**Kareem Ibraheem**

**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 varchar(100) not null, email varchar(50), tel varchar(20) );**  **create table courses ( course\_id int primary key, course\_name varchar(100) not null, credit\_hour int );**  **create table student\_courses ( course\_id int, student\_id int, grade int, reg\_date int, 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 varchar(150) not null;**  **desc students;** |
| **4** | **Add constraint to force unique email for each student** |
|  | **alter table students modify email varchar(50) unique;** |
| **5** | **Get Time, Date, Current user, MySQL Version using prompt?** |
|  | **select now(), current\_user(), version();** |
| **6** | **Add gender column for the students table. It holds two value (male or female)** |
|  | **alter table students add column gender enum('M', 'F');** |
| **7** | **Add birth\_date column for the students table.** |
|  | **alter table students add column birth\_date 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 varchar(75) not null;**  **alter table students add column last\_name varchar(75) not null;** |
| **9** | **Insert your friend’s data into the table students.** |
|  | **insert into students ( student\_id, email, tel, gender, birth\_date, first\_name, last\_name ) values ( 1, 'friend@gmail.com', '010101', 'M', '200**  **1-05-18', 'Kareem', 'Ibraheem' );** |
| **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 = 'M';** |

**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 where 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 \* 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 c.\* from courses c, students\_courses g where c.course\_id = g.course\_id order by grade desc limit 1;** |