Problem 1: College Admission System
Schema:
● Student(sid INT, name VARCHAR(50), gender VARCHAR(10), dept_id INT)
● Department(dept_id INT, dept_name VARCHAR(50), intake INT)
Questions:
1. Create tables with appropriate keys and constraints.
2. Add 5 students and 3 departments.
3. Display names of all male students and their department names.
4. List departments with more than 2 students using GROUP BY and HAVING.
5. Update the intake to increase by 10% for all departments.

```
-- 1. Create Tables with Appropriate Keys and Constraints
CREATE TABLE Department (
    dept_id INT PRIMARY KEY,
    dept_name VARCHAR(50) NOT NULL,
    intake INT CHECK (intake >= 0)
);

CREATE TABLE Student (
    sid INT PRIMARY KEY,
    name VARCHAR(50) NOT NULL,
    gender VARCHAR(10) CHECK (gender IN ('Male', 'Female')),
    dept_id INT,
    FOREIGN KEY (dept_id) REFERENCES Department(dept_id)
);

--  2. Add 5 Students and 3 Departments
-- Inserting into Department
INSERT INTO Department VALUES
(1, 'Computer Science', 60),
(2, 'Mechanical', 50),
(3, 'Electronics', 40);

-- Inserting into Student
INSERT INTO Student VALUES
(101, 'Amit', 'Male', 1),
(102, 'Sneha', 'Female', 2),
(103, 'Ravi', 'Male', 1),
(104, 'Priya', 'Female', 3),
(105, 'Rahul', 'Male', 2);

--  3. Display Names of All Male Students and Their Department Names
SELECT s.name AS Student_Name, d.dept_name AS Department
FROM Student s
JOIN Department d ON s.dept_id = d.dept_id
WHERE s.gender = 'Male';
```

```sql
-- 4. List Departments with More Than 2 Students
SELECT d.dept_name, COUNT(s.sid) AS Student_Count
FROM Student s
JOIN Department d ON s.dept_id = d.dept_id
GROUP BY d.dept_id, d.dept_name
HAVING COUNT(s.sid) > 2;

-- 5. Update the Intake to Increase by 10% for All Departments
SET SQL_SAFE_UPDATES = 0;
UPDATE Department
SET intake = ROUND(intake * 1.10);
SET SQL_SAFE_UPDATES = 1;
```