**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,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 add unique(email);** |
| **5** | **Get Time, Date, Current user, MySQL Version using prompt?** |
|  | **Select now(),current\_date(),user(),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\_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 char (50);**  **Alter table students add column last\_name char (50);** |
| **9** | **Insert your friend’s data into the table students.** |
|  | **Insert into students values(1,'shaimaa@yahoo.com','012','Female','1999-7-17', 'Shaimaa', 'Mokhtar');** |
| **10** | **Create a new table (male\_students) based on students table and fill it with the data of male students** |
|  | **Create table male\_students select \* from students where gender=’Male’;** |

**Part II**

**Create another database “OS42”**

**Use OS42**

**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 male students who are born before 1991-10-01.** |
|  | **Select \* from students where birth\_date < ’ 1991-10-01’ and gender = ‘Male’;** |
| **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 concat(first\_name,last\_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(\*) from students group by first\_name having count(first\_name)>=2;** |
| **10** | **Display the subject with highest grade** |
|  | **Select course\_name, max(grade) from courses as c, students\_courses as s where c.course\_id=s.course\_id;** |