

CAPSTONE PROJECT REPORT

(Project Term January-May 2022)

Online doctor appointment scheduling and patient medical management system

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Course Code: CSE445

Under the Guidance of

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Computer Science and Engineering



LOVELY
PROFESSIONAL
UNIVERSITY

**TOPIC APPROVAL PERFORMA**

School of Computer Science and Engineering (SCSE)

Program : P132::B.Tech. (Computer Science & Engineering)

COURSE CODE : CSE445

REGULAR/BACKLOG : Regular

GROUP NUMBER : CSERGC0337

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PROPOSED TOPIC : Online doctor appointment scheduling and patient medical management system

Qualitative Assessment of Proposed Topic by PAC		
Sr.No.	Parameter	Rating (out of 10)
1	Project Novelty: Potential of the project to create new knowledge	6.59
2	Project Feasibility: Project can be timely carried out in-house with low-cost and available resources in the University by the students.	7.82
3	Project Academic Inputs: Project topic is relevant and makes extensive use of academic inputs in UG program and serves as a culminating effort for core study area of the degree program.	7.82
4	Project Supervision: Project supervisor's is technically competent to guide students, resolve any issues, and impart necessary skills.	8.00
5	Social Applicability: Project work intends to solve a practical problem.	6.35
6	Future Scope: Project has potential to become basis of future research work, publication or patent.	7.00

PAC Committee Members		
PAC Member (HOD/Chairperson) Name: Dr. Navneet Malik	UID: 14335	Recommended (Y/N): Yes
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Final Topic Approved by PAC: Online doctor appointment scheduling and patient medical management systemOverall Remarks: Approved

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Approval Date: 16 Mar 2022

Approval

This project work is titled “Online doctor appointment scheduling and patient medical management system”. Course Specialization Area: Programming II, Course Code: CSEC-445, Submitted by: S.Bhuvaneswar reddy, registration no: 11806794, T.Venkata Sai and Chandrashekhar Kairamkonda. This project has been approved as it is satisfied the academic requirement. This project is done under the guidance of Dr.Bandana Sharma, Assistant Professor, Department of Computer Science & Engineering, lovely professional university, Punjab.

DECLARATION

We, therefore declare that the project work entitled (“Online doctor appointment scheduling and patient medical management system”) is a true record of our work done as required by the Capstone Project to obtain a B.Tech degree in Computer Science Engineering from Lovely Professional University, Phagwara, under the direction of Dr.Bandana Sharma, between January and May 2022. All information provided in this keystone project report is based on our deep and accurate work.

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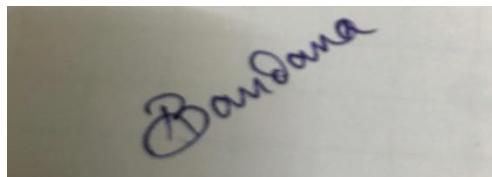
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CERTIFICATE

This is to certify that, to the best of my knowledge and belief, the declaration made by this group of pupils is correct. They finished the Capstone project with my help and supervision. Their present work is the culmination of their preliminary investigation, effort, and learning. No component of the project has ever been submitted to a university for any other degree. The capstone project for the B.Tech degree-awarding in Computer Science Engineering at Lovely Professional University, Phagwara is ready for submission and partial execution.



Signature and Name of the Supervisor

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Date: 28-04-2022

Acknowledgment

I'd want to express my gratitude to everyone involved in this project for their contributions to its successful conclusion. To begin, I'd want to express our heartfelt appreciation to everyone who assisted me in completing this assignment on time. My project supervisor, Dr.Bandana Sharma, Assistant Professor, department of computer science and engineering, beautiful professional university, Jalandhar, Punjab, deserves particular recognition. This project would not have been as effective if it hadn't been for the supervisor's guidance and assistance. Her advice was invaluable throughout my research and the preparation of my project report.

We want to express our gratitude to my family members for their warmth, assistance, generosity, and perseverance. We owe a debt of gratitude to all of my friends who counselled and motivated me along the way.

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ABSTRACT

The project's purpose is to computerize the hospital's front office management and provide user-friendly, fast, and cost-effective software. It is involved with the collection of patient data, diagnostic data, and other similar information. It was formerly done by hand. The system's primary function is to register and preserve patient and doctor data, as well as to access and meaningfully alter that data as needed. Patient and diagnosis information is fed into the system, and these facts are shown on the screen via the system output. To utilize the online doctor appointment scheduling and patient medical management system, you'll need a login and password. It can be accessed by the administrator. They are the only ones who have access to the information in the database. It is simple to collect the information. The goal of this project is to create a computerised hospital front desk administration system that produces user-friendly, quick, and cost-effective software. It is in charge of managing and safeguarding patient data, diagnostic information, and other sensitive data. Its main purpose is to register and retain patient and doctor information, as well as to access and update it as needed. The output of the system is then used to display the patient's data and diagnostics on the screen. You'll need a username and password to access the Hospital Management System. It can be accessed by a receptionist or an administrator. They are the only ones who have access to the database. The information is easy to access.

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1 INTRODUCTION

1.1 INTRODUCTION

The Online doctor appointment scheduling and patient medical management system project includes the patients must be registered and their information must be kept in the system. Every patient has a unique identification in the software, which stores all of the patient's and doctor's information automatically. The user can look up a doctor's schedule and patient information. A username and password are required to set up this system. Admin or doctors are in charge. Only they have access to the website's data. It's simple to get data. It's simple to use the UI. Personal data is well-protected, and data processing is sped up significantly. The online doctor appointment scheduling and patient medical management system is powerful, adaptable, and simple to use, with the goal of providing hospitals with actual, unimaginable benefits. With the purpose of providing hospitals with tangible, inconceivable benefits, the system is powerful, versatile, and simple to use. This is intended for multi-specialist hospitals to manage and administer a variety of hospital administration and administrative procedures. It's a comprehensive Integrated System that disseminates pertinent data throughout the hospital in a structured manner to assist excellent patient care decision-making, hospital administration, and critical accounting. A software product suite developed to improve the quality and management of hospital management in the field of clinical process and cost-based analysis is the online doctor appointment scheduling and patient medical management system. This system enables you to increase the efficiency and quality of your organization's work. You may better manage your processes by properly managing the processes that are critical to the hospital's performance.

1.2 MODULES IN THE PROJECT

The entire project has 4 modules

- Admin module
- Patient module
- Doctor module
- Appointment module

1.2.1 ADMIN MODULE

The admin has full control over the system. You have access to all available hospital records. Patients, doctors, departments, treatments, and medical records may all be managed by the admin. A doctor's account can only be created by an administrator. To do so, the administrator must also create accounts for the doctor of other hospital departments. All appointment records can also be viewed by the administrator. In addition, the supervisor should follow the treatment and payment information of each patient. The Administrator have access to the queries of users and can respond to them. Admin can see the login sessions of all users like doctor and patient's and have access to the reports and can view them at any time.

1.2.2 PATIENT MODULE

After logging in for the first time, users can log in to monitor meeting status. All appointments are on hold by default. A doctor must first approve or deny a treatment procedure before it can begin. Patients also have the right to cancel their reservation at any time. The patient dashboard allows patients to update information and access treatment and prescribing data. Patients have access to all records in the treatment area, including treatment type, doctor name, date, and total cost.

1.2.3 DOCTOR MODULE

The technology will be accessible to each doctor through his or her own account. All pending sessions can be viewed by a doctor here. There are options available for the doctor to approve or disapprove each visit. The doctor may review the patient's profile and record of appointment after approving the appointment. For the rest of the time, the doctor should keep each patient healthy by providing appropriate treatment. The doctor may still be able to go to the doctor's office after completing medical records. The doctor should choose the date, amount, and dosage of the doctor's prescription, and choose the most readily available medication.

1.2.4 APPOINTMENT MODULE

The appointment may be arranged by making sure the doctor and their free spaces are available, then the appointment will be confirmed. Otherwise days or vacancies may be requested to switch patients. Physician appointments for various patient positions are created and maintained by the system. Appointments may be changed at any time prior to the actual hour schedule for the appointment. Doctor and patient details must be registered to make appointments.

1.3 OBJECTIVE

The hospital is an important part of our lives, presenting first-class hospital therapy for its patient's various diseases, which can be caused due to the weather change, improved workload, emotional trauma, and so on. It's far essential for hospitals to keep track of their daily activities and the facts of their patients, doctors, and the team of workers who maintain the hospital running well & effectively. But tracking all their activities and data present on paper is a very difficult, erroneous, and tiring process. It does not work well and it is a time-consuming process the number of people visiting the hospital increases day to day. Record and maintaining all these records are very dishonest, ineffective and prone to mistakes. It is also not easy technically or economically to keep data on paper. Therefore maintaining the operation of the "Online doctor appointment scheduling and patient medical management system" is our foundation project. We have developed a version of the system, and that is called "Online doctor appointment scheduling and patient medical management system".

The main objective of this project is for reducing the workload of unregistered health care centers up to 80%. It aims to provide the least expensive reliable automation of existing systems. The system also provides stable and reliable storage and backup resources, as well as excellent data security at all levels of the user system.

1.4 SCOPE

The proposed software program is an online doctor appointment scheduling and patient medical management system. The program can be used at any medical institution, clinic, and treatment center. The present running program is totally based on paper. It wasn't very fast and cannot provide up-to-date patient lists within the rationale Time frame. The purpose of this software is to lessen regular time payments and increase number of patients who may be treated appropriately. The statements required in both documents are also functional and non-functional. The hospital management system could handle specific tasks such as securing various information about the patients. This will help them secure the data to keep patient-doctor confidentiality as well as assure them of their healing factors. It can also improve the productivity of the health care workers and could let them accommodate more patients.

2. PROBLEM STATEMENT

- ❖ **Shortages of immediate resources:**

Obtaining particularly specific information is extremely difficult.

- ❖ **Lack of immediate data retention:**

It takes time and effort to properly save information obtained through various purchases

- ❖ **Lack of immediate renewal:**

Due to the paperwork involved, many changes in information such as patient records or child immunization details are difficult to make.

- ❖ **Error-prone calculation:**

Manual computations are imprecise and time-consuming, which might lead to inaccurate information. The estimation of a patient's debt based on numerous treatments is one example.

- ❖ **Preparation of accurate and prompt reports:**

This might be a tough undertaking because the information from multiple sources is difficult to come by.

- ❖ Medical care is one of the most essential and in-demand services for all. It needs a lot of attention and high-quality service that also causes health care workers to do a lot of effort. These issues also add to the situations where there's a need for doctors for every patient wherein it could be automated and handled with technology.

- ❖ It's very much important to support an efficient software program to process and store the information data of the hospital and this software provides a way in a simple and effective way.

3. LITERATURE SURVEY

Efficiency and waiting periods between different processes, departments, and individuals are two important difficulties facing hospital management. This study identifies the shortcomings of existing systems and presents RFID (Radio Frequency ID) as well as a wireless sensor, location, and information management framework for tracking hospital assets, employees, and patients in real-time as they go through routine processes. Jobs. Visual stimulation is included in the program, as well as the ability to examine current processes for improvement in order to reach efficient process and service standards.

Hospitals are complex organizations that require solid management practices in addition to the technical assistance required in the context of treatment and prevention of health concerns, for example, necessitate strong management methods targeted at increasing their fundamental business efficiency. However, in terms of management, there are reoccurring conflicts concerning technical and administrative issues.

HMS also displays an error notice after entering incorrect information. It also prevents illegal access since, after the trainer registers, you must create a certificate that the administrator can authenticate, and only the trainer will have access to this site. It's quite easy to use as a result of all of this. This is essentially an internet web portal where the user may look for Trainers in any form of pastime very quickly. Several UN agencies that provide these types of services have registered on this website to submit their information and certification, allowing the user to read the fine print and enjoy the services as desired.

