

Create a database named **exam management system (ems)** with the following tables and **insert data** in each table.

`departments(id, department_name, head)`

`students(id, name, roll, date_of_birth, city, department_id)`

`subjects(id, subject_title, credits, department_id)`

`exams(id, exam_name, exam_date, subject_id)`

`results(id, student_id, exam_id, marks)`

Instructions: [ignore the marked part]

1. Create a database with the name **ems**.

2. Create all tables with proper **data types** and **constraints**. Ensure **PRIMARY KEY**, **UNIQUE**, **NOT NULL**, **AUTO_INCREMENT**, and **FOREIGN KEY** constraints are correctly applied.

3. Insert data into each table. Add at least 2/3 records in each table.

Q1: Create Database and tables using SQL Commands. [5]

Q2: Insert data using SQL Commands. [5]

Q3: Write SQL Query for the following questions. *You have to answer 10 questions in the exam. I have added more questions for practice.* [10]

- Find the number of departments.
- Find the number of students.
- Find the number of students who are from barishal or dhaka.
- Find the number of distinct cities.
- Find the title and the credit hours of those course having credit more than 3.
- How many students get more than 80 marks?
- How many students pass in the exam where 60 is the passing marks?
- What is the min, maximum and average marks obtained by the students (write three different queries for each function)?
- How many types of exams are conducted?
- Sort the result according to the highest marks.
- How many subjects have been taken in exams?