

# Hospital Management System

## Abstract

---

- We've all been at the hospital, clinics or any other similar health centre at sometime in our life. During each case of health problems, we get a file to hold all diagnosis reports, lab reports, prescriptions and treatment details related to that particular problem which eventually ends up in some corner in our house and gets lost and forgotten after sometime.
- The problem here is our past history of health conditions, effects of treatments and medicines in different situations are important and even crucial in diagnosis and treatments as they become important factors for doctors in helping diagnosing and deciding best treatment of our health problems. And thus, we need to keep these files.
- A solution to this problem is keeping all records saved in digital format. By designing a system which implements the solution for this problem, we can also overcome many other problems that doctors and patients face.
- There are so many other features we can implement (which are not discussed here) that can be integrated with this solution and remove many other pain-points of this whole diagnosis-treatment process.

## Solution

---

We can design a platform for hospital management which provides following functionalities:

- One-time patient registration process, which can store following details
  - Personal details
  - Demographic details
  - Current fitness data (which can be helpful for tracking health)
- Appointment booking system which enables patients to book appointments from on-premise, internet or via telephone
- A platform through which doctors can enter, refer and save patients' entire history of diagnosis details, health check-up and lab reports, prescriptions and treatment details, all in one place.
- An app where patients can book regular and emergency appointments quickly and hassle-free, view and share their medical history easily.

## Main Components

---

We can divide our system in three main components as follows:

### **1. Reception:**

- a. Login/Logout functions for admin
- b. Book appointments on behalf of patients (on-premises or via telephone)
- c. Register new patients
- d. Chat based interaction with doctor for any instructions or notifications
- e. Detailed view of today's appointments summary

### **2. Monitoring and Recording system for doctor:**

- a. View patient's health record history
- b. Enter and save patients' diagnosis details
- c. Enter and save prescriptions and treatment details
- d. View appointments summary
- e. Chat based interaction with receptionist for any notifications and giving instructions

### **3. Scheduler and Queue Manager:**

- a. An API for receiving and sending appointments details like available slots for booking and saving new appointment data to the database
- b. Manage today's all appointments in Queue including adding new appointments for today's to the queue, rescheduling late or absent patients