In Numerous research have been conducted to introduce the event of data systems in good hospital systems. In fact, information systems is an academic study of systems with specified reference data and suitable hardware and software package networks that are used by people and organizations to collect, filter, analyses, and reform medical data. First, there's the ever-present hospital system model, which is referred to as Service design. Medical data is available in this model, and it is structured in stages. There are numerous ways to implement the concept to prepare medical data (offline computer) and, as a result, good service delivery (online computer) is introduced. The goals of the strategies are to provide medical information services to patients in their own status and private environment, as well as to disseminate it. We've introduced a comprehensive hospital system that eases the work for the patients and doctors the required records and payment details online. We've implemented a complete

hospital system that makes it easier for patients and doctors to access needed data and payment information via the internet.

This paper provided a clear picture of the components that will be included in the software solution. Patients' interactions, diagnosis, and treatment will all benefit from a Smart Hospital Management Designs interface. Our Team lead ensures that the project and outlook run well, providing consumers with a trouble-free experience. The Team Members devised the design, workflow, and database structures, among other things. This project might be a unique representation of an online hospital management system that reduces effort and increases hospital time and efficiency by using the internet.

We used a variety of methods and came across a variety of research papers to help us come up with the concept of Medicare Management. According to the paper, B. Koyuncu and H. Sour devised many tasks for an emergency nurse management system, leading to the development of the IHMS ("Intelligent Hospital Management System"), which enables scalability and integrated patient care. It also provides the management with great data security through data encryption. Aside from authorized access to personal information.

4 EXISTING SYSTEM

4.1 INTRODUCTION

The procedure currently used by the system is that when a patient visits a hospital to get their medication, the patient first purchases an identification card containing their name and other necessary information and a card with an identity number. The patient then awaits the processing of the card, as well as the doctor's diagnosis, a file cover containing the card with the medication column. The doctor set the arrival date of the card in the waiting room. When the files arrive, patients line up to see a doctor. In this current system, file cabinets are used to file individual patient records. The system is too tedious to keep track of space occupied by log files, slow record processing, and a chance to file timeouts waiting for registrars to receive patient files.

Existing systems provide the fundamental functions required in a hospital administration setting. In such instances, the software has no intelligence. The existing system requires the receptionist to manually enter all patient information, doctor availability information, and information on the tests performed on patients who have been prescribed by the doctor. If a patient needs to be admitted, we must first check for bed availability, which takes a long time if done manually. In addition, there is no appropriate search technique for verifying patient information. Maintaining all of the hospital's financial management systems, as well as the records that keep track of doctor information, is a difficult process utilizing the current system. When it comes to the system's security, there are numerous flaws.

4.2 EXISTING SYSTEM DRAWBACKS

1. There is a lot of paperwork in the existing manual system.
2. Manual record maintenance takes a long time.
3. As the amount of data grows, it will become more difficult to store and preserve it.
4. It requires large amounts of office space, which can be used to store past details data.
5. It will become a tough job and not easy to retrieve previous patient records.
6. There is a lack of security for records because anyone can tamper with them.

4.3 NEED OF NEW SYSTEM

- **Reliability Issue:**

The current system is unreliable. It appears to be of varying quality from month to month. It occasionally produces an excellent result, while other times it produces a poor result.

- **Accuracy problem:**

The reports may contain far too many inaccuracies..

- **Timeliness problem:**

Reports and output from the existing system are too late, and they often do not help because we are not on time.

- **Performance Problem:**

Outputs and reports often contain misleading information. Customer information is sometimes invalid.

- **Economic Crisis:**

The existing system is extremely costly. We have to spend a lot of money to keep the Program running, yet we aren't getting the outcomes we desire.

- **Competence Problem:**

The current system also has a capacity issue. The organization's staff is small, and the task is extensive. Only a few persons are capable of handling all of the tasks.

4.4 PROPOSED SYSTEM

By automating the entire hospital administration system with an integrated program that manages the entire system, we would be able to solve all of the above-mentioned concerns in our suggested system. For billing, collection, appointment booking, appointment history, and patient medical history, the proposed system provide patients with a single integrated view. Effective Search facility to search any type of information connected to Patient history. Easy Query Handling for the rapid decision and reports can be viewed for any specific date. Easy appointment booking based on a specific date with doctor based on specialization of the doctor with fees.

- **Employee Information:**

The suggested new system keeps track of all employee information.

- **Statistics:**

The suggested new system calculates salary and income tax in an automated, quick, and precise manner.

- **Registers:**

Maintaining a pay register and an employee register by hand is no longer necessary. It remembers each entry, allowing us to locate any connected employee and salary report at any time.

- **Speed:**

The new system presented is 100 percent faster and saves time.

- **Staff:**

The proposed new system requires fewer staff. Little people can do it great deal.

- **Efficiency:**

The suggested new methods save time by completing the tasks of several providers.

- **Historical information:**

The suggested new plan includes information on every previous doctor who was formerly a patient for future assistance.

5 SYSTEM ANALYSIS

5.1 BACKGROUND STUDY

The split of an object into sections of a study and its application, as well as a detailed evaluation, is known as system analysis. It is critical to understand the type of business and the present system functionalities before building any program. To ensure that all customer needs are addressed, the detailed test offers some of the essential data at a time design. Feasibility studies are significantly used in the investigation or I study undertaken during the analysis phase. It is not incorrect to claim, instead, that the analysis and possible categories are consistent. The time feasibility study is where the high-level analysis begins. The analysis is given as if it were a single phase of the system development life cycle, however this is not the case. The analysis starts with the program's implementation and lasts until the end. Analysis may play a part in periodic repairs and system upgrades even after the program has been implemented successfully. Inadequate comprehension is one of the leading reasons for project failure, and one of the most common causes of misunderstanding is the inability to plan system analysis adequately.

5.2 SOFTWARE SYSTEM ATTRIBUTES

5.2.1 Reliability:

This web application is a dependable solution that generates quick results while following all of the established procedures.

5.2.2 Availability:

This online application will be available for usage and will assist them in efficiently managing their operations.

5.2.3 Security:

This software will be created with security in mind. Doctor can register in the webpage. Only administrator can add the doctor details and share to the concerned doctor.

5.3 SCOPE OF WORKING

The software product that is being presented is an “Online doctor appointment scheduling and patient medical management system”. Any hospital, clinic, treatment facility, or disease lab will be able to use

the system. Patients' information is collected and stored at a clinic, treatment facility, or pathology lab for future use. The existing system is based on paper. It's too sluggish, and it can't keep up with the demand for updated patient lists. The goal of this initiative is to decrease overtime payments while also increasing the number of patients who may not be getting the care they need.

5.4 FEASIBILITY STUDY

Feasibility study suggests one or more solutions for a project problem set. In fact, it is a test of whether or not continuing with the project is beneficial. Feasibility is a study of these types of solutions. Such tests usually show flaws in main objectives. This process is repeated as needed policies are revised along with other solutions checked. Analyzing the feasibility often considers other project methods, one selected as a very satisfying solution. These alternative approaches also ought to be explored in a more holistic way to make a surplus of resources.

The following are the many steps involved in a hypothetical analysis:

5.4.1 TECHNOLOGICAL FEASIBILITY

This covers considerations like if the system's technology exists, how difficult it will be to create, and whether the organization has enough experience with that technology. The evaluation is based on the creation of a system requirements framework, which includes input, output, fields, programs, and procedures. In terms of data amounts, styles, and frequent updates, this can be done appropriately. Providing an overview of the technological system.

5.4.2 SCHEDULE FEASIBILITY STUDY:

This covers considerations like how much time is available to develop a new system, where it can be built (for example, during the holidays), if it would interfere with routine company operations, and so on.

5.4.3 ORGANIZATIONAL FEASIBILITY STUDY:

This includes considerations like whether the system has enough support to be effective if it will cause a lot of change, and whether the organization will be able to absorb it soon enough.

5.4.4 CULTURAL FEASIBILITY STUDY:

At this stage, alternatives to the project are evaluated for their impact on the environment as well general culture. For example, environmental factors need to be considered.

5.4.5 LEGAL FEASIBILITY STUDY:

All initiatives must be formally examined, and this is not a final resort. Such inspections are typical when a company or a retainer has legal representation for its personnel. In any case, legal concerns may arise after the project is completed.

5.4.6 MARKETING FEASIBILITY STUDY:

This will involve a dynamic examination of the commercial potential of single and multi-dimensional markets. As a result, before constructing this program, our team will write some text about feasibility research, which will incorporate all of the above-mentioned analyses.

5.4.7 ECONOMIC FEASIBILITY:

The ultimate profit margin of the product development plan is used to analyze development costs. When evaluating predicted costs and benefits, cost-benefit analysis is used in economics..

COSTS AND BENEFITS REVIEW:

Developing an IT application is a long-term commitment. As a result of the upgrade, the online application now produces a successful business. Profit might be monetary or in the form of a better employment environment. It does, however, come with dangers, as the estimations may be wrong in some circumstances. It's possible that the initiative may be ineffective. Managers may use cost-benefit analysis to have a better knowledge of costs, rewards, and risks. Comparing other investments is usually part of the process. The cost-benefit analysis assesses the system's predicted benefits and savings and compares them to the estimated cost. It is critical to identify cost and benefit aspects while doing a cost-benefit analysis. The following are the different types of costs and benefits:

Development Expenses - Development costs are expenses incurred when a system develops over time. It is a one-time expenditure.

Operating Expenses - Operating Expenses are the expenditures associated with running a business on a day-to-day basis. Salaries, purchases, and surplus are examples of operating expenses.

Hardware and Software Costs - This category includes the cost of purchasing or renting computers, as well as accessories. The essential S/W charges are included in the software costs.

Personnel Expenses - Funds spent on individuals who have contributed to the system's development. Costs are expended during the refurbishment of the actual space in which the system will operate. Wiring, flooring, acoustics, lighting, and air conditioning are examples of these.

Fees - These are variable charges that are equivalent to the cost of using paper, ribbons, discs, and other materials.

BENEFITS

Income – Costs = Profit or Benefit

Benefits can be accumulated in the following ways:

- Increasing income, or
- Decreasing costs, or
- Both

6 SYSTEM REQUIREMENT ANALYSIS

1. Hardware System Requirements

Processor: Intel Core i5, 2.4 GHz or above

RAM: 4GB or above

HDD: 50 GB or above

2. Software System Requirements

Operating System: Microsoft WINDOWS 7 or above

Application: XAMPP server or WAMP server

Back End: JavaScript, PHP, MySQL

Front End: HTML, CSS

7. SYSTEM DESIGN

7.1 PROJECT MANAGEMENT

Project planning is connected to the use of schedules such as Gantt charts to plan and report progress within the project area and is an aspect of project management. The project scope is specified first, followed by the proper means for finishing the project. Following this, the length of time necessary to accomplish the various tasks is noted and grouped into a job categorization structure. A working network diagram is used to define logical dependency between activities, allowing an important technique to be identified.

7.1.1 PROJECT PLANNING

Below tables shows that how we planned our project.

Sl.no	Task	Duration	Start	Finish
1	Planning	15	02/02/2022	16/02/2022
2	Designing	20	17/02/2022	08/03/2022
3	Coding, Report	30	10/03/2022	10/04/2022
4	Delivery	5	11/04/2022	16/04/2022

Fig Table 7.1.1.1 project planning

7.1.2 PROJECT SCHEDULING

week	1	2	3	4	5	6	7	8	9	10
Plan	yes	yes								
Design			yes	yes	yes					
Coding						yes	yes	yes		
Testing									yes	
Delivery										yes

Fig 7.1.2.1 project scheduling

7.1.3 METHODOLOGY

To enhance our project, we employed the Iterative and Incremental Development (IID) paradigm. Iterative Waterfall Development is another name for this development method. Iterative and incremental development is a type of software development that follows a waterfall methodology. This approach was created to handle such a large job. A large and complicated project, in particular, need

more thorough planning and appraisal. The waterfall model is well-known for its extensive testing. As a result, when it came time to replace my software, I went with the waterfall methodology.

