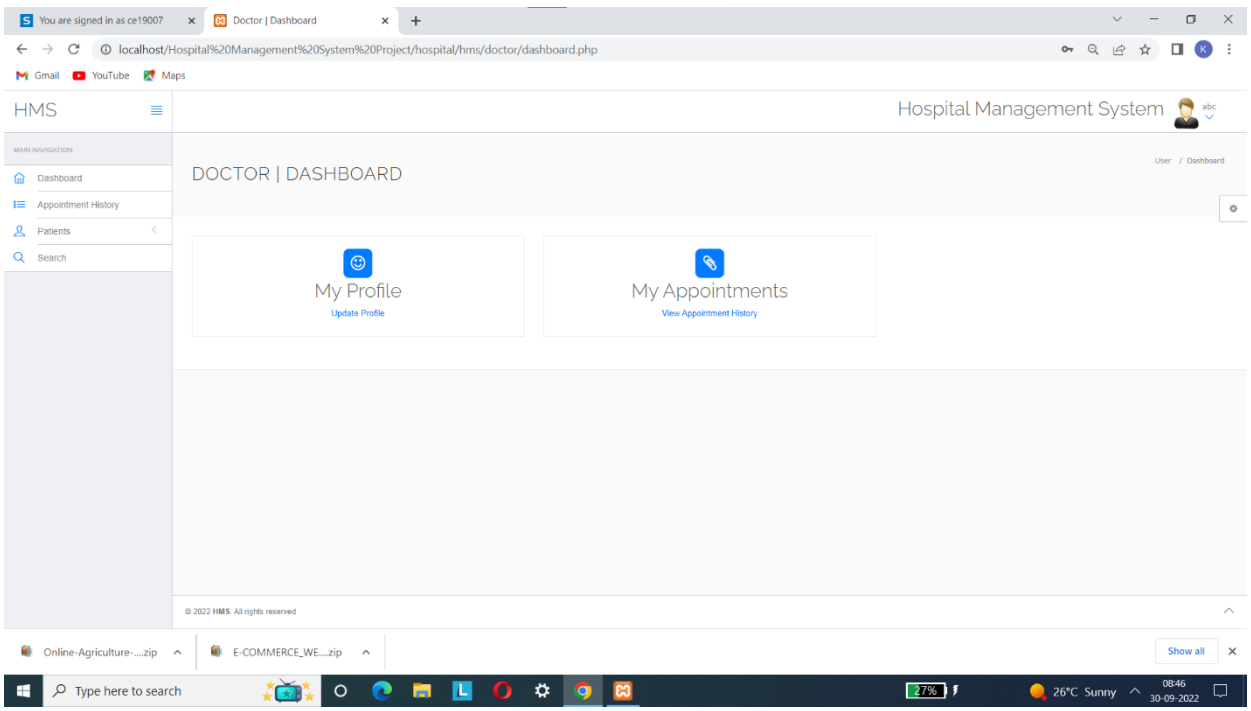

## 5.6 USERS



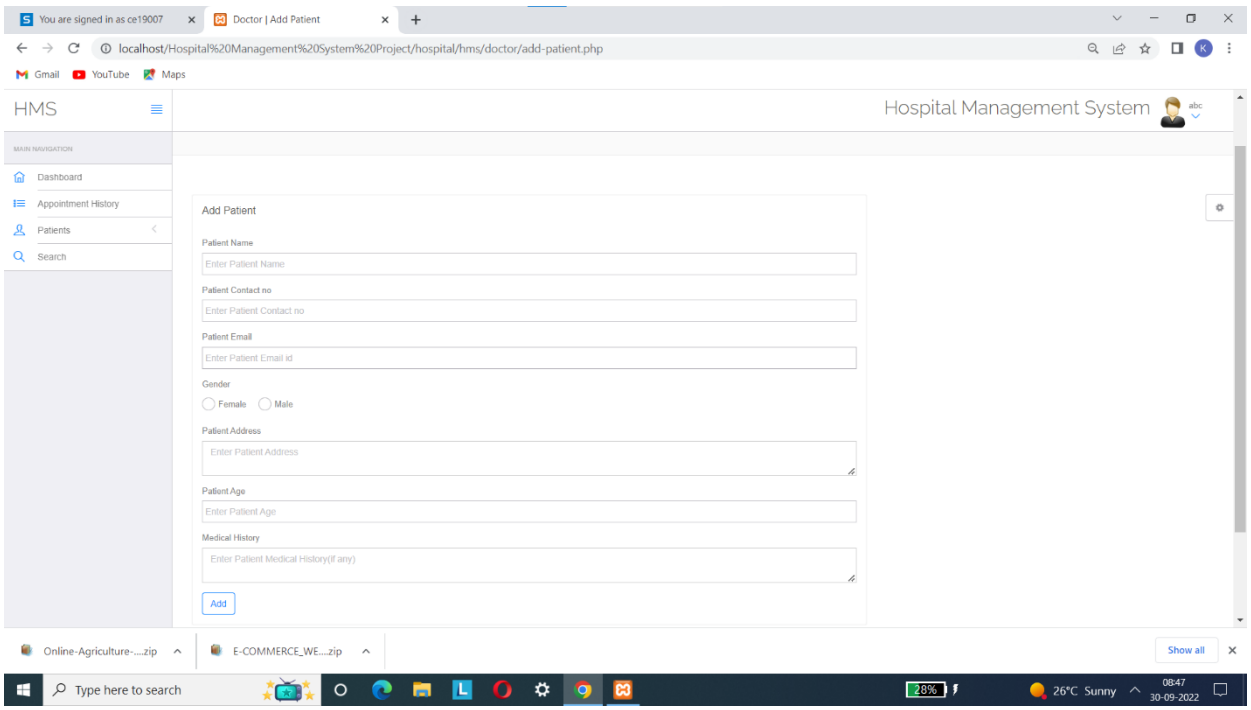

## 5.7 VIEW PATIENT



