INSTITUTE FOR ADVANCED

COMPUTING AND SOFTWARE DEVELOPMENT AKURDI, PUNE

Documentation On

"Hospital Management System"

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Submitted By :   **Project Guide:**

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ABSTRACT

This document explains the requirement and scope for developing Hospital management system. The real power of this project lies in the creation of tighter relationships with common people and delivering of a high level of service and support, which in turn improves hospital management and its goodwill. In this system we can maintain the history of patient and which is very important for everyone's health. Using this system we can save the patients time.

INTRODUCTION

In this system we can store patients health records. In the existing system patient records are maintained manually by pen and paper. It is difficult to find the historical data of patients by using existing system. We overcome this issue in our system, also we are providing the facility of booking appointments to save the patients time.

TECHNOLOGIES USED

- Spring-Boot
- React-JS
- MySQL

DEVELOPMENT TOOLS

- Visual Studio Code
- Spring Tool Suite
- MySQL Relational Database

DOCUMENT PURPOSE

1) To deliver high quality health service

2).Easy to maintain patient's history and save his time

3). Finding specialist doctor and booking his appointment on single platform

4).Provide correct, consistent and timely information.

5). Information To make healthcare simple and more accessible for patient through digital solution.
It was important to provide a digital platform for millions of patients visiting the hospital.

6). Facilitating instant appointment booking and confirmation.

SCOPE

In the existing system patient records are maintained manually by pen and paper.It is hard to maintain data or reports and difficult to find the historical data of patients by using existing system. We overcome this issue in our system, in its approach to simplify doctor discovery and ease of booking and access, something which no other product in the market is solving for.

AIMS & OBJECTIVES

1). Our vision is to simplify healthcare by making quality healthcare more accessible, affordable and convenient

2) Digital visibility of doctors. : Aware of the need to bring in digitization to improve patient experience, at the same time ensuring that quality healthcare is delivered. It was important to provide a digital platform for millions of patients visiting the hospital

3). Ease of booking and access:- Healthcare has been one of the largest industries in India with a potential of growing up to $372Bn by 2022. Smartphone penetration has been on the rise and all the industries, including healthcare, have been working to make their services available with a click.

4). The two-fold objective of HMS is to ensure:

  a) Excellent experience for our patients by minimizing their waiting time
  b) Excellent experience for our partners by maximizing their utilization of time

DESCRIPTION

The Appointment

You have to book an appointment of the doctor using website check the hospital after that select doctor as per your requirement then check the slots of the doctor. Book appointment as per your convenience and his availability.

Hospital

The selected hospital checks the data provided and confirms the appointment. A Govt ID is later used for identification at the hospital.

Patients

Patients use the this website to obtain information and make appointments in dedicated hospital. During book a appointment, the patient select the hospital that is most convenient for them and choose a suitable appointment from the overview of available appointments..

Data storage

(a) The Client shall ensure that all information which comprises personal data under any relevant data protection legislation will be collected, used and disclosed to HMS in accordance with applicable data protection and privacy regulations including, without limitation, the Personal Data Protection Act 2012 ("PDPA") of Singapore.

(b) The Client agrees that HMS may collect, use and disclose the Client's personal data that the Client provides to us in connection with the Agreement for the purpose of our administration and performance of our obligations under the Agreement including but not limited to case analysis, internal management, information storage, compliance and any internal communications within the HMS group.

Uses and Characteristics

Admin:

- Add new hospital / Delete hospital /Update hospital
- View hospital list
- To view only patient details
- To view only doctor details
- Web dashboard handling

Hospital:

- Add / Delete /Update reception or doctor
- To see patient history
- To view patient bill
- To view appointment history
- Update self profile

Reception:

- View the Status of an appointment

- Take an appointment

- Cancel the appointment

- Check previous medical history

- Check bill status

Doctor:

- Approve appointment

- Check patient history

- Consult patient

- Give prescription

Patient:

- Register/login

- Feel appointment form

- After confirmation consulting by doctor

- Get prescription

- Pay bill

Operating Environment

Server Side:

Processor: Intel® Xeon® processor 3500 series
HDD: Minimum 500GB Disk Space
RAM: Minimum 2GB OS: Windows 8.1, Linux 6 Database: Mysql

Client Side (minimum requirement)

Processor: Intel Dual Core
HDD: Minimum 80GB Disk Space
RAM: Minimum 1GB
OS: Windows 7, Linux

MODULES

Admin Module :

- Login
- Logout
- Update Profile
- View Patient Details
- Add Hospital
- Add /Update services
- View Contact Details

HospitalModule:

- Login
- Logout
- Update Profile
- Previous Medical History
- Bill Check

Reception Module :

- Login
- Logout
- Update Profile
- View History
- Check Bill Status
- Check Appointment Status

Doctor Module:

- Login

- Logout

- Update Profile

- Appointment Confirmation

- View history

- Update history

- Give prescription

- Generate bill

Patient:

- Register

- Login

- Logout

- Update Profile

- Book /Check appointment

- Get Bill

- Paid The Bill

REQUIREMENTS

System requirements are expressed in a software requirement document. The Software requirement specification (SRS) is the official statement of what is required of the system developers. This requirement document includes the requirements definition and the requirement specification. The software requirement document is not a design document. It should set out what the system should do without specifying how it should be done. The requirement set out in this document is complete and consistent.

