Semester Project Documentation

Semester Project Title: **Hospital Management System**

Student Details

SR.no.	Student Name	Student Reg #	Student Degree
Student-1	Mohit Kumar	2024306	Software Engineering
Student-2	Nabiha Nasir	2024514	Software Engineering
Student-3	Tooba Hussain	2024639	Software Engineering
Student-4	Sehrish Noor	2024569	Software Engineering

Main Features

1.Staff Management

2.Patient Management

3.Inventory Management

4.Ward and Bed Management

Types of Users

1.user(consumers)
2.Doctors to manage appointments
3.Invertory manager
4.Hospital staff

Requirement Breakdown

Feature # 1: Add/ Show and Search Staff

1.1 The system allows adding a staff member by inputting its id, name and role(profession).

1.2 System shows all the staff members that have been entered in the system

1.3 System allows the user to search for any staff member.

1.4 It searches the staff members on the basis of their id's.

1.5 System terminates if the id is not valid and prints the message for the user

Feature # 2: Manage and View Ward and Bed Details

2.1 The system should allow assigning a bed to patients.

2.2 System checks for the availability of beds in a ward.

2.3 User can discharge a patient and update result of the bed in the system.

2.4 Patient details are stored along with the bed and ward assignment.

2.5 Doctors, nurses, and admins can view details of wards and beds.

2.6 The system should show occupancy status (occupied/free beds) for all wards.

Feature # 3: Inventory Management System

3.1 Allows user to add new items by entering item name, quantity, and price, ensuring the inventory does not exceed its maximum limit.

3.2 Displays a list of all the items with their name, quantity, and price, or informs the user if no item exists.

3.3 Enable updating an item's quantity or price by searching for the item using its name, notifying the user if the item is not found.

3.4 Provides a menu-driven interface with options to add, view, update, or exit the program, while handling the invalid inputs smoothly.

Feature # 4: Patient Management System

4.1 The system allows registering a new patient by inputting his id, name, age, contact, gender and medical history.

4.2 System shows all the patients that are registered.

4.3 System can schedule the appointments of patients that are registered.

4.4 System allows the user to search for patient through his name or id.

4.5 System allows the user to view medical history or record of patients.

4.6 System prints the error message if the id is not valid

Features to Codding Matrix

Function name	Implemented	Concepts used	Variables/objects created	Lines of code
Staff Management	Mange staff records	Loops, control structures, arrays, function.	Staff.id, staff.name, staff.role.	Maximum 90 lines of code.
patient management	Manage patient records	Loops, conditional statements Control structure, arrays, functions	Patient.id,patient.name,patient data	Approx 200 lines of code
invertorymanagement	Manage hospital inventory	Input/output,conditional statement, loops	ItemNames,itemQuantities,itemPrices,itemCount,searchName,choice	Approx 105
wardsAndBedManagement	Manage wards and beds	Loops , conditional statements, control structures, arrays, functions.	Ward, bed, NUM_WARDS, NUM_BEDS, current.	Maximum 80 lines of code.