Software Engineering Lab-2

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Software Requirements Specification

Introduction

The Hospital Management System Software is a web-based application that is designed to manage various hospital-related tasks such as managing the details of doctors, staff, patients, managing appointments, room booking, managing medical records, etc. The software is developed using Java Swing and utilizes an SQL database for managing data and credentials.

Functional Requirements

Login and Registration :-
The system shall provide a login and registration module for doctors, staff, and patients. The login and registration module shall be designed in such a way that it provides security and restricts unauthorized access. The registration module shall collect user data, including personal information, contact information, and login credentials.

Manage Doctor Information :-
The system shall allow doctors to view and update their personal information, including name, contact details, address, qualifications, and specialization.

Manage Staff Information :-
The system shall allow the hospital administration to manage staff information, including name, contact details, address, role, and work schedule.

<u>Manage Patient Information</u> :-
The system shall allow patients to register and create a personal profile. Patients shall be able to update their personal information, including name, contact details, address, and medical history.

<u>Appointment Scheduling</u> :-
The system shall provide a module for patients to schedule appointments with doctors. Patients shall be able to view the available time slots for the doctors and select a suitable time.

<u>Room Booking</u> :-
The system shall allow patients to book rooms. The system shall also allow the hospital administration to manage room availability.

<u>Medical Records</u> :-
The system shall allow doctors to view and update patient medical records, including treatments, diagnosis, and medicines prescribed.

<u>Services Offered</u> :-
The system shall provide information about the various services offered at the clinic, including types of treatments, laboratory services, and diagnostic services.

Non-Functional Requirements

<u>Performance</u> :-
The system shall be designed in such a way that it can handle a large volume of data without any performance degradation. The system shall have a response time of less than 2 seconds.

<u>Security</u> :-
The system shall ensure data security and restrict unauthorized access. The system shall also implement various security mechanisms such as user authentication, data encryption, and firewalls.

Usability :-
The system shall be user-friendly and easy to use. The system shall have a simple and intuitive user interface that can be easily understood by users.

Reliability :-
The system shall be reliable and shall not fail or crash during normal operation. The system shall have a backup mechanism to ensure data recovery in case of any failure.

Constraints

Hardware Constraints :-
The system shall require a computer with a minimum configuration of 4GB RAM, 250GB HDD, and a 2GHz processor.

Software Constraints :-
The system shall require Java runtime environment and SQL database management software.

Dependencies

The HMS software is dependent on the availability and functionality of the SQL database. The software is also dependent on the operating system and hardware requirements.