## Assignment No. 2

# Objectives

1. Students will be able to learn SQL.
2. Student will be able to learn DDL commands and data types.
3. Student will be able to learn DML commands.

## Case Study

### Problem: Hospital Database information system: -

Hospitals are key institutions and there is need for efficient service delivery in the hospital as good health is paramount to a happy society. As a result of this there is need for a system that will enable hospital management in making effective and efficient decision. Recently, efforts are continuously being made in designing and constructing a user friendly and reliable database system to satisfy hospital or medical management system.

### Goal: -

It aimed at designing and implementing an automated system that will alleviate the problem of handling patients' data in a hospital such as insecurity of files, poor file retrieval system and Inefficient file update system etc. This examines an existing information system of a hospital and designed an automated system that can help Medical Doctors and those effectively and efficiently. The Database would be developed with MySQL software.

### Description: -

All large enterprises need the database systems for handling the information. One kind of those enterprises is the hospital. Because of large number of patients, doctors and other staff in hospitals, data processing becomes more crucial. Data Management in hospital can be used for

On the other hand, patient can access their lab results and all kinds of information that doctors indicate. Data base hospital helps to control the accounting business easily.

## Assumptions: -

In the database management system all information including prescriptions, survey, and diagnosis of patients can be carried out.

1. All information includes prescription survey, diagnosis of patients.
2. The patients and the doctor can handle all information
3. Patients can take appointment time for visiting and can access their information via interest if the organization is online.
4. Administration can access the statistics about the hospital such as patients' capacity, number of employees

## Tables will be created are as follows: -

1. Patient Table: - This table consist of details about all the available patients. The information stored in thistable includes **PATIENT_ID**, **PATIENT_NAME**, age, weight, gender, address, phoneno, disease, doctorID, registrationdate.

2. Doctor Table: - This table consists of details about the doctor includes doctorID, doctor name, dept, PHONENO.

3. Lab Table :- This table consist of details about all the variable like lab_no, PATIENT_ID, weight, doctor_id, Date, patient status, fees.

4. Bill Table:- This table consist of details about all the variable like bill_no, PATIENT_ID, patient_type, DoctorID , Doctor_charge, medicine_charge, room_charge, no_of_days, nursing_charge.)

**Patient Table:**

| PATIENT_ID | PATIENT_NAME | AGE | WEIGHT | GENDER | ADDRESS | PHONE_NUMBER | DISEASE | DOCTOR_ID | REGISTRATION_DATE |
|---|---|---|---|---|---|---|---|---|---|
| P1 | ZUANG | 25 | 54 | MALE | BEIJING | 7865452301 | FEVER | D32 | 2022-08-21 |
| P2 | CHENG | 65 | 74 | MALE | HONGKONG | 7782376451 | LEVER SYROSIS | D65 | 2023-06-25 |

**Doctor Table:**

| DOCTOR_ID | DOCTOR_NAME | DEPT | PHONE_NUMBER |
|---|---|---|---|
| D32 | ASHUTOSH | PHYSICIAN | 8956752301 |
| D65 | ANANT | CARDIOLOGY | 6754934575 |

**Lab Table:**

| LAB_NO | PATIENT_ID | WEIGHT | DOCTOR_ID | LAB_DATE | CATEGORY | PATIENT_STATUS | FEES |
|---|---|---|---|---|---|---|---|
| L2 | P3 | 54 | D34 | 2022-08-21 | REGULAR | ACTIVE | 320 |
| L3 | P4 | 62 | D65 | 2023-03-15 | EMERGENCY | CRITICAL | 500 |

**Bill Table:**

| BILL_NO | PATIENT_ID | PATIENT_TYPE | DOCTOR_ID | DOCTOR_CHARGE | MEDICINE_CHARGE | ROOM_CHARGE | DAYS | NURSING_CHARGE |
|---|---|---|---|---|---|---|---|---|
| B10 | P34 | REGULAR | D34 | 2000 | 950 | 1500 | 5 | 500 |
| B11 | P45 | EMERGENCY | D65 | 3000 | 1200 | 2500 | 3 | 700 |

**Questions:**

1. **Create a database named as HMS (Hospital Management System).**
2. **Use database**
3. **Create three tables named as Patient Table, Doctor Table, Lab Table, Bill.**
4. **Display all columns and data of the table Doctor**.
5. **Display all the surgen Doctors.**
6. **Find all the male patients whose age is above 40.**
7. **Add a column name as blood group in patient table.**
8. **Delete the recently added column in the patient table.**
9. **Display PATIENT_ID, PATIENT_TYPE, DOCTOR_CHARGE, and MEDICINE_CHARGE from Bill table where DOCTOR_CHARGE and MEDICINE_CHARGE are more than 1000**
10. **Create a new table new_Lab by coping all data from Lab table. Display all from new_Lab table**.
11. **Change datatype of any coloum of new_Lab table.**
12. **Change any column name of new_Lab table.**
13. **Delete the patient whose age is less than10.**
14. **Change the Fees of patient id 'P2' to Rs. 450 in the** new_lab table**.**