7.1.4 RISK MANAGEMENT

Software Risk management is an effective method for reducing project uncertainty and possible losses. Product size, business effect, customer-related, process, technology, development area, personnel (size and information), system, and cost are some of the other risk categories. Risk management is a project risk management technique that includes processes, methodologies, and tools.

A systematic endeavor to detect hazards to the project plan is known as risk identification. We may take the initiative to avoid known and predictable hazards when feasible, and to control them where required, by identifying them. We categorize risks into numerous categories in order to conduct a risk assessment.

- Initiation
- Planning
- Execution
- Closure

7.2 DATABASE DESIGN

The process of creating a data model with precise information is known as website design. This data model includes all of the criteria for logical and physical design choices, as well as the storage parameters needed to generate the design in the data description language, which may be utilised to develop a website. Details characteristics are included in the fully described data model. Many distinct components of a general information system can be described as a design database. It may be viewed of as a logical design of the fundamental data structure that is utilised to store data in particular. Tables and ideas are the tables and ideas in the relationship model. Business and relationships are the types of items and connections named on the Internet of Things. The phrase database design, on the other hand, may refer to the entire design process, not just the fundamental data structure, but also the forms and queries that make up the complete database application inside the management system.

7.3 Data Flow Diagram of Online doctor appointment scheduling and patient medical management system

The contextual diagram represents the less ambiguous data flow of the system. Represents the whole system as a single bubble. The data flow between the system and external businesses, as well as the numerous external businesses with whom the system interacts, are also illustrated. The term "context diagram" has been coined to describe the environment in which the system will operate, i.e. external organizations (users) who will be able to interact with the system and the data items that they will encounter.

Level 0 DFD:

The data flow diagram (DFD) at the context level depicts the whole system. It displays all of the system's user modules. Users of the hospital include admin staff, patients, and doctors, as shown in the data flow diagram.

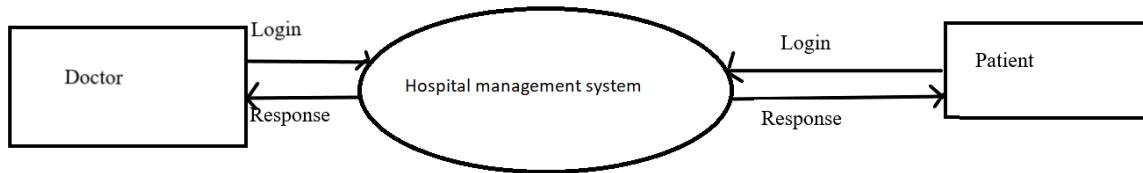


Fig.7.4.1 Level 0 DFD

Level 1 DFD:

The DFD Level One Online doctor appointment scheduling and patient medical management system demonstrate how the system is separated into subsystems, each of which handles one or more data flows to or from an external agent, and combined offers all the information. The entire hospital management plan's executives also identifies internal data storage for the patient and the doctor that is required for the system to work. It depicts the flow of information between the many components of the hospital, including the patient, the doctor, the administrative staff, and the appointment scheduler. DFD Level 1 parts are divided into sections in great detail. It'll focus on the hospital's vital functions.

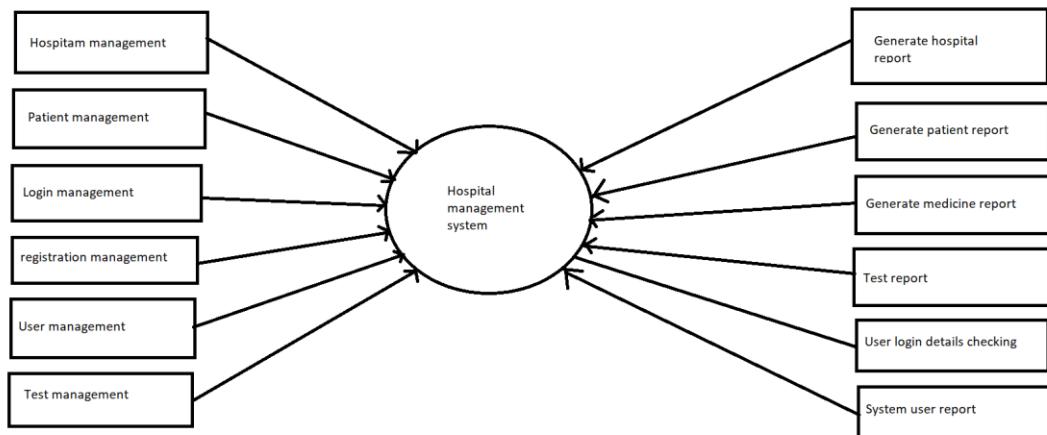


Fig 7.4.2 Level 1 DFD

Level 2 DFD:

The Level 2 DFD takes the Level 1 DFD a step further. It may be necessary to conduct extra hospital operations in order to obtain the needed degree of knowledge on the hospital's operations. The Hospital Management System's DFD Phase One (Level One) diagram depicts how the system is separated into sub-systems (processes)

Level 2 DFD for admin:

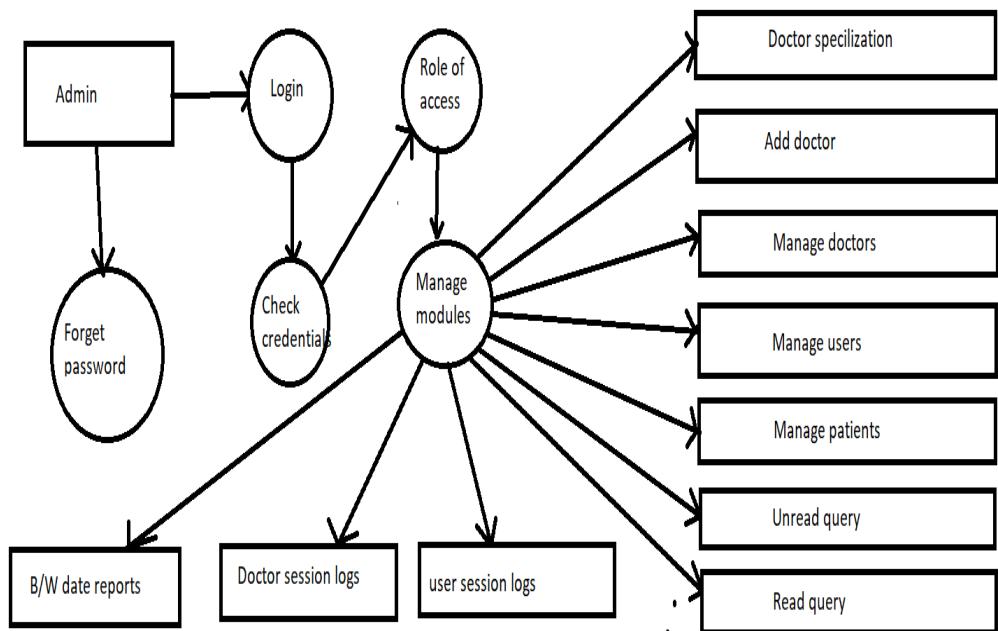


Fig 7.4.3 Level 2 DFD

7.4 PSEUDOCODE

```
<?php
include_once('hms/include/config.php');
if(isset($_POST['submit']))
{
$name=$_POST['name'];
$email=$_POST['email'];
$mobilenumber=$_POST['phone'];
$dscrption=$_POST['message'];
$query=mysqli_query($con,"insert into tblcontactus(fullname,email,contactno,message) value('$name','$email','$mobilenumber','$dscrption')");
echo "<script>alert('Your information successfully submitted');</script>";
echo "<script>window.location.href ='contact.php'</script>";
}

?>

<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8" />
<meta name="viewport" content="width=device-width, initial-scale=1.0" />
<title>Contact Form</title>
<link rel="stylesheet" href="css/style.css" />
<script
src="https://kit.fontawesome.com/64d58efce2.js"
crossorigin="anonymous"
></script>
</head>
<body>
<div class="container">
<span class="big-circle"></span>

<div class="form">
<div class="contact-info">
<a href="index.html"><h3 class="title">Home</h3></a>
<h3 class="title">Let's get in touch</h3>
<p class="text">
Hospitals are only an intermediate stage of civilization,

```

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>Hospital Management System</title>
    <link href="https://fonts.googleapis.com/css2?family=Poppins:wght@400,600,700,900&display=swap" rel="stylesheet">
    <link rel="stylesheet" href="css/homestyle.css">
    <style>
        body{
            background-image: url('images/image1.jpg');
            background-repeat: no-repeat;
            background-size: cover;
        }
    </style>
</head>
<body>
    <header>
        <div class="wrapper">
            <ul class="nav-area">
                <li><a href="index.html">Home</a></li>
                <li><a href="contact.php">Contact us</a></li>
                <li><a href="hms/user-login.php">Patient Login</a></li>
                <li><a href="hms/doctor/index.php">Doctor Login</a></li>
                <li><a href="hms/admin/index.php">Admin Login</a></li>
            </ul>
        </div>
    </header>

    </body>
</html>
```

```

<?php
session_start();
error_reporting(0);
include("include/config.php");
if(isset($_POST['submit']))
{
$ret=mysqli_query($con,"SELECT * FROM users WHERE email='".$_POST['username']."' and password='".md5($_POST['password'])."'");
$num=mysqli_fetch_array($ret);
if($num>0)
{
$extra="dashboard.php";
$_SESSION['login']=$_POST['username'];
$_SESSION['id']=$num['id'];
$host=$_SERVER['HTTP_HOST'];
$uip=$_SERVER['REMOTE_ADDR'];
$status=1;
// For stroing log if user login successfull
$log=mysqli_query($con,"insert into userlog(uid,username,userip,status) values('".$_SESSION['id']."','".$_SESSION['login']."' ,'$uip','$status')");
$uri=rtrim(dirname($_SERVER['PHP_SELF']), '/\\');
header("location: http://$host$uri/$extra");
exit();
}
else
{
// For stroing log if user login unsuccessfull
$_SESSION['login']=$_POST['username'];
$uip=$_SERVER['REMOTE_ADDR'];
$status=0;
mysqli_query($con,"insert into userlog(username,userip,status) values('".$_SESSION['login']."' ,'$uip' ,'$status')");
$_SESSION['errmsg']="Invalid username or password";
$extra="user-login.php";
$host = $_SERVER['HTTP_HOST'];
$uri = rtrim(dirname($_SERVER['PHP_SELF']), '/\\');
header("location: http://$host$uri/$extra");
exit();
}
}
?>

```

```

</head>
<body>
    <div id="app" style="background-color: #B0B3B8;">
        <?php include('include/sidebar.php');?>
        <div class="app-content" style="background-color: #B0B3B8;">

            <?php include('include/header.php');?>

            <!-- end: TOP NAVBAR -->
            <div class="main-content" >
                <div class="wrap-content container" id="container">
                    <!-- start: PAGE TITLE -->
                    <section id="page-title">
                        <div class="row">
                            <div class="col-sm-8">
                                <h1 class="mainTitle" style="color:#000000;"><b>Patient Book Appointment</b></h1>
                            </div>
                        </div>
                    </section>
                    <!-- end: PAGE TITLE -->
                    <!-- start: BASIC EXAMPLE -->
                    <div class="container-fluid container-fullw ">
                        <div class="row">
                            <div class="col-md-12">