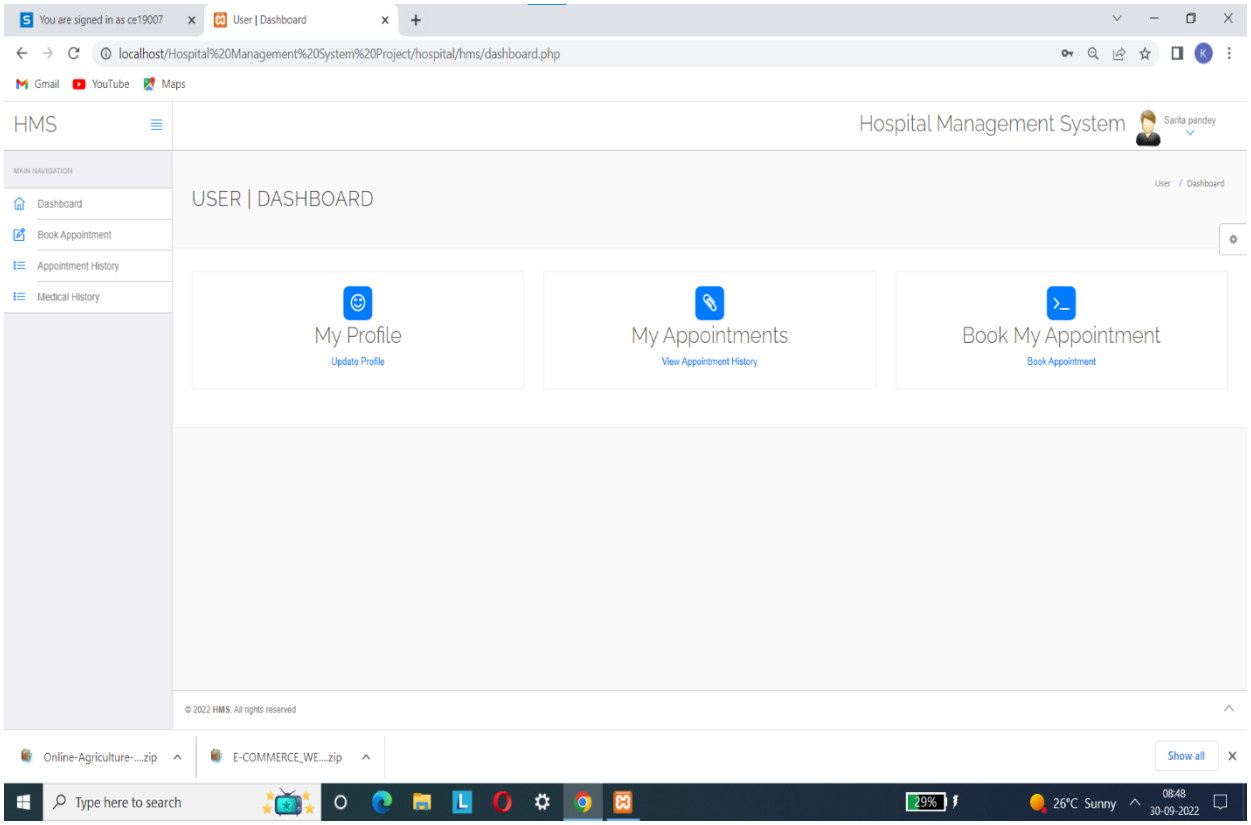

## 5.8 DOCTOR DASHBOARD



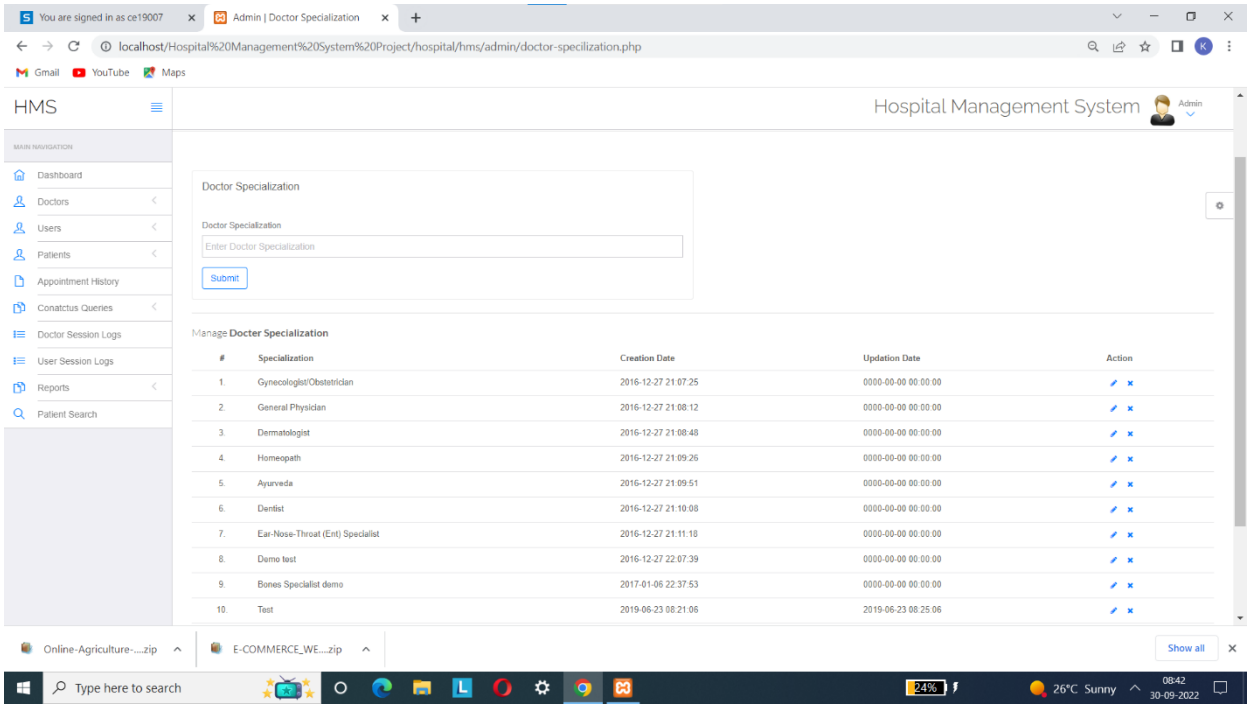

## 5.9 PATIENT




## 