**MySQL Labs**

**MySQL (Day1):**

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|  | **Create a database called grades** |
|  | **Create database grades;** |
|  | **Create the following tables in the grades database:**  ***courses***  ***course\_id*** *int pk*  *course\_name varchar(100) not null*  *credit\_hour int*  ***students\_courses***  ***course\_id*** *int*  ***student\_id*** *int*  *grade int*  *reg\_date date*  ***students***  ***student\_id*** *int pk*  *student\_name varchar (100) not null*  *email varchar (50)*  *tel varchar (20)* |
|  | **CREATE TABLE students(**  **student\_id INT PRIMARY KEY, student\_name CHAR(100) NOT NULL,**  **Email CHAR(50),Tel CHAR(20));**  **CREATE TABLE courses( course\_id INT PRIMARY KEY, course\_name CHAR(100) NOT NULL,credit\_hour INT);**  **CREATE TABLE students\_courses (course\_id INT,student\_id INT,grade INT,**  **reg\_date DATE,FOREIGN KEY (course\_id) REFERENCES courses(course\_id),**  **FOREIGN KEY (student\_id) REFERENCES students(student\_id),**  **PRIMARY KEY (course\_id, student\_id));** |
| **3** | **Modify the students table to allow for longer Student names (150 char)**  **Confirm your modification.** |
|  | **alter table students modify student\_name CHAR (150);** |
| **4** | **Add constraint to force unique email for each student** |
|  | **alter table students modify email unique;** |
| **5** | **Get Time, Date, Current user, MySQL Version using prompt?** |
|  | **select now(); // time and date**  **select user(); //user information**  **mysql -u root //mysql version** |
| **6** | **Add gender column for the students table. It holds two value (male or female)** |
|  | **alter table students add column gender enum ('male' ,'female');** |
| **7** | **Add birth\_date column for the students table.** |
|  | **alter table students add column birth\_day date;** |
| **8** | **Drop the student\_name column and replace it with first name and last name.** |
|  | **alter table students drop column student\_name;**  **alter table students add column first\_name CHAR ;**  **alter table students add column last\_name CHAR ;** |
| **9** | **Insert your friend’s data into the table students.** |
|  | **insert into students (student\_id,email,tel,gender,birth\_day,first\_name,last\_name)values(123,'mohamed@gmail.com',01152211637,'male',8/12/1997 ,'mohamed','ahmed');** |
| **10** | **Create a new table (male\_students) based on students table and fill it with the data of male students** |
|  | **CREATE table male\_students as select \* from students where gender = 'male';** |

**Part II**

**Create another database “mob39”**

**Use mob39**

**Run Lab Script then answer the following**

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| **1** | **Display all students’ information.** |
|  | **select \* from students;** |
| **2** | **Display male students only.** |
|  | **select \* from students where gender = 'male';** |
| **3** | **Display the number of female students.** |
|  | **select count(student\_id) from students group by gender having gender = 'female';** |
| **4** | **Display the students’ data for the students who are born before 1992-10-01.** |
|  | **select \* from students where birth\_date < '1992-10-01';** |
| **5** | **Display the students’ data for the students who are born before 1991-10-01.** |
|  | **select \* from students where birth\_date < '1991-10-01';** |
| **6** | **Display course\_id and their grades sorted by grades.** |
|  | **select course\_id,grade from students\_courses order by grade;** |
| **7** | **Display students’ names that begin with A.** |
|  | **select first\_name from students where first\_name like 'A%';** |
| **8** | **Display the gender, number of males and females.** |
|  | **select gender,count(student\_id) from students group by gender;** |
| **9** | **Display the repeated first names and their counts if higher than 2.** |
|  | **Select first\_name, count(first\_name) from students group by first\_name having count(first\_name) > 2;** |
| **10** | **Display the subject with highest grade** |
|  | **select course\_id from students\_courses where grade >=all(select grade from students\_courses) ;**  **select course\_id,grade from students\_courses where grade >=all(select grade from students\_courses) ;** |