                                <div class="row margin-top-30">
                                    <div class="col-lg-8 col-md-12">
                                        <div class="panel panel-blue">
                                            <div class="panel-heading">
                                                <h5 class="panel-title">Book Appointment</h5>
                                            </div>
                                            <div class="panel-body">
                                                <p style="color:red;"><?php echo htmlentities($_SESSION['msg1']);?>
                                                <?php echo htmlentities($_SESSION['msg1']="");?></p>
                                                <form role="form" name="book" method="post" >



<label for="DoctorSpecialization" style="color:#000000;">


```

```

<body style="background-color: #e0e0e0; >
    <div id="app">
<?php include('include/sidebar.php');?>
        <div class="app-content">

            <?php include('include/header.php');?>

<!-- end: TOP NAVBAR -->
        <div class="main-content" >
            <div class="wrap-content container" id="container" >
                <!-- start: PAGE TITLE -->
                <section id="page-title" >
                    <div class="row">
                        <div class="col-sm-8">
                            <h1 class="mainTitle" style="color: #000000;"><b>Patient Dashboard</b></h1>
                        </div>
                    </div>
                </section>
                <!-- end: PAGE TITLE -->
                <!-- start: BASIC EXAMPLE -->
                <div class="container-fluid container-fullw">
                    <div class="row">
                        <div class="col-sm-4">
                            <div class="panel panel-yellow no-radius text-center">
                                <div class="panel-body">
                                    <span class="fa-stack fa-2x"> <i class="fa fa-square fa-stack-2x text-success"></i> <i class="fa fa-smile-o fa-stack-2x text-success"></i>
                                    <h2 class="StepTitle">My Profile</h2>
                                </div>
                                <p class="cl-effect-12">
                                    <a href="edit-profile.php" style="color:#008000;">
                                        Update
                                    </a>
                                </p>
                            </div>
                        </div>
                        <div class="col-sm-4">
                            <div class="panel panel-blue no-radius text-center">
                                <div class="panel-body">
                                    <span class="fa-stack fa-2x"> <i class="fa fa-square fa-stack-2x text-success"></i> <i class="fa fa-calendar fa-stack-2x text-success"></i>
                                    <h2 class="StepTitle">Appointments History</h2>
                                </div>
                            </div>
                        </div>
                    </div>
                </div>
            </div>
        </div>
    </div>
</body>

```

```

<p>
    Enter your account details below:
</p>
<div class="form-group">
    <span class="input-icon">
        <input type="email" class="form-control" name="email" id="email" onBlur="userAvailability()" placeholder="Email" required>
        <i class="fa fa-envelope"></i> </span>
        <span id="user-availability-status1" style="font-size:12px;"></span>
    </div>
<div class="form-group">
    <span class="input-icon">
        <input type="password" class="form-control" id="password" name="password" placeholder="Password" required minlength="6" maxlength="15">
        <i class="fa fa-lock"></i> </span>
    </div>
<div class="form-group">
    <span class="input-icon">
        <input type="password" class="form-control" id="password_again" name="password_again" placeholder="Password Again" required>
        <i class="fa fa-lock"></i> </span>
    </div>
<div class="form-group">
    <div class="checkbox clip-check check-primary">
        <input type="checkbox" id="agree" value="agree" checked="true" readonly="true">
        <label for="agree">
            I agree
        </label>
    </div>
</div>
<div class="form-actions">
    <p>
        Already have an account?
        <a href="user-login.php">
            Log-in
        </a>
    </p>
    <button type="submit" class="btn btn-primary pull-right" id="submit" name="submit">
        Submit <i class="fa fa-arrow-circle-right"></i>
    </button>
</div>
</fieldset>
</form>

```

```

CREATE TABLE `appointment` (
  `id` int(11) NOT NULL,
  `doctorSpecialization` varchar(255) DEFAULT NULL,
  `doctorId` int(11) DEFAULT NULL,
  `userId` int(11) DEFAULT NULL,
  `consultancyFees` int(11) DEFAULT NULL,
  `appointmentDate` varchar(255) DEFAULT NULL,
  `appointmentTime` varchar(255) DEFAULT NULL,
  `postingDate` timestamp NULL DEFAULT current_timestamp(),
  `userStatus` int(11) DEFAULT NULL,
  `doctorStatus` int(11) DEFAULT NULL,
  `updationDate` timestamp NULL DEFAULT NULL ON UPDATE current_timestamp()
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

-- 
-- Dumping data for table `appointment`
-- 

INSERT INTO `appointment` (`id`, `doctorSpecialization`, `doctorId`, `userId`, `consultancyFees`, `appointmentDate`, `appointmentTime`, `postingDate`, `userStatus`, `doctorStatus`, `updationDate`) VALUES
(3, 'Demo test', 7, 6, 600, '2019-06-29', '9:15 AM', '2019-06-23 18:31:28', 1, 0, '0000-00-00 00:00:00'),
(4, 'Ayurveda', 5, 5, 8050, '2019-11-08', '1:00 PM', '2019-11-05 10:28:54', 1, 1, '0000-00-00 00:00:00'),
(5, 'Dermatologist', 9, 7, 500, '2019-11-30', '5:30 PM', '2019-11-10 18:41:34', 1, 0, '2019-11-10 18:48:30');

-- 
-- Table structure for table `doctors`
-- 

CREATE TABLE `doctors` (
  `id` int(11) NOT NULL,
  `specilization` varchar(255) DEFAULT NULL,
  `doctorName` varchar(255) DEFAULT NULL,
  `address` longtext DEFAULT NULL,
  `docFees` varchar(255) DEFAULT NULL,
  `contactno` bigint(11) DEFAULT NULL,
  `docEmail` varchar(255) DEFAULT NULL,
  `password` varchar(255) DEFAULT NULL,
  `creationDate` timestamp NULL DEFAULT current_timestamp(),
  `updationDate` timestamp NULL DEFAULT NULL ON UPDATE current_timestamp()
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

-- 
-- Dumping data for table `doctors`
-- 

```

```

<?php error_reporting(0);?>
<header class="navbar navbar-default navbar-static-top" >
    <!-- start: NAVBAR HEADER -->

    <div class="navbar-header bg-dark" >
        <a href="#" class="sidebar-mobile-toggler pull-left hidden-md hidden-lg" class="btn btn-navbar sidebar-toggle" data-toggle-class="app-slide-off" data-toggle-target="#app" data-target="app">
            <i class="ti-align-justify"></i>
        </a>
        <a class="navbar-brand" href="#">
            <h2 style="padding-top:20% ;">Patient</h2>
        </a>
        <a href="#" class="sidebar-toggler pull-right visible-md visible-lg" data-toggle-class="app-sidebar-closed" data-toggle-target="#app" data-target="app">
            <i class="ti-align-justify"></i>
        </a>
        <a class="pull-right menu-toggler visible-xs-block" id="menu-toggler" data-toggle="collapse" href=".navbar-collapse">
            <span class="sr-only">Toggle navigation</span>
            <i class="ti-view-grid"></i>
        </a>
    </div>
    <!-- end: NAVBAR HEADER -->
    <!-- start: NAVBAR COLLAPSE -->
    <div class="navbar-collapse collapse">
        <ul class="nav navbar-right" >
            <!-- start: MESSAGES DROPODOWN -->
            <li style="padding-top:2% ">
                <h2><b>Hospital Management System</b></h2>
            </li>

            <li class="dropdown current-user">
                <a href class="dropdown-toggle" data-toggle="dropdown">
                     <span class="username">
                        <?php $query=mysqli_query($con,"select fullName from users where id='".$_SESSION['id']."'");<br/>
                        while($row=mysqli_fetch_array($query))<br/>
                        {<br/>
                            echo $row['fullName'];
                        }
                        ?> <i class="ti-angle-down"></i></i></span>
                </a>
                <ul class="dropdown-menu dropdown-dark" >
                    <li>
                        <a href="edit-profile.php">
                            My Profile
                        </a>
                    </li>
                </ul>
            </li>
        </ul>
    </div>
</header>

```

```
<div class="sidebar app-aside" id="sidebar" >
    <div class="sidebar-container perfect-scrollbar" style="background-color: #404040">

        <nav>

            <!-- start: MAIN NAVIGATION MENU -->
            <div class="navbar-title " style="color: #FFFFFF; ">
                <span>Main Navigation</span>
            </div>
            <ul class="main-navigation-menu" >
                <li>
                    <a href="dashboard.php">
                        <div class="item-content" style="background-color: #404040" >
                            <div class="item-media">
                                <i class="ti-home"></i>
                            </div>
                            <div class="item-inner" >
                                <span class="title" style="color: #FFFFFF; "> Dashboard </span>
                            </div>
                        </div>
                    </a>
                </li>
                <li>
                    <a href="book-appointment.php">
                        <div class="item-content" style="background-color: #404040" >
                            <div class="item-media">
                                <i class="ti-pencil-alt"></i>
                            </div>
                            <div class="item-inner" >
                                <span class="title" style="color: #FFFFFF; "> Book Appointment </span>
                            </div>
                        </div>
                    </a>
                </li>
                <li>
                    <a href="appointment-history.php">
                        <div class="item-content" style="background-color: #404040;" >
                            <div class="item-media">
                                <i class="ti-list"></i>
                            </div>
                            <div class="item-inner" >
                                <span class="title" style="color: #FFFFFF; "> Appointment History </span>
                            </div>
                        </div>
                    </a>
                </li>
            <li>
                <a href="manage-medhistory.php">
```

