**# Create Tables in MySQL:**

CREATE TABLE Students (

student\_id INT PRIMARY KEY,

name VARCHAR(255),

date\_of\_birth DATE,

address VARCHAR(255),

contact\_information VARCHAR(255)

);

CREATE TABLE Courses (

course\_id INT PRIMARY KEY,

name VARCHAR(255),

description TEXT,

credit\_hours INT

);

CREATE TABLE Professors (

professor\_id INT PRIMARY KEY,

name VARCHAR(255),

specialization VARCHAR(255),

contact\_information VARCHAR(255)

);

CREATE TABLE Departments (

department\_id INT PRIMARY KEY,

name VARCHAR(255),

location VARCHAR(255),

contact\_information VARCHAR(255)

);

CREATE TABLE Enrollment (

enrollment\_id INT PRIMARY KEY,

student\_id INT,

course\_id INT,

enrollment\_date DATE,

FOREIGN KEY (student\_id) REFERENCES Students(student\_id),

FOREIGN KEY (course\_id) REFERENCES Courses(course\_id)

);

**#Insert Dummy Data:**

INSERT INTO Students VALUES (1, 'Said Salem', '1995-01-01', '123 muscat', 'Said@example.com');

INSERT INTO Students VALUES (2, 'Ali Said', '1996-02-02', '456 sur ', 'Ali@example.com');

INSERT INTO Courses VALUES (1, 'Math 101', 'Introduction to Mathematics', 3);

INSERT INTO Courses VALUES (2, 'IT 201', 'Data Sices', 4);

INSERT INTO Professors VALUES (1, 'Dr. Ahmed', 'Mathematics', 'Ahmed@example.com');

INSERT INTO Professors VALUES (2, 'Dr. Saif', 'Data', 'Saif@example.com');

INSERT INTO Departments VALUES (1, 'Math Department', 'Building A', 'math@example.com');

INSERT INTO Departments VALUES (2, 'IT Department', 'Building B', 'it@example.com');

INSERT INTO Enrollment VALUES (1, 1, 1, '2023-01-01');

INSERT INTO Enrollment VALUES (2, 2, 1, '2023-02-02');

INSERT INTO Enrollment VALUES (3, 1, 2, '2023-03-03');

**#1.Retrieve all students enrolled in a specific course:**

SELECT Students.name

FROM Students

JOIN Enrollment ON Students.student\_id = Enrollment.student\_id

WHERE Enrollment.course\_id = 1; -- Replace 1 with the desired course ID

**#2.Retrieve the number of students enrolled in each course:**

SELECT Courses.name, COUNT(Enrollment.enrollment\_id) AS num\_students

FROM Courses

LEFT JOIN Enrollment ON Courses.course\_id = Enrollment.course\_id

GROUP BY Courses.course\_id;3

**#3.Retrieve the courses offered by a specific department:**

SELECT Courses.name

FROM Courses

JOIN Departments ON Courses.department\_id = Departments.department\_id

WHERE Departments.name = 'Math Department'; -- Replace with the desired department name