Vanier College

**SMT Hospital Management System**

Project Proposal

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## Introduction

The SMT’s mission statement is to make the hospital staff’s job of managing patient records as easy as possible. Our hospital management system aims to create a user-friendly application that allows authorized staff to perform a variety of tasks related to patient records. The problem this application aims to solve is the often times difficult and complicated process of logging patient information with outdated systems that cannot keep up with the times. SMT will address these needs by constructing a robust, user-friendly, and efficient GUI application to be used in many hospitals.

## Project Background

The problem that all hospitals face is that they need an efficient, up-to-date management system to keep track of patients, doctors, appointments, etc. There are already some similar applications that exist, however, our system will be the most user-friendly with a minimal learning curve. Such systems are crucial in hospitals where time is of the essence.

Through a login, authorized staff will have access to patient records to schedule appointments, add patients, and filter through them among additional functionalities. There will be easy navigation between the login page, the home page, the patients page, the doctors page, and the hospital related page.

#### Key functionalities:

1. Make an appointment
2. Cancel Appointment
3. Reschedule an Appointment
4. Check availability for doctors
5. Check availability for rooms
6. Create new patient file
7. Patient Check-in
8. Discharged from hospital
9. Filter ICU patients
10. List patient Information
11. List doctor Information
12. Find Patient by Name
13. Find Patient by ID
14. Transfer patient
15. Log in/out features
16. Filter Patients by Doctor

## Solution & Approach

Our application provides clear instructions of all the actions it can perform. It is designed to facilitate front desk communication with both patients and doctors.

#### Main Page:

The main page will display the hospital’s name and require login credentials from the staff to ensure data confidentiality. Only authorized users will have access to the necessary pages and functionalities that the application provides. The user has the option to log out manually or will automatically be logged out after a certain period of inactivity for security purposes.

#### Patient Related Pages:

These are the pages that will display detailed patient information, including their stay duration, diagnosis, and assigned doctors. From here, staff can book, cancel, or reschedule appointments, as well as check a patient’s room assignment.

#### Doctor Related Pages:

These are the pages that display the information about doctors at the hospital including their specialty and their availability. When making appointments the app will need to communicate with the database and cross-reference to confirm those availability. The front desk should be able to see all the dates available before finalizing or booking the appointment to minimize errors.

#### Hospital Related Pages:

These are pages that will focus on hospital-wide operations. Some examples of said functionalities are checking the rooms available for surgery or checking how many patients are presently in Intensive Care Unit that will lead to staff coordination. Additional features include creation of a files for new patients and filtering doctors or patients based on name or ID for quick information retrieval.

## Who will take ownership of the application?

Our project aims to support the front desk staff and hospital administrators by making an easy-to-learn, intuitive, and efficient management system for doctors and patient records. New hires often require several weeks of training to familiarize themselves with the system, which is common for other industries. However, in healthcare time is of the essence and delays can have critical effects. Our solution reduces this learning time while keeping a solid, high-performing database, thus making sure that time sensitive tasks are handled in a timely manner without issues.

e keeping a solid, high-performing database, thus making sure that time sensitive tasks are handled in a timely manner without issues.

## Additional Documents

[What is a Hospital Management System? How Does It Work?](https://www.spaceo.ca/blog/hospital-management-system/)

## Team Members

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