5.10 BOOK APPOINTMENT




## 5.11 DOCTOR SPECIALIZATION

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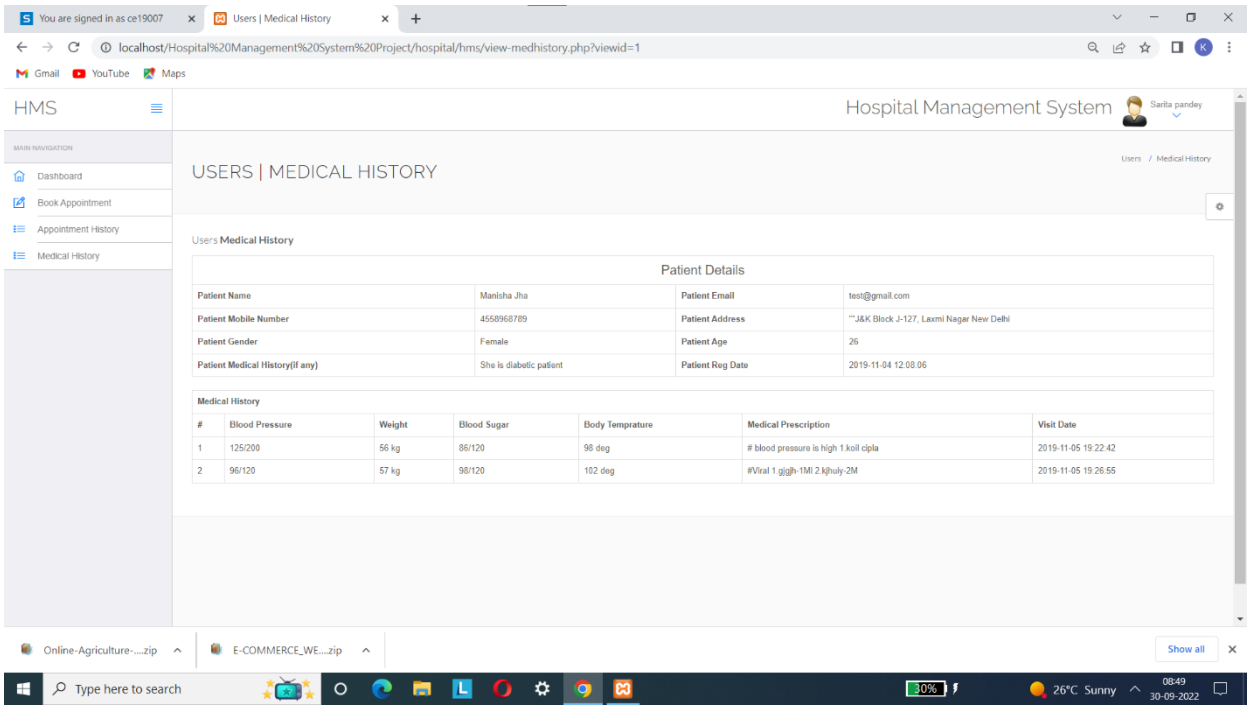