```
<?php
require_once("include/config.php");
if(!empty($_POST["email"])){
    $email= $_POST["email"];
$result =mysqli_query($con,"SELECT PatientEmail FROM tblpatient WHERE PatientEmail='".$email "'");
$count=mysqli_num_rows($result);
if($count>0)
{
echo "<span style='color:red'> Email already exists .</span>";
echo "<script>$('#submit').prop('disabled',true);</script>";
} else{
    echo "<span style='color:green'> Email available for Registration .</span>";
    echo "<script>$('#submit').prop('disabled',false);</script>";
}
}
}
?>
```

8 IMPLEMENTATION

8.1 IMPLEMENTATION

Implementation is a program for the system to self-test and provide new resources, we can run the simulation for the user data in the software and check whether it gets stored inside the database or not. There are different types of method we can perform. using computer system software instead of hands-on system. The problem encountered is file coverage, user training, creating accurate files and ensuring outgoing print integrity. Replace the old systems with the new ones to improve efficiency. This is often a difficult transition. If left unmanaged, they can be left astray and lose the right path. So a large computer program takes about a year to complete. Modify the existing software with the new one to provide smooth experience of updating the records. This type of conversation is easily handled, usually with no major changes to the file and Our project will still work.

8.2 IMPLEMENTATION ENVIRONMENT

As we look at the implementation of software requirements reveals a real-world demonstration of the purifying the process and working and information structures. This computer program is defined in a way that sets out the specific details of the implementation. Enhanced operating system location helps multiple users to run this program at the same time. The interface of user is designed by an idea of making the GUI application to provide user smooth and efficient interface which can reduce their workloads. Therefore, our team has limited the development of a GUI- application based system to make the end user experience familiarize themselves with the advanced system.

9. TESTING

9.1 FUNCTIONAL TESTING

Functional testing ensures that tested jobs are available in accordance with business and technological requirements, system documentation, and user manuals.

The following are the areas where functional evaluation focuses:

Valid Input: Only the input categories that have been specified must be accepted.

Invalid Input: Invalid input in specific categories should be rejected.

Tasks: Only the functions that have been specified should be utilized.

Output: Only the categories of application results that have been specified shall be used.

The use of communication systems or processes is required. Performance assessments are designed and prepared with unique demands, tasks, or test circumstances in mind. Furthermore, formal inputs such as data fields, pre-defined procedures, and sequential operations should be considered for testing. Additional tests are found prior to the end of the performance test, and the effective value of the present test is established.

9.2 LEVELS OF TESTING

9.2.1 UNIT TESTING

Examination of program modules for classification to determine differences between programs and program specifications ---- White Box Testing

9.2.2 INTEGRATION TESTING

Linking between test program modules to determine differences between systems and system specifications ---- White Box Testing

9.2.3 FUNCTION TESTING

An integrated software test based on each task for the purpose of finding differences between programs and job specifications ---- Black Box Testing

9.2.4 SYSTEMS TESTING

Integrated software testing for the purpose of detecting conflicts between programs and real intentions regarding system operating systems (For example, discovery, security, performance, and storage) ---- Black Box Testing

9.2.5 ACCEPTANCE TESTING

End-user software (or their representatives) is tested to see if there are any inconsistencies between programs and end-user needs. ---- Black Box Testing

9.3 TESTING APPROACH

Testing will take place at various levels. Only high-quality design panels will be subjected to testing. Both the functional aspect, i.e. the validity of the reports generated, and compliance with the GUI principles, as well as the appearance and sound of the displays and the application's complete functioning, will be assured. The Test System defines the test method details, which identify the test locations connected with this release cycle's product.

METHOD OF ASSESSMENT:

Rather than a view of system efficiency, evaluation is the process of developing plans with the goal of detecting mistakes. Although the distinction may appear to be just semantic, it has been demonstrated to have a considerable influence on test success. Testing should bear the following objectives:

- To expose design flaws
- To expose logic flaws
- To expose performance bottlenecks
- To expose security flaws
- The testing approach outlines the scope of system testing, the overall strategy to be followed, the actions to be performed, the total resources necessary, and the methodologies and processes to be utilized for release testing in order to uncover operational flaws. It also explains how to perform system tests, including the processes, dependencies, and effort required.

