HOSPITAL MANAGEMENT SYSTEM (HMS)

Software Requirement Specification (SRS) for Hospital Management System

1. Purpose:
The purpose of this Hospital Management System is to provide a comprehensive and efficient digital solution for patients, doctors, hospitals, ambulance services, and government agencies to streamline healthcare operations, enhance patient care, and facilitate data management in the healthcare sector. It aims to address the various challenges faced by these stakeholders and improve overall healthcare service delivery.

2. Scope:
The scope of this system encompasses four primary modes: Patient, Doctor, Ambulance, and Hospital, along with a dedicated mode for government agencies.

The System is designed such that it encompasses multiple facets of healthcare management. The system will have a secure login portal with five distinct user modes: Patient, Doctor, Ambulance, Government Agencies+ and Hospital. Hospitals can sign up and provide essential information such as their name, location, specialties, available services, ICU availability, pharmacy support, bed capacity, and the number of doctors. They can also specify the medical insurances they accept. Doctors can access patient data, including past medical histories, current treatments, and lab reports. They can maintain patient progress records, schedule appointments, and generate prescriptions or bills during patient visits. Ambulance drivers can locate and navigate to the nearest hospitals based on the patient's condition. In emergencies, they can access hospital data, including bed availability and staff information, and notify hospitals to prepare for incoming patients. Patients can log in, search for hospitals based on their needs, book appointments, access pharmacy and laboratory data, view their appointment schedule, and keep track of their medical history. A dedicated mode allows government agencies to access a personalized database for monitoring hospitals, doctors, and patient data, enabling better healthcare management and policy-making. Ensuring the security and privacy of patient and healthcare data is a crucial aspect of the project's scope. In short, the scope of the Hospital Management System project is to provide a comprehensive digital platform that addresses the needs of patients, doctors, hospitals, ambulance services, and government agencies.

3. Target Audience:
- Patients: Individuals seeking healthcare services, appointments, and medical information.
- Doctors: Healthcare professionals managing patient care and appointments.
- Hospitals: Healthcare facilities providing medical services and resources.
- Ambulance Services: Emergency response teams facilitating patient transportation.
- Government Agencies: Regulatory bodies and policymakers monitoring and improving healthcare services.

4. Product Perspective:

This Hospital Management System is designed to be a comprehensive and integrated solution that connects patients, doctors, hospitals, ambulance services, and government agencies. It serves as a centralized platform to streamline healthcare operations, improve patient care, and enhance data management. The system can be integrated with existing healthcare infrastructure and can be further expanded to include additional features and modules as per evolving requirements.

By providing a user-friendly and efficient interface, this system aims to improve the overall healthcare experience for patients while aiding doctors, hospitals, and government agencies in making informed decisions and ensuring better healthcare delivery. The product perspective includes scalability, adaptability, and continuous improvement to meet the ever-changing needs of the healthcare industry.

5. User Classes and Characteristics:

The User Class for the HMS is divided into the following:

a. Patient
   A patient can be associated with the following attributes in the database:
   Patient's basic information including his contact information
   Patient's past medical history and current medical status (for diet and medicinal reasons)
   Patient's unique identifier number
b. Doctor
   The following fields can be associated with a doctor:
   Basic contact details and personal information of the doctor
   Qualification of doctor (Ease for government agencies to keep a track)
   Daily working schedule of the doctor (For appointment with patients)
c. Hospital
   Basic contact detail and location of the Hospital
   Medical specialities available
   Availability of resources such as doctors, staffs, beds, etc
   Medical Insurance Policies accepted
   Pharmacy table for hospitals
   Laboratory table for lab specialities available
d. Ambulance Drivers
   Driver Basic contact details and information
e. Government Agencies
   Basic contact details and information
   Any kind of identification proof as a government agency

6. Privileges:

For Patients:
- Access information about hospitals, including specialties, services, and location.
- Book appointments with doctors at preferred hospitals.
- Access pharmacy and laboratory information.
- View prescription history and medical bills.
- Monitor appointments and receive reminders.
- View and update personal health records.

For Doctors:
- Access patient information and medical history.
- Schedule patient appointments.
- Generate prescriptions and bills.
- Track patient progress, diets, and lab reports.
- Maintain a schedule of appointments.
- Access patient schedules.
- View hospital information and resources.

For Hospitals:
- Register and provide basic information.
- Specify medical specialties and services.
- Manage ICU availability and bed occupancy.
- List available doctors and staff.
- Offer medical insurance details.
- Monitor and manage appointments and patient data.
- Receive appointment notifications.
- Access ambulance service requests and notifications.

For Ambulance Services:
- Locate and navigate to the nearest hospitals.
- Access hospital data including bed availability and staff information.
- Notify hospitals in case of emergencies.
- Maintain an emergency response team standby.

For Government Agencies:
- Access a personalized database for monitoring hospitals, doctors, and patient's restricted data.
- Monitor healthcare infrastructure, services, and resources.
- Utilize data for policy-making and resource allocation.