The software specification document satisfies the following:

- It specifies the external system behaviors.

- It specifies constraints on the implementation.

- It is easy to change.

- It serves as reference tool for system maintainers.

- It records forethought about the life cycle of the system.

- It characterizes acceptable response to undesired events.

Functional Requirements:

The System must provide following functionalities:

- Keeping records of patients, staff, doctors, admin, pharma companies,Hospitals etc.

- Storing the enquiry status given by the patient.

- Keeping details about medical history it is Complete or not.

Non-Functional Requirements:

Following Non-functional requirements will be there in the Insurance on internet:

- Secure access of confidential data (customer's details).

- 24 X 7 availability.

- Better component design to get better performance at peak time.

Nonfunctional requirements define system properties and constraints. It arises through user needs, requirement regarding vaccination and so on.
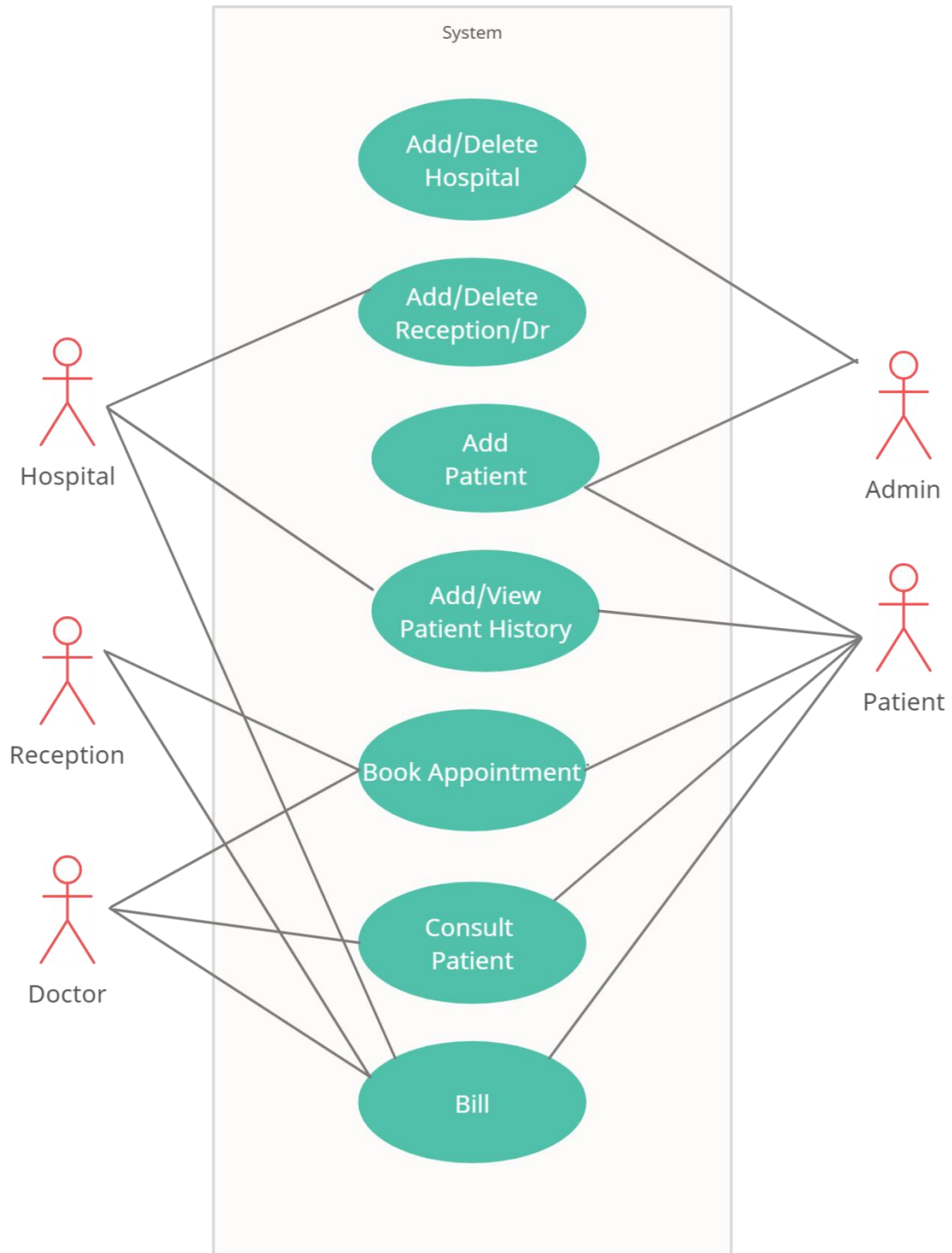
Various other Non-functional requirements are:
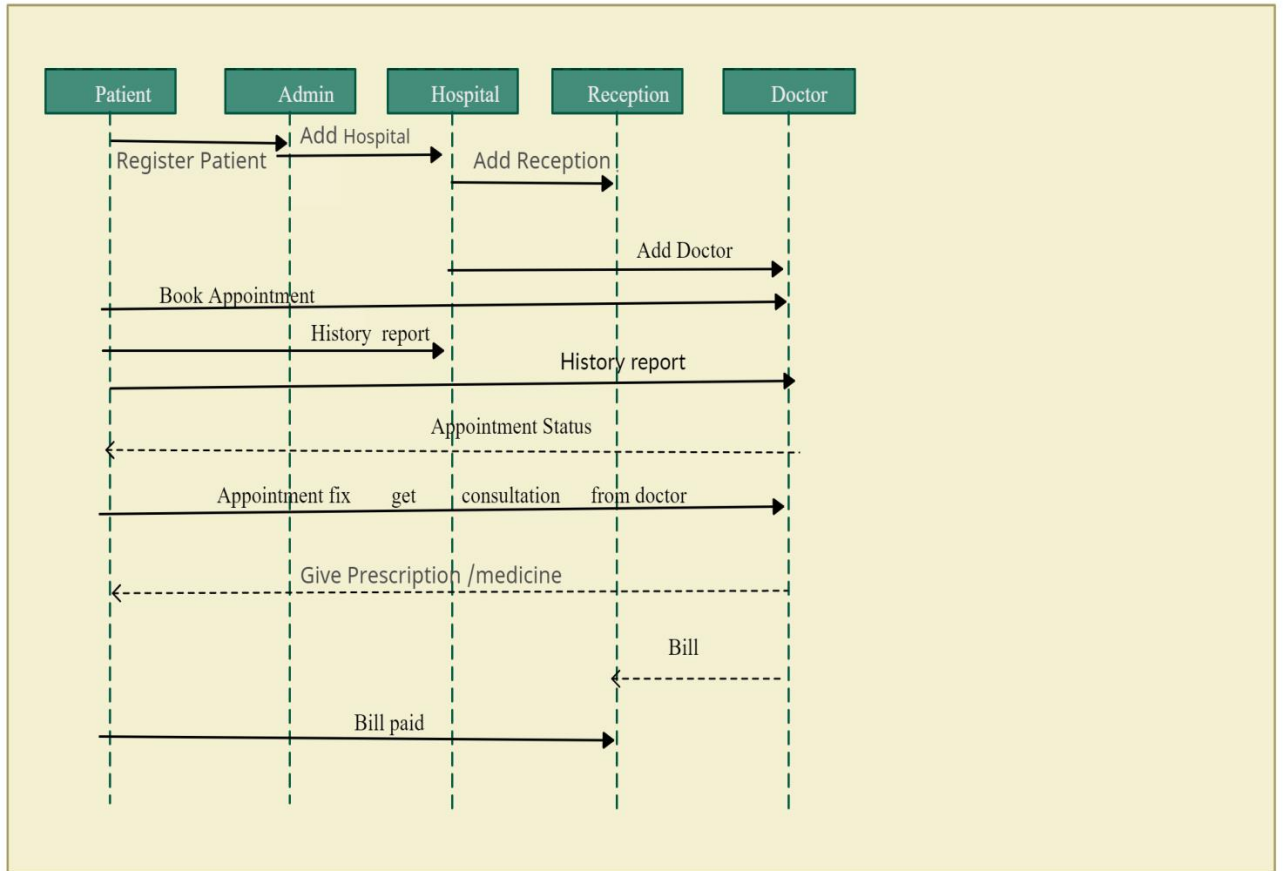
1. Security