The following details should be revealed by the test method:

- Transaction Processing (new and updated)
- A good testing technique is one that discovers an unknown problem.
- New Query Processes
- Revised Audit process

- Relocate Exceptions
- Revised Query Management process
- Revised Retrievals process

The expected outcomes or results must be defined as part of the test strategy. Do not make any plans for your efforts to assume that an error will not be discovered. In the Program section, the possibility of more errors occurring is proportionate to the number of mistakes found in this section thus far. The test library must be set to perform regression tests during maintenance and improvement of the system. Later, the more recent changes, the more modifications as the malfunction was found in the life cycle of development. Successful testing depends on complete and clear specifications.

10. SYSTEM SNAPSHOTS

HOME PAGE

User: Any Patients or patient guardians



Fig 10.1. Home page

worklow:

- Any person who needs the access the digital access to the Hospital facilities can be acknowledged as a user

CONTACT PAGE

User: Any user

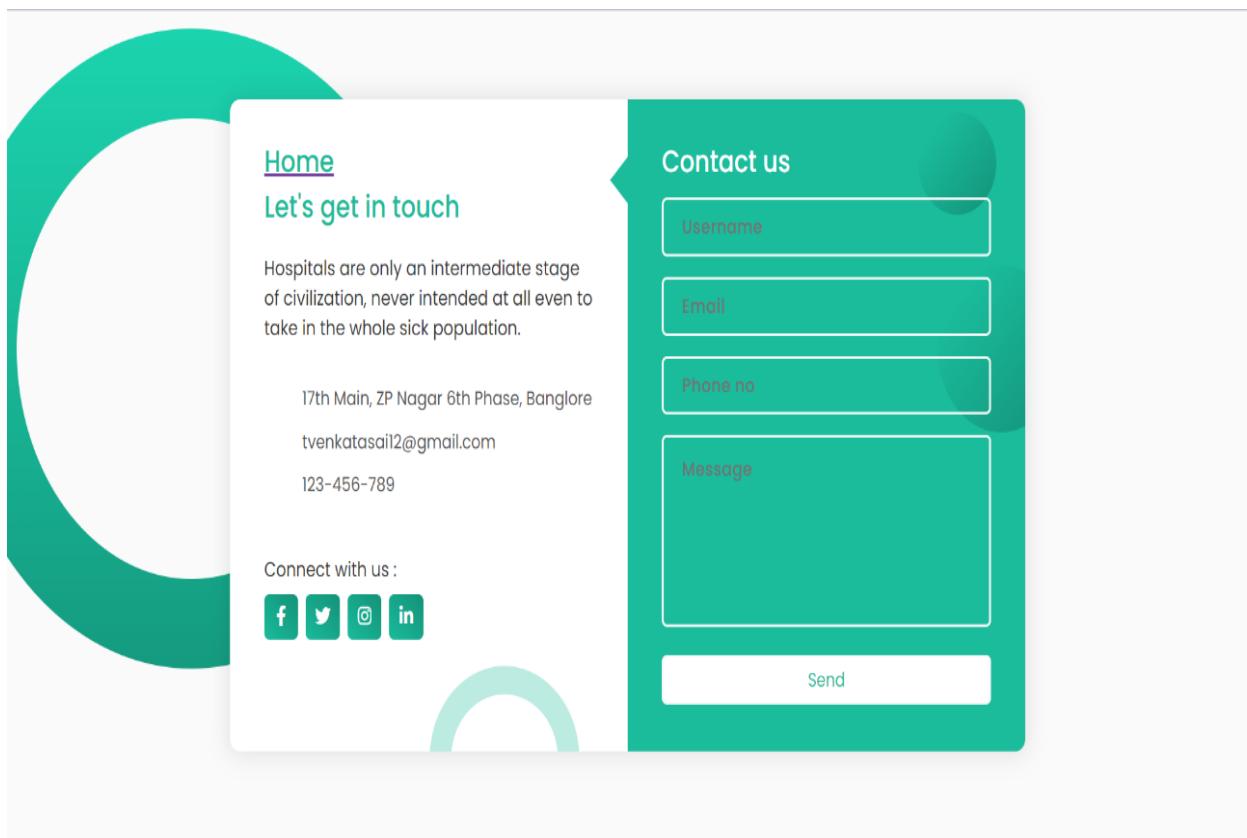


Fig 10.2. Contact page

workflow:

1. Any user who needs to make communication with hospital management staff can use this page

Patient Login Page

Actor: User

Input: Username and passphrase

Output: user sign page

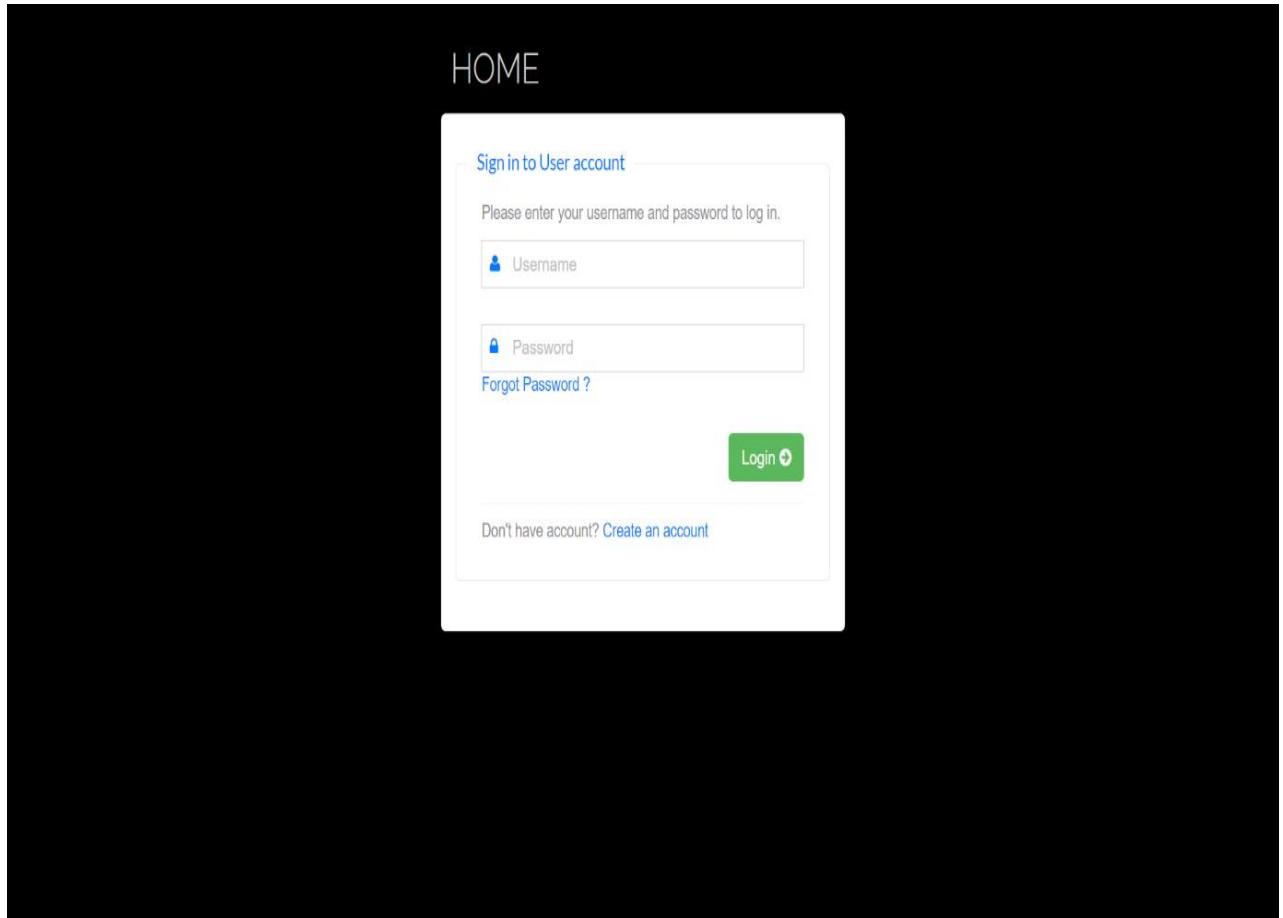


Fig 10.3. Patient Login Page

workflow:

- Any user with their credentials can login to the interface.

Alternate workflow:

1. If the user entered email is not valid then it asks to enter the credentials again
2. if the user entered passphrase is not valid then it asks to enter the credentials again.

Doctor Login

Action performed by: user

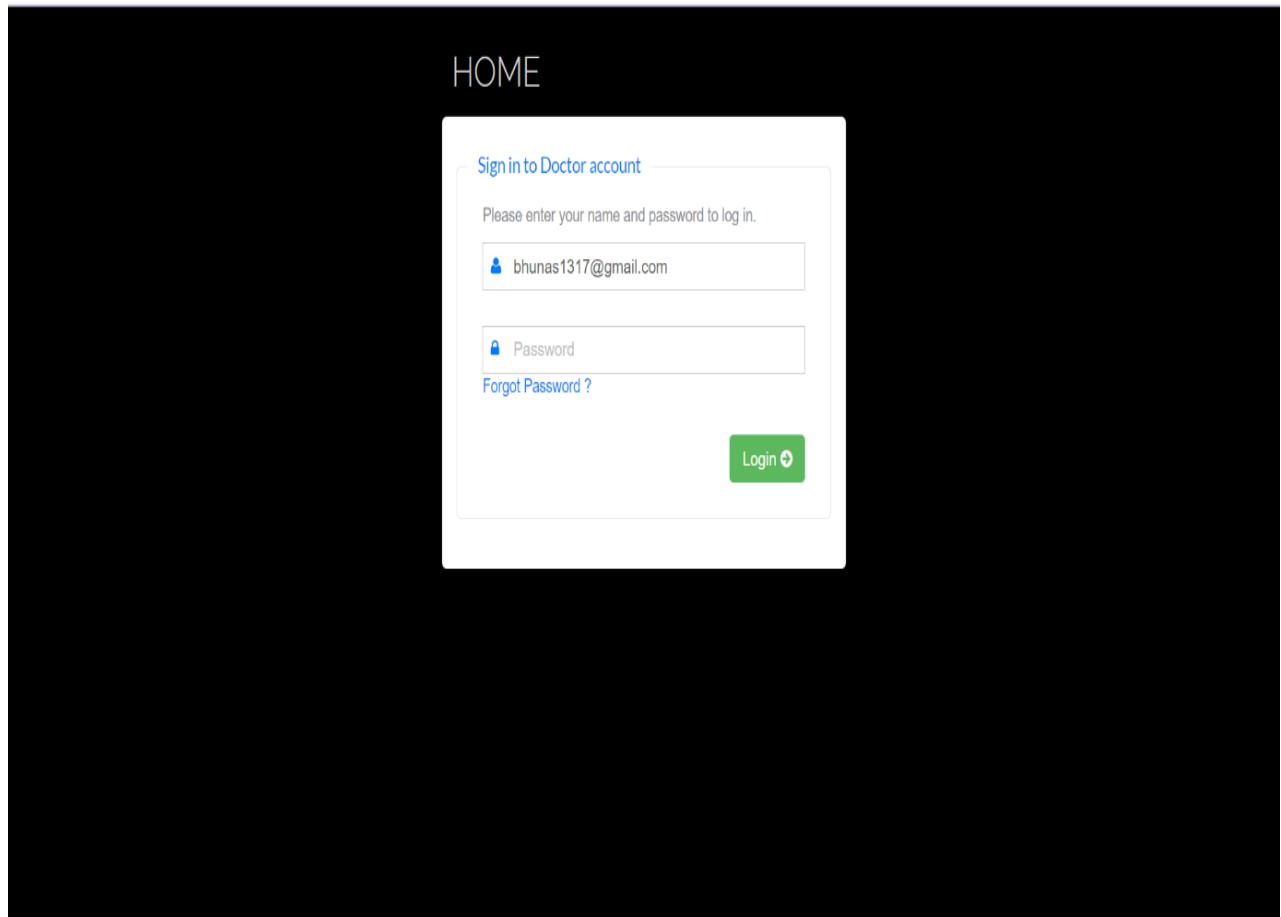


Fig 10.4. Doctor Login

workflow:

- (1) if the user is a doctor then he should login with the credentials provided by the administrator.

Administrator login

Page used by: Administrator users

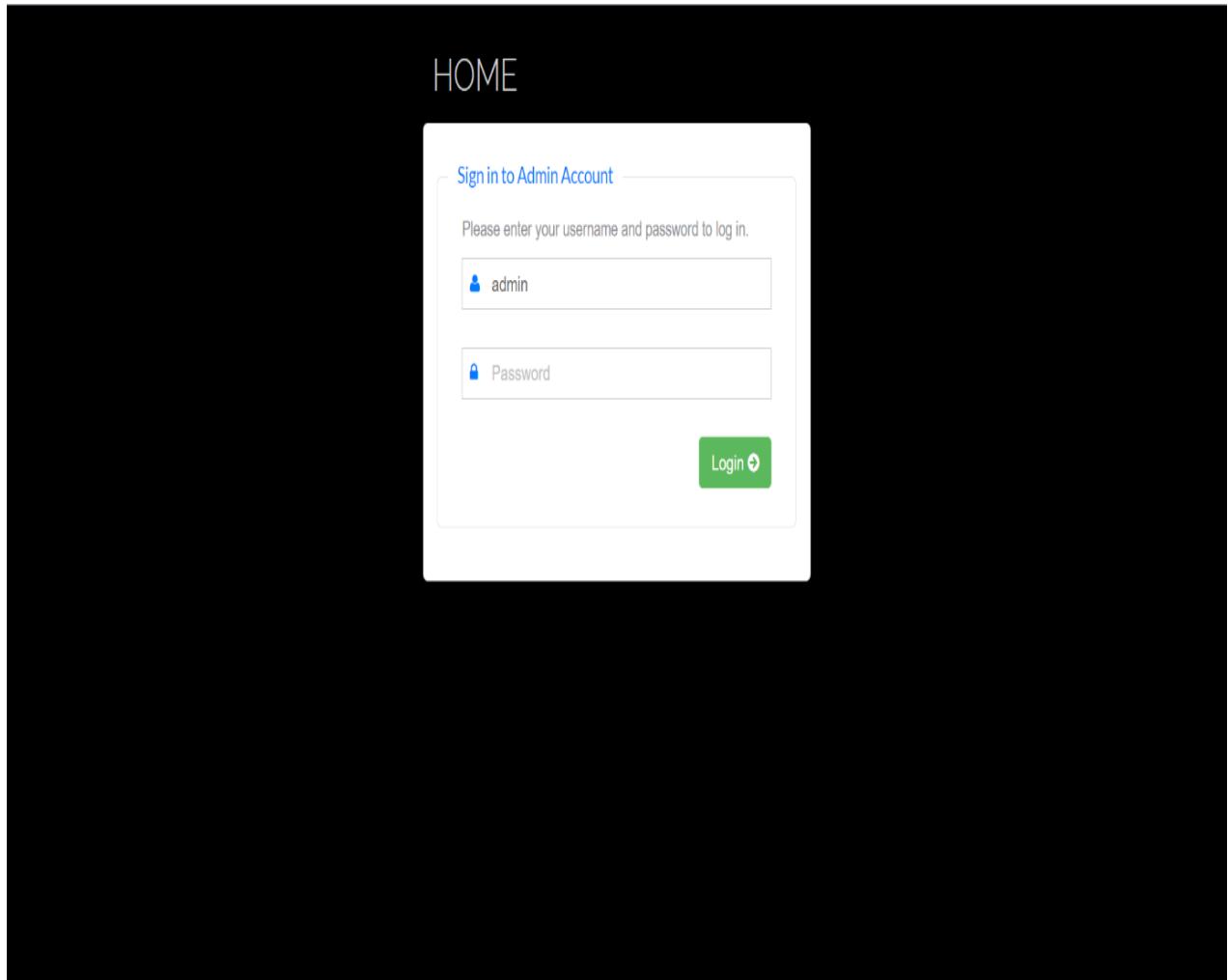


Fig 10.5. Administrator login

Flow:

1. if the user is admin, then he can access this page with the given credentials.
2. Administrator user can surf for the patient and hospital details and can also add doctor data if required

User Details Page

Interface used by : user

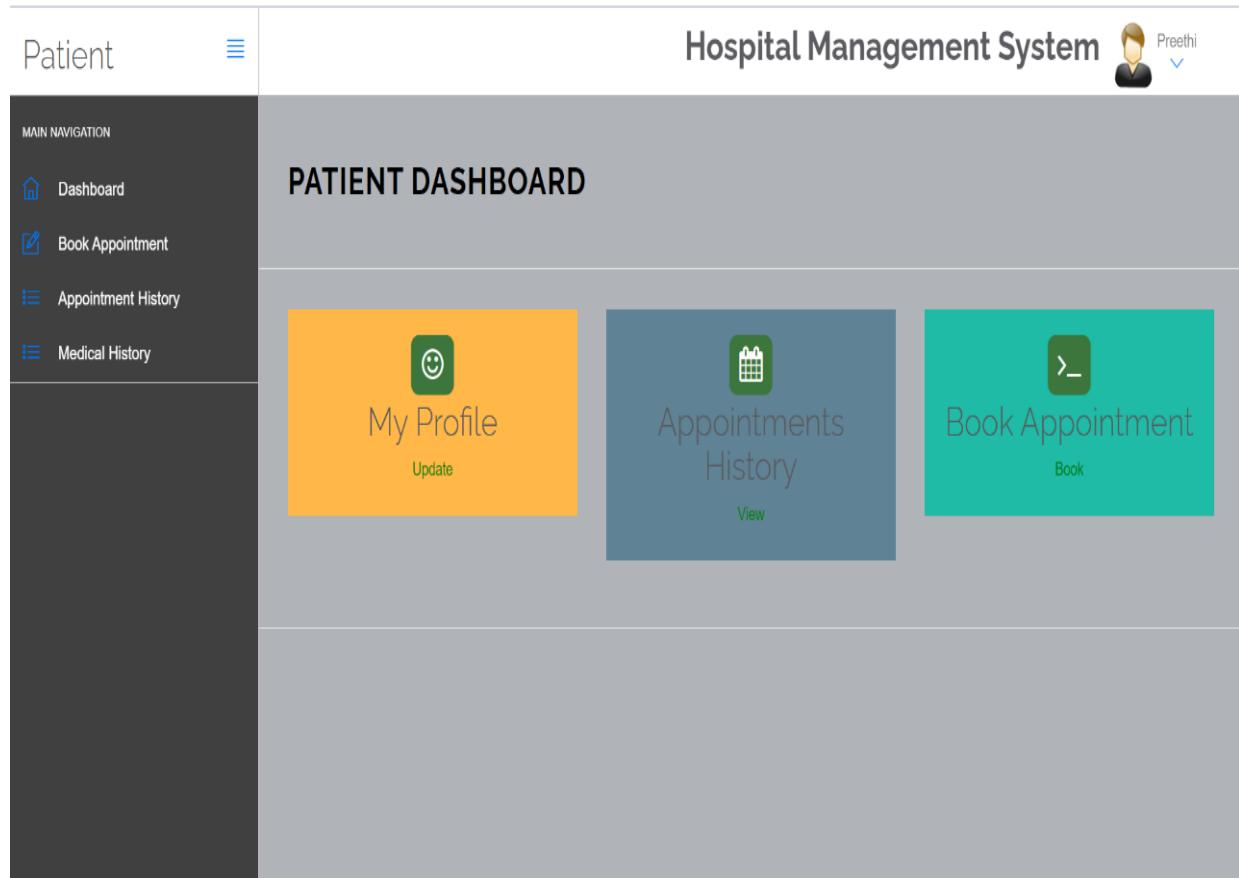


Fig 10.6. User Page

Flow:

1. User should fill all the inputs which are required

Alternate Flow:

1. If the mandatory fields are not filled up then alert message pops up .

User Book Appointment

Interface used by : patient module user

The screenshot shows a mobile application interface for booking an appointment. On the left is a dark sidebar with four items: 'Dashboard' (with a house icon), 'Book Appointment' (with a pencil icon, which is highlighted in white), 'Appointment History' (with a list icon), and 'Medical History' (with a list icon). The main area has a light gray header with the text 'PATIENT BOOK APPOINTMENT' in bold capital letters. Below the header is a teal-colored rectangular form titled 'Book Appointment'. The form contains five input fields: 'Doctor Specialization' with a placeholder 'Select Specialization', 'Doctors' with a placeholder 'Select Doctor', 'Consultancy Fees' (which is empty), 'Date' (which is empty), and 'Time' with a placeholder '4:45 PM' and a note 'eg : 10:00 PM'. At the bottom of the form is a green 'Submit' button.

Fig 10.7 User Book Appointment

- 1) User book Appointment with doctor in specific specialization with date and time

User Appointment History

Interface used by: patient module user

The screenshot shows the 'Patient' interface of the 'Hospital Management System'. At the top right, there is a user profile icon for 'Preethi' with a dropdown arrow. The main title 'Hospital Management System' is displayed. On the left, a dark sidebar contains 'MAIN NAVIGATION' with links: 'Dashboard' (selected), 'Book Appointment', 'Appointment History' (selected), and 'Medical History'. The main content area is titled 'APPOINTMENT HISTORY'. A table lists one appointment entry:

#	Doctor Name	Specialization	Consultancy Fee	Appointment Date	Appointment Creation Date	Current Status	Action
1.	Gopal	General Physician	1200	2022-04-28 / 4:45 PM	2022-04-30 16:32:30	Active	Cancel

Fig 10.8. User Appointment History

- 1) User can check the previous appointments.
- 2) User can check the status of the appointments.

Patient Medical history

Interface used by: patient module user

The screenshot shows the 'Patient' interface of the 'Hospital Management System'. At the top right, there is a user profile icon for 'Preethi' with a dropdown arrow. The main title 'Hospital Management System' is displayed prominently. On the left, a dark sidebar titled 'MAIN NAVIGATION' contains links: 'Dashboard' (with a house icon), 'Book Appointment' (with a calendar icon), 'Appointment History' (with a list icon), and 'Medical History' (with a list icon). The 'Medical History' link is currently selected. The main content area is titled 'MEDICAL HISTORY'. A table lists a single medical history entry:

Sl.No	Patient Name	Patient Contact Number	Patient Gender	Creation Date	Updation Date	Action
1.	Manisha Jha	4558988789	Female	2019-11-05 03:08:06	2019-11-06 12:18:05	

Fig 10.9. Patient Medical history

1. User can see the current and previous medical history

