**Problem Definition Document**

**1. Introduction**

Healthcare institutions, including hospitals, clinics, and medical centers, face numerous challenges in managing their operations efficiently. These challenges include but are not limited to:

* Disorganized patient records and appointment scheduling.
* Inefficient communication between healthcare providers and patients.
* Lack of centralized systems for managing medical data and administrative tasks.
* Security concerns regarding the confidentiality of patient information.

To address these challenges, the Hospital Management System (HMS) is proposed. The HMS is a comprehensive software solution designed to streamline and enhance the operational efficiency of healthcare institutions.

**2. Problem Statement**

The primary problem that the HMS aims to solve is the lack of an efficient and centralized system for managing healthcare-related tasks and data. Current manual and decentralized processes lead to inefficiencies, errors, and delays in patient care. Additionally, the lack of secure and user-friendly platforms for communication between patients and healthcare providers hampers the delivery of quality healthcare services.

**3. Functionalities of the HMS**

The HMS will provide the following functionalities to address the identified problems:

* **User Authentication and Authorization**: Validate user login data for accuracy and security. Determine user roles, such as admin, doctor, nurse, or patient, to control access and permissions.
* **Patient Management**: Enable administrators to add, edit, and delete patient records, including demographic information, medical history, and insurance details.
* **Staff (doctor-Nurse) Management**: Allow administrators to manage healthcare provider and staff profiles, including scheduling and assignments.
* **Appointment Scheduling**: Provide patients with the ability to request, reschedule, or cancel appointments with healthcare providers based on availability and preferences.
* **Medical Records Access**: Allow patients to securely access their medical records, test results, and treatment plans for better understanding and continuity of care.

**4. Objectives of the HMS**

The objectives of the HMS are as follows:

* Improve the efficiency of healthcare institutions by streamlining administrative tasks and data management processes.
* Enhance communication between patients and healthcare providers for better coordination of care.
* Ensure the security and confidentiality of patient information through authorization mechanisms.
* Facilitate better decision-making by providing healthcare professionals with timely access to accurate patient data.

The Hospital Management System aims to address the challenges faced by healthcare institutions by providing a comprehensive and user-friendly software solution. By implementing the functionalities outlined above, the HMS will contribute to improving the quality, efficiency, and security of healthcare delivery.