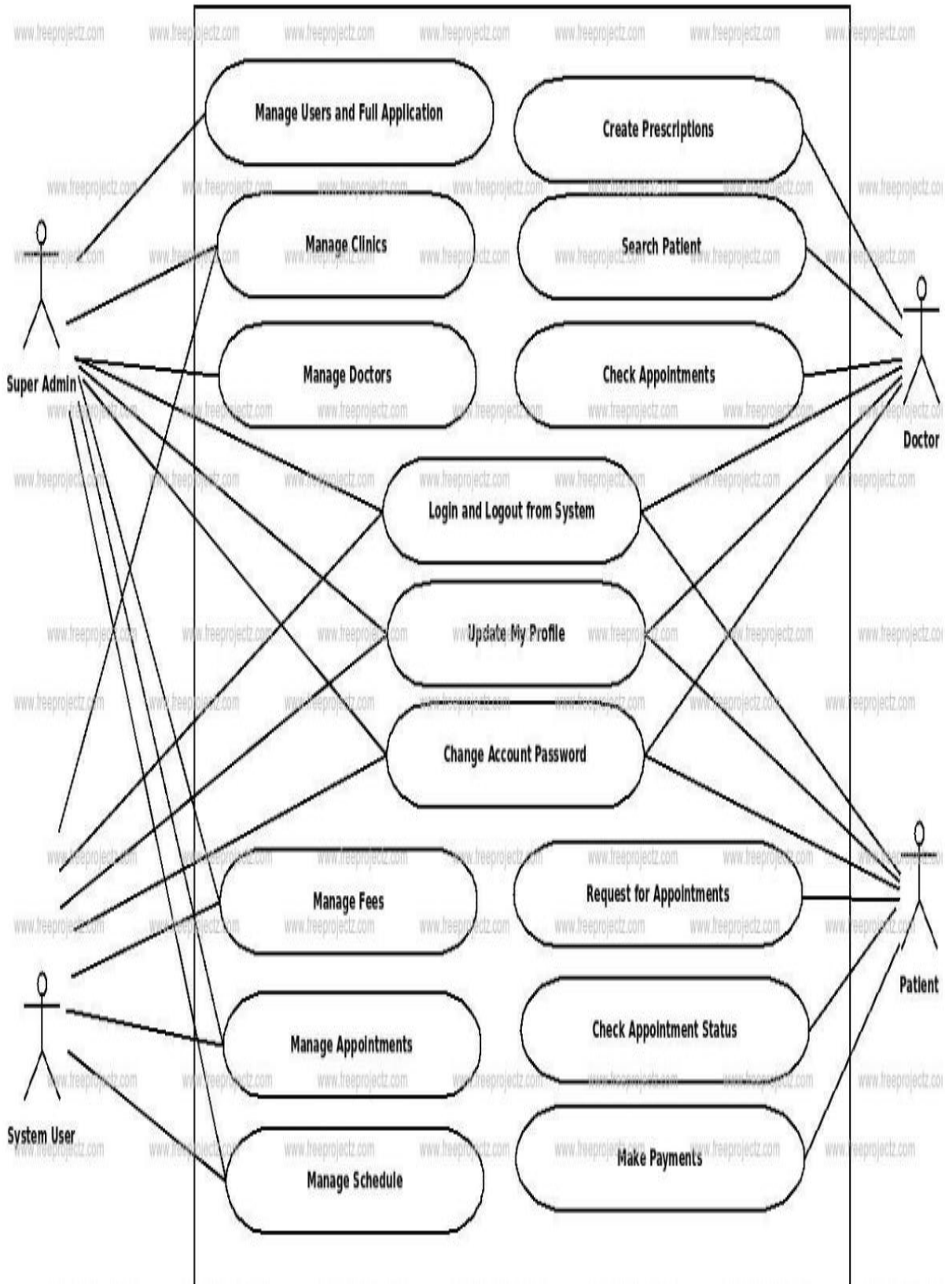
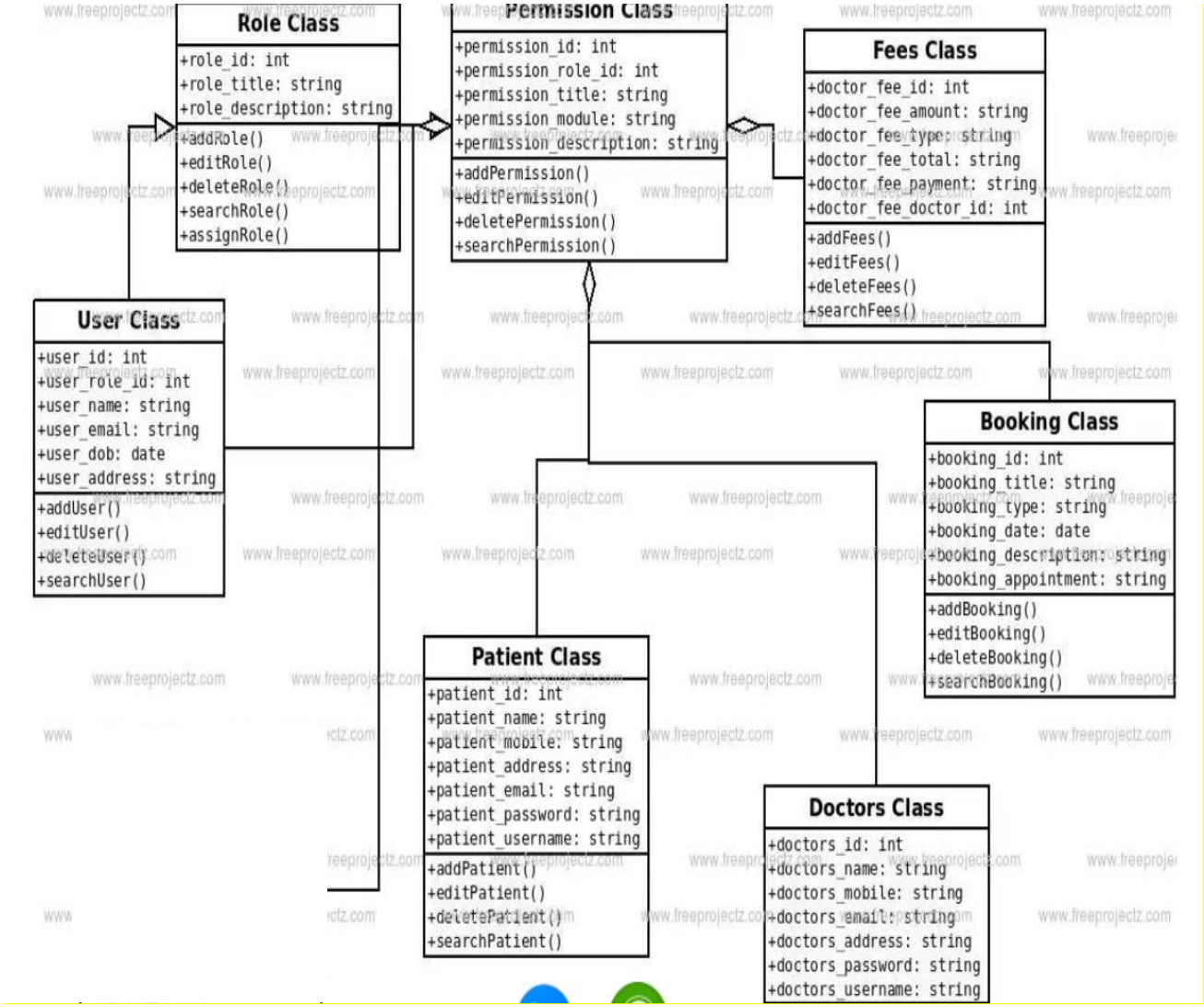
## 5.12 MEDICAL HISTORY



