

## Mini Project – Group Assignment 2022

### Hospital Data Management System

**In this assignment you need to create a backend database management system for a selected hospital.**

**The following requirements need to be met through your designed system.**

Hospitals have unique data requirements. Not only do they have to maintain the medical records of their patients, but they also have to manage their staff and its multiple departments. You can solve the data-related problems of hospitals by creating a DBMS solution.

First, you should assign unique IDs to the patients and store the relevant information under the same. You'll have to add the patient's name, personal details, contact number, disease name, and the treatment the patient is going through. You'll also have to mention under which hospital department the patient is (such as cardiac, gastro, etc.).

After that, you should add information about the hospital's doctors. A doctor can treat multiple patients, and he/she would have a unique ID as well. Doctors would also be classified into different departments.

Patients would get admitted into rooms, so you'll need to add that information to your database too. Apart from that, there would be distinct rooms (ICUs and Operation Theaters) in the hospital. Then, you'd have to add the information of ward boys and nurses working in the hospital and assigned to different rooms.

You can start with a small hospital. Make sure that the data is easily understandable and accessible.

Also, the hospitals have a lot of information with them such as the patient's history, pharmacy, test results, number of beds, information about the helping staff, etc. All of this data needs to be managed as they are crucial to the hospital's operations and helps in its smooth functioning. This database management helps in routine or emergency visits as well.

#### **The followings will be evaluated.**

1. Requirement analysis of the system.
2. Show at least three requirements under each module listed below.

#### **✓ Manage Patients**

This table of ER Diagram Hospital Management System will be used for storing and managing the patient information.

#### **✓ Manage Doctor**

This table will be used for storing and managing the Doctor information and login account.

✓ **Manage Laboratory**

This table will be used for storing and managing the Laboratory transaction.

✓ **Manage Inpatient**

This table will be used for storing and managing the inpatient information and diagnosis.

✓ **Manage Outpatient**

This table will be used for storing and managing the inpatient information and diagnosis.

✓ **Manage Room**

This table will be used for storing and managing the room information and assigning of patient in every room.

✓ **Manage Bills**

The billing table will be used for managing the statement of accounts per patient and for the collection of bills.

3. ER diagram of the designed system.
4. Table structures of the designed system.
5. Data Dictionary.
6. The following operations need to be addressed.
  - Creating Data
  - Retrieving Data
  - Updating Data
  - Deleting Data
7. Your system should contain below user accounts.
  - Admin - With All privileges with Grant
  - Doctor - With All privileges without Grant
  - Patients – Read permissions all tables/views
  - Laboratory Staff - All privileges without Grant and user creation
8. Following MySQL queries need to be included.
  - Select Statements using Different Functions. (Minimum of 10)
  - Select Statements using Sub Query (Minimum of 3)
  - Select Statements using Count and Group Functions (Minimum of 2)
  - Select Statements using Different Joins (Minimum of 5)
  - Insert Statement (Minimum of 5)
  - Update Statement (Minimum of 5)
  - Delete Statement (Minimum of 5)

### **System Implementation guidelines.**

You need to go through the DDLC process and produce all the related documents for the final presentation (Requirement document, ER diagrams etc).

Database implementation should be done using MySQL.

You should store data for at least 10 records for each table you identified in module mentioned above.

You should store basic data for above roles including at least 04 different attributes.

### **Requirement Document guidelines**

The following information needs to be written on your proposal.

- **Title Page**  
In the title page, you have to write your desired title for your project.  
Example: **Hospital Management System**
- **System Description**  
Design solution.
- **Requirements Analysis**  
State your gathered requirements under each module mentioned above.
- **Data Dictionaries**  
For Data Dictionaries, you have to present the descriptive details of each field in every table.

Report Guideline will be given.