Doctor Dashboard

Used By: patient module user

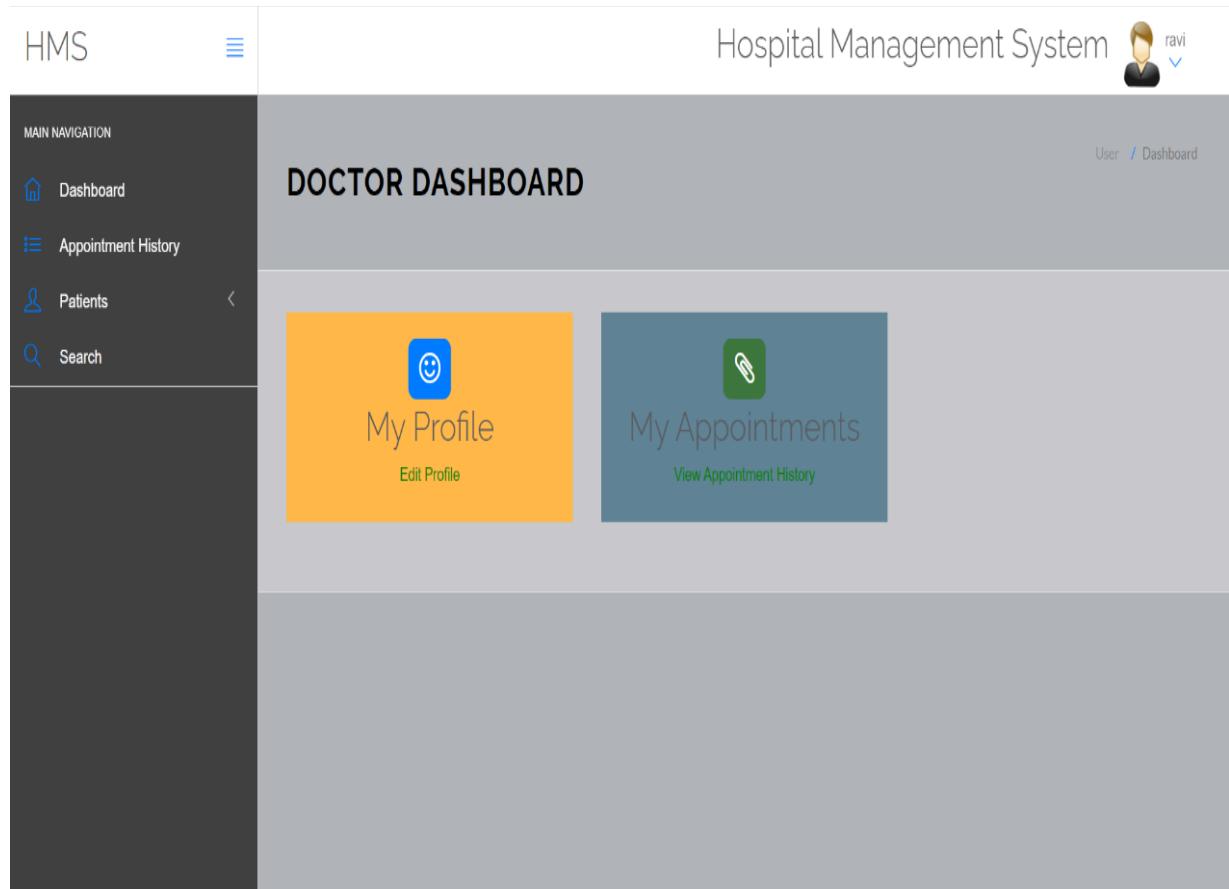


Fig 10.10. Doctor Dashboard

Work flow:

- (1) User should fill up all the required inputs

Alternate Flow:

- (1) the mandatory fields needed to be filled up or alert is shown.

Doctor Appointment History

Used by: Patient module User

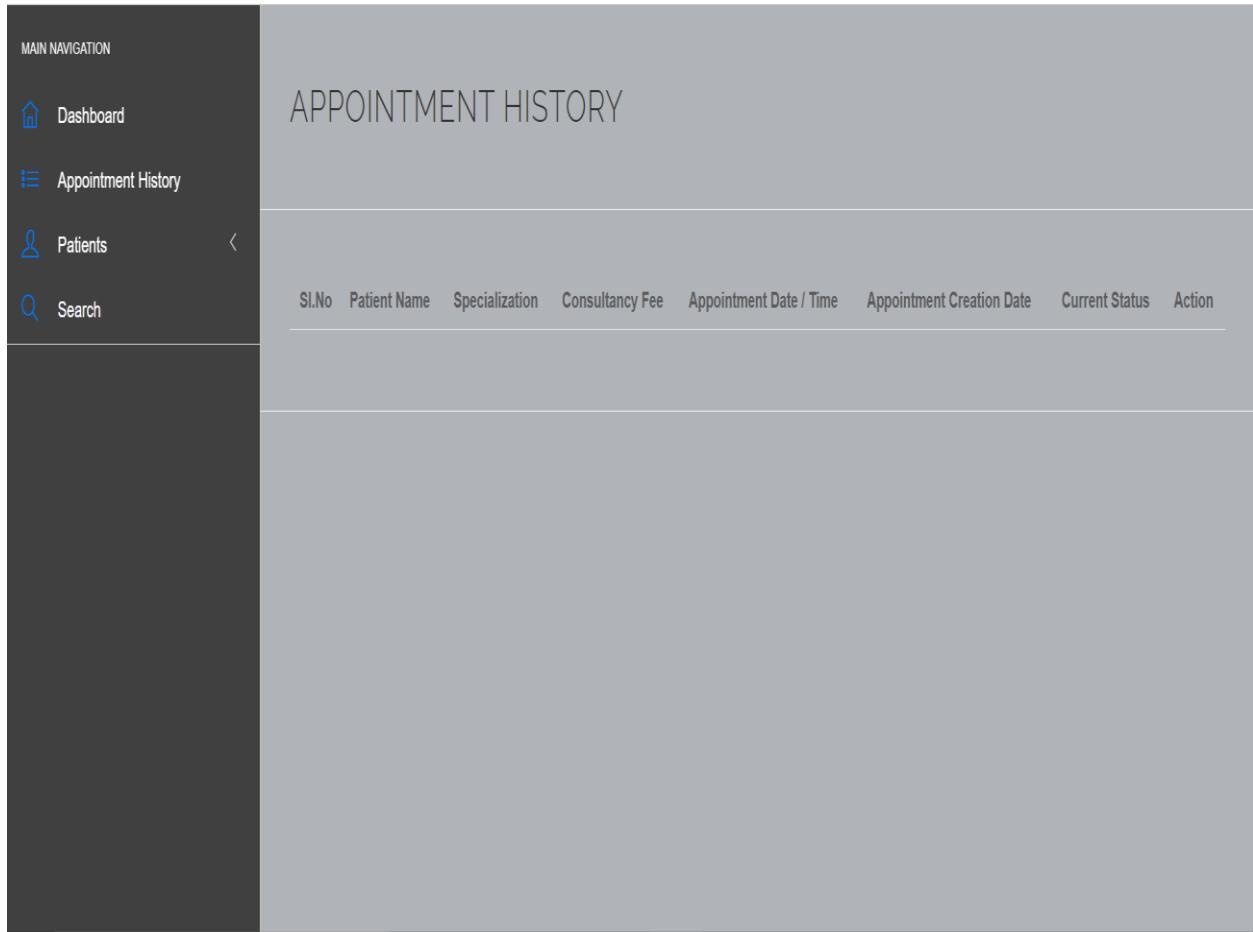


Fig 10.11. Doctor Appointment History

- 1) User can see the appointments with patients

Doctor Add Patient

Actor: User

The screenshot shows a user interface for adding a patient. On the left is a dark sidebar with a 'MAIN NAVIGATION' section containing 'Dashboard', 'Appointment History', 'Patients' (selected), and 'Search'. The main area has fields for 'Patient Name', 'Patient Contact no', 'Patient Email', 'Gender' (with radio buttons for Female and Male), 'Patient Address', 'Patient Age', and 'Medical History'. An 'Add' button is at the bottom.

Patient Name
Enter Patient Name

Patient Contact no
Enter Patient Contact no

Patient Email
Enter Patient Email id

Gender
 Female Male

Patient Address
Enter Patient Address

Patient Age
Enter Patient Age

Medical History
Enter Patient Medical History(if any)

Add

Fig 10.12. Doctor Add Patient

- 1) User can add new patient details
- 2) If any field is given empty error will be shown

Doctor Manage Patient

Actor: user

The screenshot shows the 'PATIENT DETAILS' page of the Hospital Management System (HMS). The top navigation bar includes the HMS logo, a three-line menu icon, the system name 'Hospital Management System', a user profile icon for 'ravi', and a dropdown menu. The main navigation sidebar on the left lists 'Dashboard', 'Appointment History', 'Patients' (selected), and 'Search'. The central content area displays a table titled 'PATIENT DETAILS' with one row of data. The table columns are: SI.No, Patient Name, Patient Contact Number, Patient Gender, Creation Date, Updation Date, and Action. The single row shows: 1., ra, 123, male, 2022-04-30 16:39:10, (empty), and a edit/cancel icon.

SI.No	Patient Name	Patient Contact Number	Patient Gender	Creation Date	Updation Date	Action
1.	ra	123	male	2022-04-30 16:39:10	(empty)	

Fig 10.13. Doctor Manage Patient

- 1) User can take manage the patient.
- 2) User can remove the patient from the user patient details.

Admin Dashboard

Actor: Admin

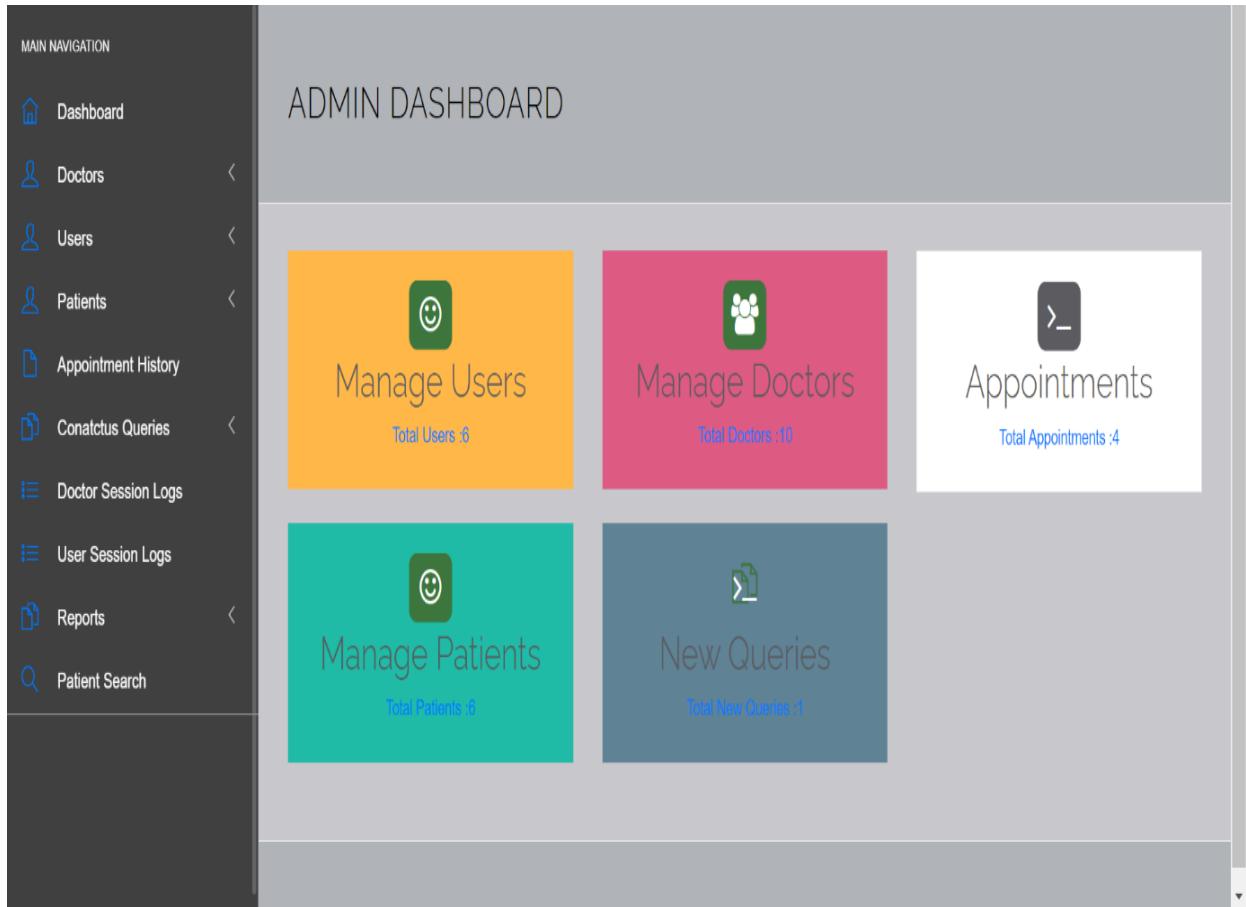


Fig 10.14. Admin Dashboard

workflow:

- 1) Administrator can access this page.
- 2) He can access all the modules.

Admin Manage User

Actor: Admin

MAIN NAVIGATION								
	Dashboard							
Doctors		<						
Users		<						
Patients		<						
Appointment History								
Contact Queries		<						
Doctor Session Logs								
User Session Logs								
Reports		<						
Patient Search								

MANAGE USERS								
#	Full Name	Address	City	Gender	Email	Creation Date	Updation Date	Action
1.	Preethi	New Delhi India	Delhi	female	test@gmail.com	2016-12-30 11:04:39	0000-00-00 00:00:00	x
2.	Amulya	New Delhi	New delhi	male	Amulya@gmail.com	2017-01-07 12:06:53	0000-00-00 00:00:00	x
3.	Rahul Reddy	New Delhi	New delhi	male	rahul@gmail.com	2017-01-07 13:11:14	0000-00-00 00:00:00	x
4.	Srujan	New Delhi India	Delhi	male	Srujan@gmail.com	2017-01-07 13:30:26	0000-00-00 00:00:00	x
5.	Shashi	New Delhi	Delhi	male	Shashi@gmail.com	2019-06-23 23:54:53	2019-06-24 00:06:09	x
6.	Mukul	USA	Newyork	male	Mukul@gmail.com	2019-11-11 00:10:21	2019-11-11 00:10:51	x

Fig 10.15. Admin Manage User

workflow:

- 1) Administrator can access this page.
- 2) He can access all the modules.

Admin Manage Doctors

Actor: Admin

The screenshot shows the 'Hospital Management System' interface. On the left, there is a dark sidebar titled 'MAIN NAVIGATION' with the following items: Dashboard, Doctors (selected), Users, Patients, Appointment History, Contactus Queries, Doctor Session Logs, User Session Logs, Reports, and Patient Search. The main content area is titled 'MANAGE DOCTORS'. It displays a table of doctors with the following columns: SI.No, Specialization, Doctor Name, Creation Date, and Action. The table contains 10 rows of data.

SI.No	Specialization	Doctor Name	Creation Date	Action
1.	Dentist	Venkat	2022-03-29 11:55:37	<input checked="" type="checkbox"/> <input type="checkbox"/>
2.	Homeopath	Bhuvaneshwar	2022-03-29 12:21:51	<input checked="" type="checkbox"/> <input type="checkbox"/>
3.	General Physician	Gopal	2022-03-29 13:13:35	<input checked="" type="checkbox"/> <input type="checkbox"/>
4.	Homeopath	Karthik	2022-03-29 13:15:09	<input checked="" type="checkbox"/> <input type="checkbox"/>
5.	Ayurveda	Dhanush	2022-03-29 13:17:07	<input checked="" type="checkbox"/> <input type="checkbox"/>
6.	General Physician	Kajal	2022-03-29 13:22:50	<input checked="" type="checkbox"/> <input type="checkbox"/>
7.	Demo test	abc	2022-03-29 13:38:58	<input checked="" type="checkbox"/> <input type="checkbox"/>
8.	Ayurveda	Test Doctor	2022-03-29 23:27:43	<input checked="" type="checkbox"/> <input type="checkbox"/>
9.	Dermatologist	Priya	2022-03-30 00:07:47	<input checked="" type="checkbox"/> <input type="checkbox"/>
10.	Gynecologist/Obstetrician	ravi	2022-04-30 16:36:29	<input checked="" type="checkbox"/> <input type="checkbox"/>

Fig 10.16. Admin Manage Doctors

workflow:

- 1) Administrator can access this page.
- 2) He can access all the modules.

Admin Appointments History

Actor: admin

