

Lab Sheet - MySQL 01 & 02

A hospital is transitioning to a new database system to manage its patients, doctors, and appointments efficiently. Your task is to help design, populate, and manipulate the database using SQL Workbench. Follow the instructions below to complete the tasks step-by-step.

I. Create a schema named **HospitalDB**.

II. Create the following tables

Doctors Table

Column Name	Data Type	Constraints
DoctorID	INTEGER	Primary Key
FirstName	VARCHAR(50)	NOT NULL
LastName	VARCHAR(50)	NOT NULL
Specialty	VARCHAR(100)	NOT NULL
ContactNumber	VARCHAR(15)	UNIQUE, NOT NULL
HireDate	DATE	NOT NULL

Patients Table

Column Name	Data Type	Constraints
PatientID	INTEGER	Primary Key
FirstName	VARCHAR(50)	NOT NULL
LastName	VARCHAR(50)	NOT NULL
DOB	DATE	NOT NULL
Gender	CHAR(1)	CHECK (Gender IN ('M', 'F'))
ContactNumber	VARCHAR(15)	UNIQUE, NOT NULL
Address	TEXT	

Appointments Table

Column Name	Data Type	Constraints
AppointmentID	INTEGER	Primary Key
PatientID	INTEGER	Foreign Key referencing Patients(PatientID)
DoctorID	INTEGER	Foreign Key referencing Doctors(DoctorID)
AppointmentDate	DATE	NOT NULL
AppointmentTime	TIME	NOT NULL
Status	VARCHAR(20)	Default: 'Scheduled'

- III. Insert the following records into the **Doctors** table:

DoctorID	FirstName	LastName	Specialty	ContactNumber	HireDate
1	Sarah	Lee	Cardiology	9876543210	2020-05-01
2	John	Adams	Neurology	8765432109	2018-03-15
3	Priya	Kumar	Pediatrics	7654321098	2021-08-20

- IV. Add the following records to the **Patients** table

PatientID	FirstName	LastName	DOB	Gender	ContactNumber	Address
101	Alice	Brown	1985-02-14	F	1234567890	12 Maple Street
102	Bob	Green	1990-11-23	M	2345678901	45 Oak Avenue

- V. Insert the following records into the **Appointments** table

AppointmentID	PatientID	DoctorID	AppointmentDate	AppointmentTime	Status
1	101	1	2024-01-15	10:00:00	Scheduled
2	102	2	2024-01-15	11:30:00	Scheduled

- VI. Insert one more following record into **Appointments** where DoctorID: 5 is referenced.
Explain why this fails.

AppointmentID	PatientID	DoctorID	AppointmentDate	AppointmentTime	Status
3	101	5	2024-01-15	12:00:00	Scheduled

- VII. Create a table named **DataTypeTest** with the following columns

Column Name	Data Type	Description	Constraints
TestId	INTEGER	Unique identifier for each record	Primary Key
SampleText	TEXT	Stores a paragraph of text	-
SampleDate	DATE	Stores a date	-
SampleTime	TIME	Stores a time value	-
SampleDecimal	DECIMAL(10,2)	Stores a decimal number (10 digits, 2 decimals)	-

- VIII. Insert the following records into the **DataTypeTest** table

TestId	SampleText	SampleDate	SampleTime	SampleDecimal
1	This is a test.	2025-01-01	14:30:00	1234.56
2	Learning MySQL.	2025-01-02	09:45:00	78.90

- IX. Add a constraint to the **Appointments** table to ensure that appointments can only be scheduled between 8:00 AM and 6:00 PM.
- X. Add a constraint to ensure no doctor can have more than 10 appointments in a single day. Test this constraint by attempting to schedule the 11th appointment for a doctor.
- XI. Truncate the **Patients** table to clear all records without deleting its structure.
- XII. Drop the **DataTypeTest** table entirely.