2. Reliability

3. Maintainability

4. Portability

5. Reusability

6. Application Affinity/Compatibility

7. Resource Utilization

ER DIAGRAM
Sahil Patel | September 28, 2021

8.1 ER diagram

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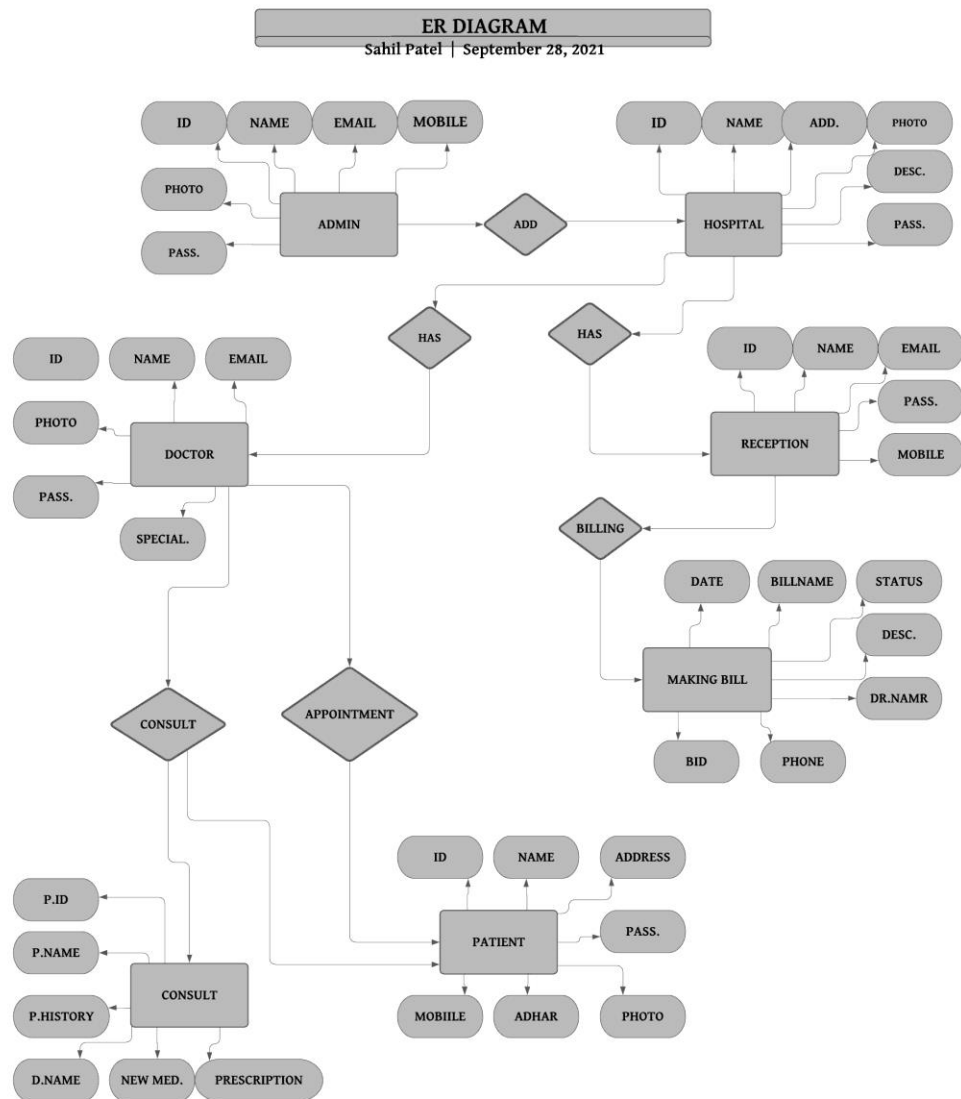
8.2 Use case diagram

8.3 Sequence diagram

FUTURE SCOPE

In the coming time this project can be extended to a larger community/area rather than a small group of people of a particular area.

We can also implement this project in future on a larger scale, this will help to have a digital records of the patients medical history and will help to store data with high security.

Keeping challenges in mind, HMS was built from scratch to provide a solution by bringing convenience, predictability and quality together in the Indian healthcare ecosystem. HMS is unique in its approach to simplify doctor discovery and ease of booking and access.

CONCLUSION

This is to conclude that the project that I undertook was worked upon with a sincere effort. Most of the requirements have been fulfilled up to the mark and the requirements which have been remaining, can be completed with a short extension.

The project made here is just to ensure that this product could be valid in today real challenging world. Here all the facilities are made and tested. Currently the system works for limited number of administrators to work. In near future it will be extended so that efficiency can be improved.

The package was designed in such a way that future modifications can be done easily. The following conclusions can be deduced from the development of the project,

- Automation of the entire system improves the efficiency
- It gives appropriate access to the authorized users depending on their permissions.
- It effectively overcomes the delay in communications.
- Updating of information becomes so easier.
- System security, data security and reliability are the striking features.
- The System has adequate scope for modification in future if it is necessary.

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