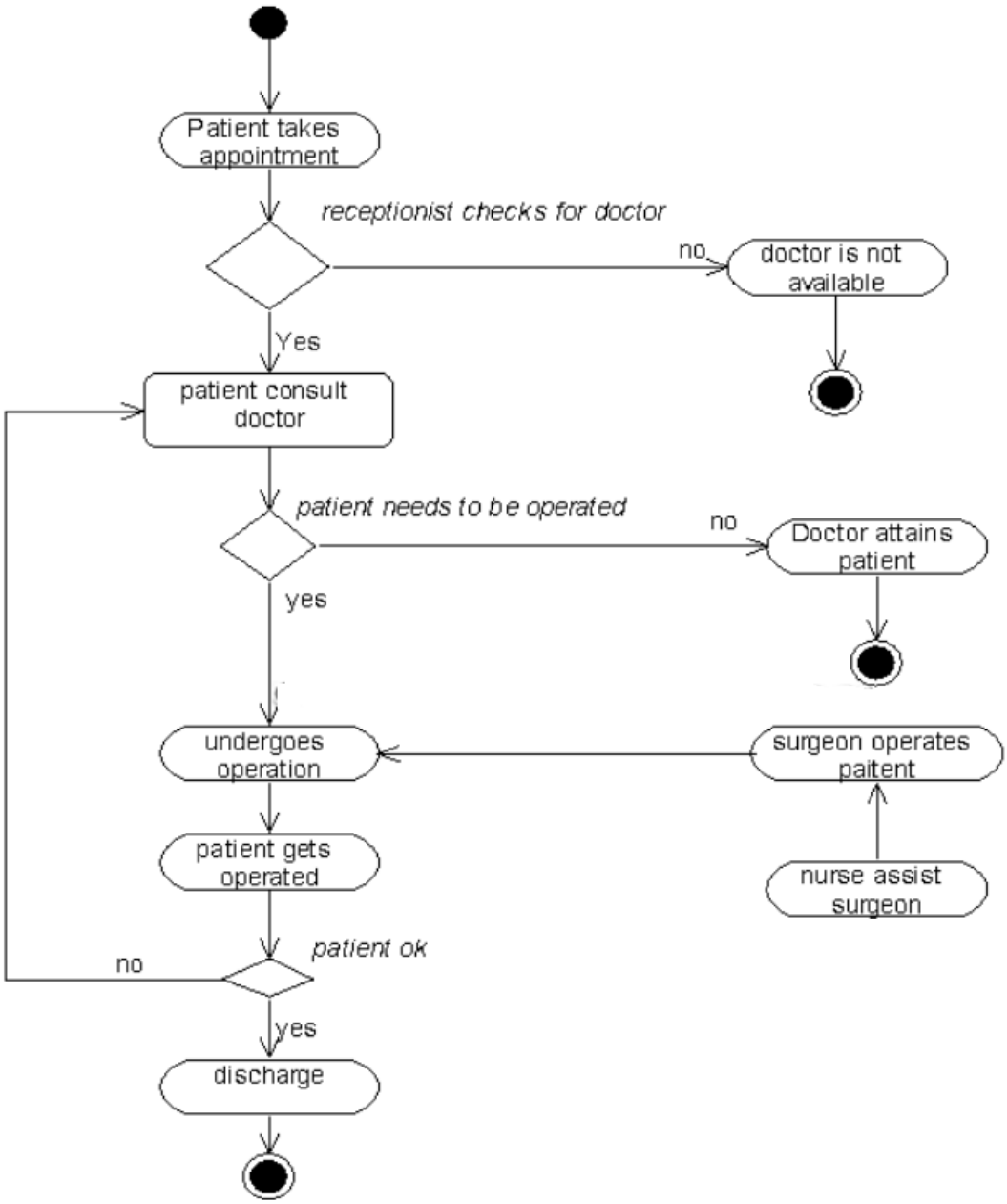

# USE CASE DIAGRAMS



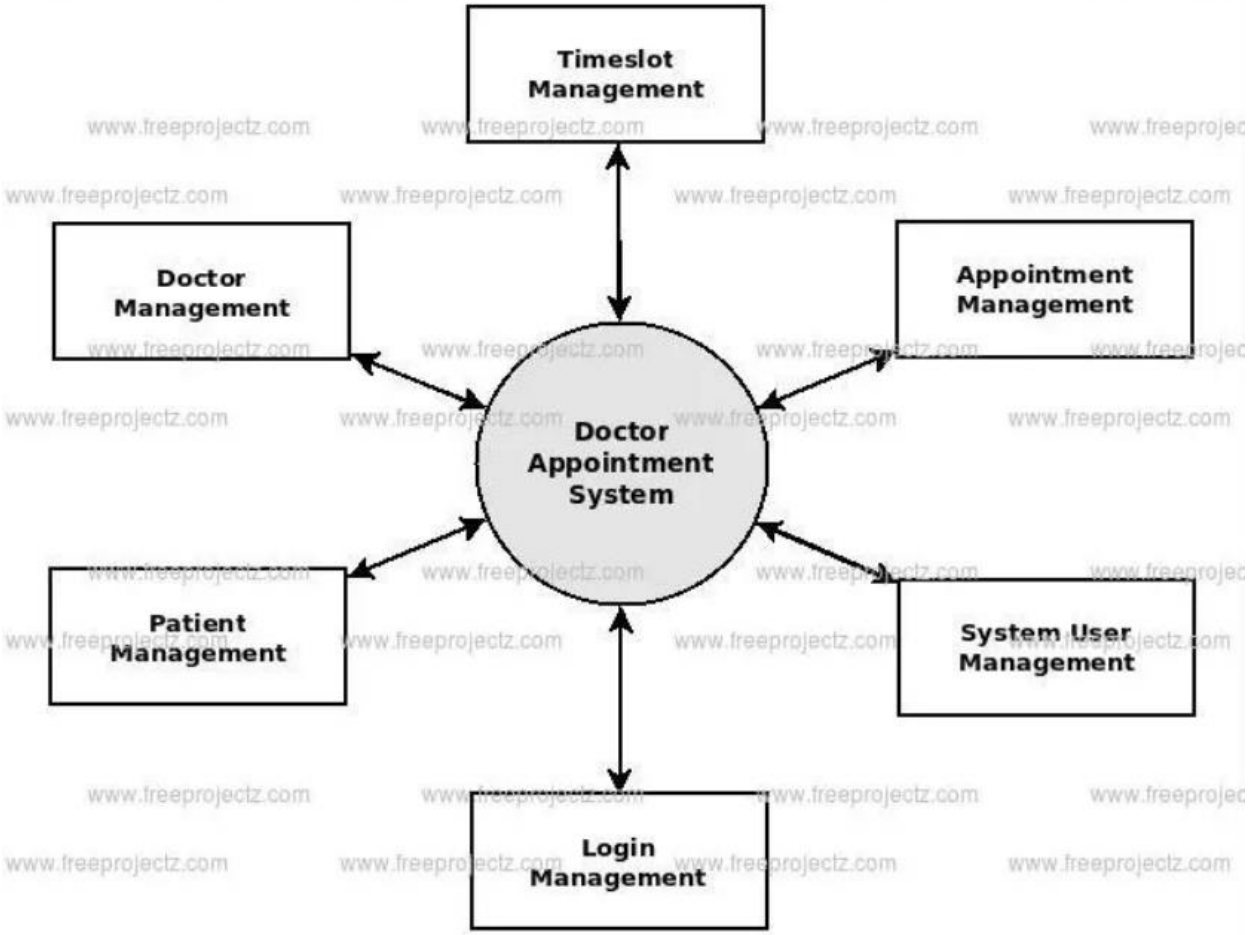

# CLASS DIAGRAM



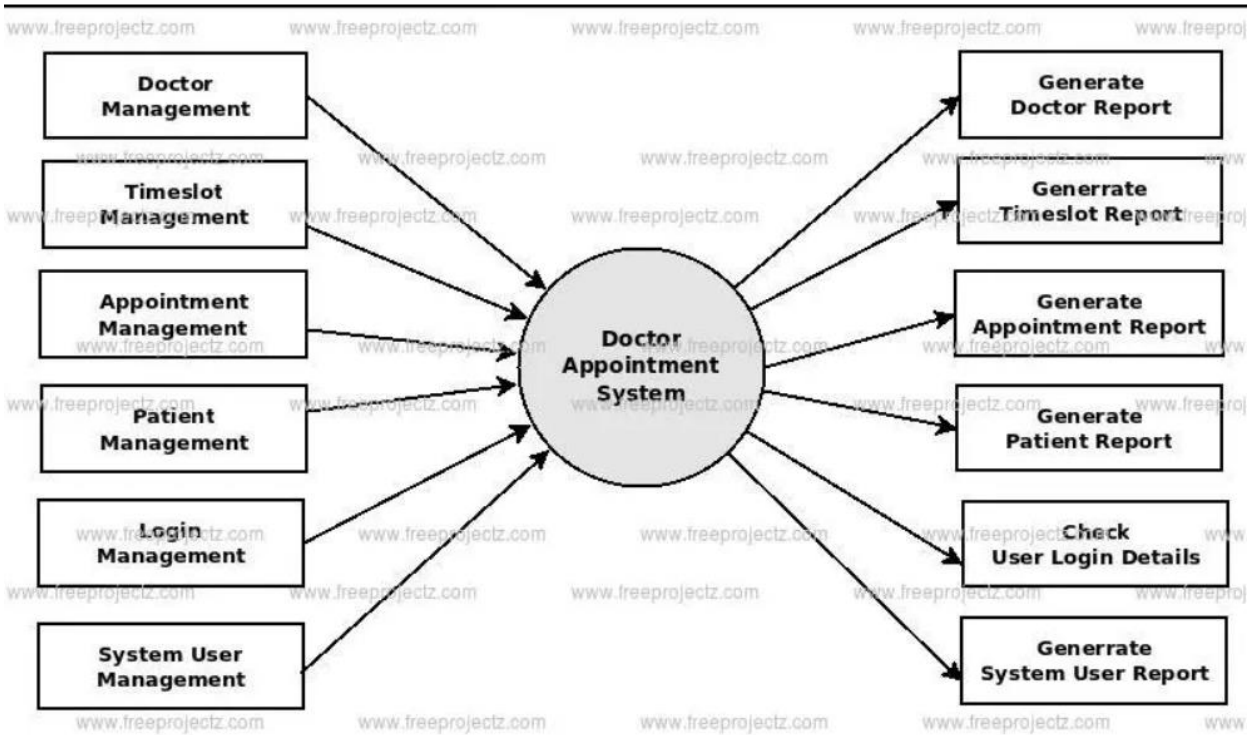

# ACTIVITY DIAGRAM


Patient takes appointment
receptionist checks for doctor
no
doctor is not available
Yes
patient consult doctor
patient needs to be operated
no
Doctor attains patient
yes
undergoes operation
surgeon operates paitent
patient gets operated
nurse assist surgeon
patient ok
no
yes
discharge