PATIENTS APPOINTMENT HISTORY								
#	Doctor Name	Patient Name	Specialization	Consultancy Fee	Appointment Date / Time	Appointment Creation Date	Current Status	Action
1.	abc	Shashi	Demo test	600	2019-06-29 / 9:15 AM	2019-06-24 00:01:28	Cancel by Doctor	Canceled
2.	Dhanush	Srujan	Ayurveda	8050	2019-11-08 / 1:00 PM	2019-11-05 15:58:54	Active	No Action yet
3.	Priya	Mukul	Dermatologist	500	2019-11-30 / 5:30 PM	2019-11-11 00:11:34	Cancel by Doctor	Canceled
4.	Gopal	Preethi	General Physician	1200	2022-04-28 / 4:45 PM	2022-04-30 16:32:30	Active	No Action yet

Fig 10.17. Admin Appointments History

workflow:

- 1) Administrator can access this page.
- 2) He can access all the appointment history.

Admin View Patient

Actor: Admin

The screenshot shows a user interface for managing patients. On the left is a vertical navigation bar titled 'MAIN NAVIGATION' containing links: Dashboard, Doctors, Users, Patients, Appointment History, Contact Queries, Doctor Session Logs, User Session Logs, Reports, and Patient Search. The 'Patients' link is currently selected, indicated by a blue background. The main content area is titled 'VIEW PATIENTS'. It displays a table of patient records with the following data:

Sl.No	Patient Name	Patient Contact Number	Patient Gender	Creation Date	Updation Date	Action
1.	Manisha Jha	4558968789	Female	2019-11-05 03:08:06	2019-11-06 12:18:05	
2.	Raghu Yadav	9797977979	Male	2019-11-05 16:10:13	2019-11-05 17:23:45	
3.	Mansi	9878978798	Female	2019-11-05 16:19:41	2019-11-05 17:28:59	
4.	Manav Sharma	9888988989	Male	2019-11-06 20:03:54	2019-11-06 20:04:31	
5.	John	1234567890	male	2019-11-11 00:19:24		
6.	ra	123	male	2022-04-30 16:39:10		

Fig 10.18. Admin View Patient

Work flow:

- 1) Administrator can access this page.
- 2) He can necessary action if required.

Admin Queries

Actor: Admin

Fig 10.19. Admin Unread Queries

Main Navigation					
Dashboard	Doctors	Users	Patients	Appointment History	Contact Queries
Dashboard	Doctors	Users	Patients	Appointment History	Contact Queries
Doctors	Users	Patients	Appointment History	Contact Queries	Doctor Session Logs
Users	Patients	Appointment History	Contact Queries	Doctor Session Logs	User Session Logs
Patients	Appointment History	Contact Queries	Doctor Session Logs	User Session Logs	Reports
Appointment History	Contact Queries	Doctor Session Logs	User Session Logs	Reports	Patient Search

Fig 10.20 Admin read queries

workflow:

- 1) Administrator can access this page.
 - 2) He can see the queries of the user

Admin session login

DOCTOR LOGIN PERIOD						
Sl.No	User id	Username	User IP	Login time	Logout Time	Status
1.		test@gmail.com	::1	2022-04-30 16:34:35		Failed
2.		test@gmail.com	::1	2022-04-30 16:34:56		Failed
3.		test@gmail.com	::1	2022-04-30 16:35:02		Failed
4.	10	bhunas1317@gmail.com	::1	2022-04-30 16:36:45	30-04-2022 04:41:18 PM	Success

Fig 10.21 doctor login session

USER LOGIN PERIOD						
Sl.No	User id	Username	User IP	Login time	Logout Time	Status
1.	2	test@gmail.com	::1	2022-04-30 16:31:28	30-04-2022 04:34:22 PM	Success

Fig10.22 user login session

Table

	Table	Action	Rows	Type	Collation	Size	Overhead
<input type="checkbox"/>	admin		1	InnoDB	latin1_swedish_ci	16.0 KiB	-
<input type="checkbox"/>	appointment		4	InnoDB	latin1_swedish_ci	16.0 KiB	-
<input type="checkbox"/>	doctors		10	InnoDB	latin1_swedish_ci	16.0 KiB	-
<input type="checkbox"/>	doctorslog		5	InnoDB	latin1_swedish_ci	16.0 KiB	-
<input type="checkbox"/>	doctorspecialization		11	InnoDB	latin1_swedish_ci	16.0 KiB	-
<input type="checkbox"/>	tblcontactus		3	InnoDB	latin1_swedish_ci	16.0 KiB	-
<input type="checkbox"/>	tblmedicalhistory		6	InnoDB	latin1_swedish_ci	16.0 KiB	-
<input type="checkbox"/>	tblpatient		6	InnoDB	latin1_swedish_ci	16.0 KiB	-
<input type="checkbox"/>	userlog		1	InnoDB	latin1_swedish_ci	16.0 KiB	-
<input type="checkbox"/>	users		6	InnoDB	latin1_swedish_ci	32.0 KiB	-

Fig 10.23 tables

11. CONCLUSION

11.1 CONCLUSION

In conclusion, the system may be stated to be an efficient, user-friendly, and reliable records management system based on proper analysis and evaluation of the developed in the system. Meeting the initial minimum requirements in a timely and acceptable manner. The new technology is expected to boost records management's overall performance and efficiency.

Every project has it Enlighten us in the following areas.

- a) We now have a better understanding of how the hospital works. This is a true reflection of the current status of the global.
- b) Our understanding of the structure of the site is reinforced by this in order to produce Final website design reports should be followed correctly.
- c) Planning a project and sticking to it gives a strong sense of time management.
- d)The spirit of collaboration has improved, and the ability to host a real-life project has increased significantly.
- e) Validation was initially a concern, but we should have taken advantage of such guarantees through discussions.

11.2 THE SYSTEM'S LIMITATIONS

- 1. This version does not support online payment.
- 2. The system for deleting and editing data is not available in all sections.
- 3. User accounts that have not been validated via SMS are not available in this system.
- 4. Data loss as a result of poor management.

11.3 PLAN FOR THE FUTURE

- 1. Module for making payments
- 2. System for billing diagnostic services

12 REFERENCE

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