**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)* |
|  | **use grades;**  **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 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)**  **);** |
| **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 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('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` varchar (100) not null, add column `last name` varchar (100) not null;** |
| **9** | **Insert your friend’s data into the table students.** |
|  | **insert into students(student\_id,`first name`,`last name`,email,tel,gender,birth\_date) values(13,'Abdorrahman','Ramadan','AR@gmail.com','01000000000','male','1988-06-10');** |
| **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 “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 desc;** |
| **7** | **Display students’ names that begin with A.** |
|  | **select concat( first\_name, " ", last\_name ) as fullname from students where first\_name like 'A%' or last\_name like 'A%';** |
| **8** | **Display the gender, number of males and females.** |
|  | **select count(student\_id) from students where gender = 'female' union select count(student\_id) from students where gender = 'male';** |
| **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\_name,grade from students\_courses sc,courses c where sc.course\_id=c.course\_id order by grade desc limit 1;** |