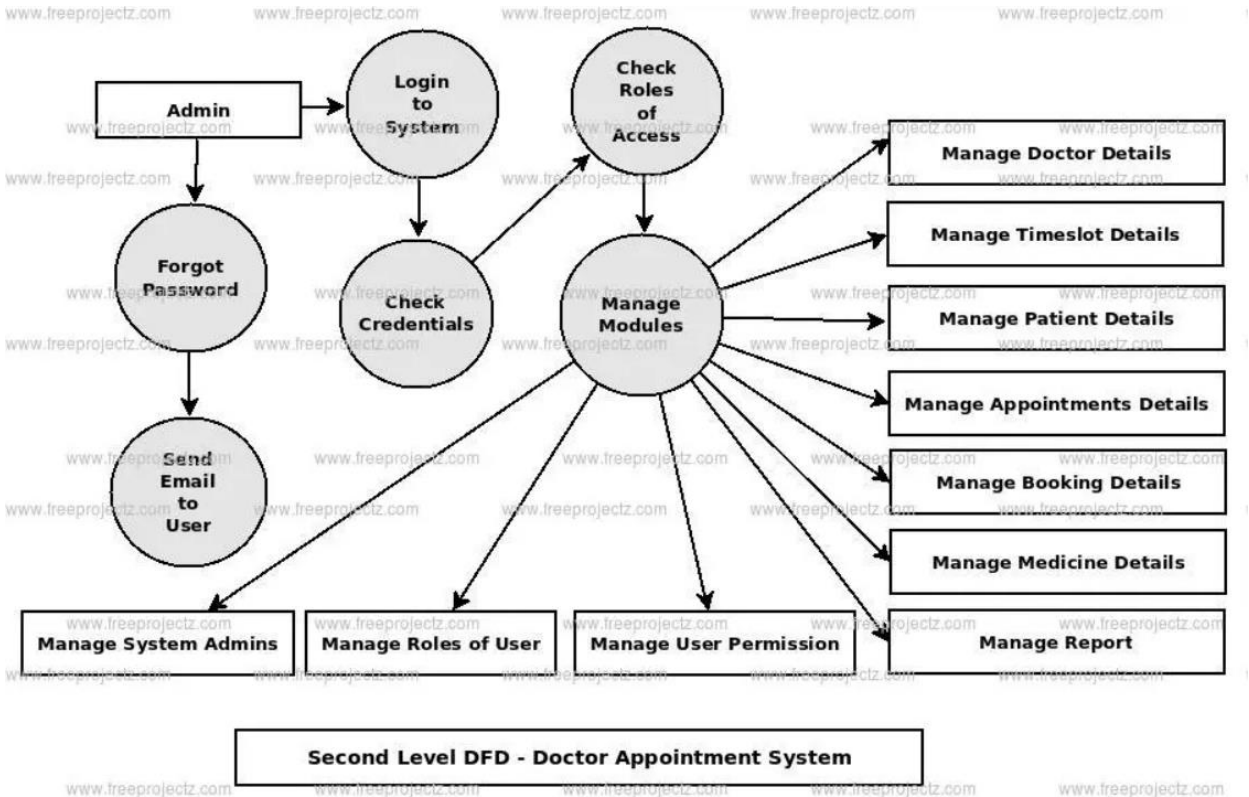
## DFD LEVEL0


Timeslot Management
Doctor Management
Appointment Management
Doctor Appointment System
Patient Management
System User Management
Login Management

# DFD LEVEL 1


Doctor Management
Timeslot Management
Appointment Management
Patient Management
Login Management
System User Management
Doctor Appointment System
Generate Doctor Report
Generrate Timeslot Report
Generate Appointment Report
Generate Patient Report
Check User Login Details
Generrate System User Report

## DFD LEVEL 2




# 6. Code Implementation

## 6.1 Implementation Environment

Challenges identified for successful design and implementation of this project are dominated by:

· Complexity, reliability/availability, transparent data access. The project was a result of a group consensus. The team was having two members. The team was guided by project manager. The team structure depends on the management style of the organization, the no. of people in the team, their skill levels and the problem difficulty.

## 6.2 Program/Module Specification

· System GUI must be as simple and user friendly as anyone can use it. At front side we implemented login form to access the system.

· A Session is maintained throughout the system when a particular user enters into the system. The Session is regularly checked whenever it is required.

· Proper validation is placed as and when it is required.

## 6.3 Coding Standards

· Normally, good software development organization requires their programmers to maintain some well-defined and standard style of coding called coding standard.

### 6.3.1 Comment Standards:

· The comment should describe what is happening, how it is being done, what parameters mean, which global are used and which are modified, and any registration or bugs.
The standards I have followed are:

· Comment may also be used in the body of the Cascading style sheets to explain individual sections or lines of codes to easily get access and easily review or manage the classes or properties for the pages.

· Inline comments should be made with the //. Comment style and should be indented at the same level as the code described.

· For multiple line comments we write between /* .... */.

# 7. Testing

## 7.1Testing Strategy

A strategy for software testing integrates software test case design method into a well-planned series of steps that result in the successful construction of the software. The strategy provides the roadmap that describes the steps to be conducted as a part of testing, then these steps are planned and then undertaken, and how much effort, time and resource will be required.

