**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 if not exists students( id int primary key, student\_name varchar(100) not null, email varchar(50),tel varchar(50));**  **Create table if not exists courses (course\_id int primary key, course\_name varchar(100) not nul, credit\_hour int);**  **Create table if not exists students\_courses( course\_id int not null, student\_id int not null, grade int, reg\_date date, primary key(course\_id,student\_id), foreign key (student\_id) references students(id), foreign key(course\_id) references courses(course\_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);** |
| **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 curtime(),curdate(),current\_user(),version();** |
| **6** | **Add gender column for the students table. It holds two value (male or female)** |
|  | **Alter table students add gender enum('Male','Female';)** |
| **7** | **Add birth\_date column for the students table.** |
|  | **Alter table students add birth\_date date;** |
| **8** | **Drop the student\_name column and replace it with first name and last name.** |
|  | **Alter table students drop student\_name;**  **Alter table students add(first\_name varchar(75), last\_name varchar(75));** |
| **9** | **Insert your friend’s data into the table students.** |
|  | **Insert into students(id,email,tel,gender,birth\_date,first\_name,last\_name) values(1,'mohamed@gmail.com','01111111111','Male','1995-7-3','mo','def');selec** |
| **10** | **Create a new table (male\_students) based on students table and fill it with the data of male students** |
|  | **Create table if not exists male\_students as 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 gender,count(\*) from students where gender = 'female' group by gender;** |
| **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';** |
| **6** | **Display course\_id and their grades sorted by grades.** |
|  | **Select course\_id,grade from students\_courses order by grades** |
| **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(gender) from students group by gender;** |
| **9** | **Display the repeated first names and their counts if higher than 2.** |
|  | **Select first\_name, count(first\_name) as c from students group by first\_name having c > 2;** |
| **10** | **Display the subject with highest grade** |
|  | **Select course\_name from courses c inner join students\_courses sc**  **On c.course\_id = sc.course\_id**  **Where sc.grade = (select max(grade) from students\_courses);** |