Project Title : Hospital Management System

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❖ Introduction :

The **Hospital Management System** is a C program designed to manage patient records efficiently. It allows admitting new patients, discharging patients, searching for patient details, sorting records based on priority (High/Med/Low), and displaying all records in a structured table.

This project demonstrates the use of **structures, arrays, functions, and basic algorithms (Linear Search and Bubble Sort)** to automate hospital data management, reduce manual errors, and save time.

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Objective :

The objective of this project is to develop a simple **Hospital Management System in C** that can admit and discharge patients, store and search their details, sort them by priority, and display records in a structured format.

❖ Problem Statement :

- Manual hospital record-keeping is time-consuming and error-prone.
- Difficulty in admitting, updating, or discharging patients.
- Searching for patient details takes more time in paper-based systems.
- No systematic way to organize patients based on treatment priority.
- Hard to display patient details in a clear, structured format.

❖ System Requirements :

Software:
- Turbo C++ / GCC Compiler

- Any Text Editor (VS Code, Code::Blocks, etc.)

 Hardware:
-Minimum 2GB RAM
- 1.0 GHz Processor
- Keyboard & Monitor

❖ Data Structures Used

- Structures in C: For storing patient, doctor, and billing details
- Arrays: To maintain multiple records

 File Handling: For saving and retrieving hospital records Permanently.

❖ Description :

This project is a **Hospital Management System** implemented in C programming.
It allows hospital staff to **admit new patients, discharge patients, search for patient details, sort patients by priority, and display all patient records** in a tabular format.

The system uses **structured programming** and **data structures (arrays + structures)** to store and manage patient information such as **Name, Phone Number, Bed Number, and Priority (High/Med/Low)**.

❖ Algorithms Used :

Linear Search → to find/remove a patient by name.

Bubble Sort → to sort patients by priority (High ↔ Low).

❖ Sample Input/Output :

HOSPITAL MANAGEMENT SYSTEM

1. Admit a patient

2. Discharge a patient

3. Search for a patient by name

4. Sort patients by priority

5. Display all patients

6. Exit

Enter your choice: 1

Enter patient name: Ramesh

Enter patient phone number: 9876543210

Enter patient bed number: 12

Enter patient priority (High/Med/Low): High

Patient added successfully.

Output:

Patient Record Added Successfully!

Search Example:

Enter Patient ID to search: 101

Patient Found: Ramesh, Age 45, Disease: Fever

Conclusion :

The **Hospital Management System** in C provides an efficient way to manage patient records.

It allows admitting and discharging patients with ease.
Patient details can be searched and displayed quickly in tabular form.
Sorting by priority ensures better organization of records.
This project reduces manual effort and improves data accuracy.