## 7.2Testing Method

### 7.2.1Unit Testing

The unit testing is meant for testing smallest unit of software. There are two approaches namely bottom-up and top-down. In bottom up approach the last module is tested and then moving towards the first module while top down approach reverses the action. In present work we opt for the first one. The bottom up approach for the current project is carried out as shown in.

### 7.2.2Validation Testing

After the integration testing software is completely assembled as a package, interfacing error have been uncovered and corrected, and then validation testing may begin. Validation can be defined in many ways but a simple definition is what a validation succeeds when software functions in a manner that can be reasonably accepted by the user.

### 7.2.3Integration Testing.

The integration testing is meant to test all the modules simultaneously because it is possible that all the modules may function correctly when tested individually. But they may not work altogether and may lead to unexpected outcome.

# 8. Limitations and Future Enhancement

## 8.1 LIMITATIONS:

Though we tried our best in developing this system but as limitations are mere parts of any System so are of our system. Some limitations of Online Examination system are as under:

- Low storage capacity.
- Communication between admin and customer.

## 8.2 FUTURE ENHANCEMENT:

There is always a scope for enhancements in any developed system, especially when our nature of the project is iterative waterfall which allows us to rethink on the method of development to adopt changes in the project. Below mentioned are some of the changes possible in the future to increase the adaptability, and efficiency of the system.

- More attractive GUI (Graphical user interface).
- Communication options like chat.
- Online payment options.

# 9. Conclusion

Taking into account all the mentioned details, we can make the conclusion that the hospital management system is the inevitable part of the lifecycle of the modern medical institution. It automates numerous daily operations and enables smooth interactions of the users. Developing the hospital system software is a great opportunity to create the distinct, efficient and fast delivering healthcare model. Implementation of hospital management system project helps to store all the kinds of records, provide coordination and user communication, implement policies, improve day-to-day operations, arrange the supply chain, manage financial and human resources, and market hospital services. This beneficial decision covers the needs of the patients, staff and hospital authorities and simplifies their interactions. It has become the usual approach to manage the hospital. Many clinics have already experienced its advantages and continue developing new hospital management system project modules.

# 10. References


**WEBSITES:**

- https://www.php.nrt
- https://getbootstrap.com
- https://www.academia.edu
- https://www.feelfreetocode.in

**Books**

- Software Engineering by Roger Pressman