**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(id int, student\_name varchar(100) not null, email varchar(50), tel varchar(20), primary key (id));**  **create table courses(course\_id int, course\_name varchar(100) not null, credit\_hour int, primary key (course\_id));**  **create table students\_courses(**  **course\_id int,**  **student\_id int,**  **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 CONSTRAINT email\_unique UNIQUE (email);** |
| **5** | **Get Time, Date, Current user, MySQL Version using prompt?** |
|  | **select curtime();**  **select curdate();**  **select current\_user();**  **select version();** |
| **6** | **Add gender column for the students table. It holds two value (male or female)** |
|  | **alter table students**  **ADD COLUMN gender VARCHAR(6) check(gender in('female','male'));** |
| **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(50);**  **alter table students add column last\_name varchar(50);** |
| **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, 'omar@123', '011223344', 'male', STR\_TO\_DATE('09-31-1999', '%m-%d-%Y'), 'omar', '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 “php”**

**Use php**

**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(\*) 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 male students who are born before 1991-10-01.** |
|  | **select \* from students where birth\_date < '1991-10-01' && gender = 'male';** |
| **6** | **Display course\_id and their grades sorted by grades.** |
|  | **select course\_id, grade from students\_courses order by grade ASC;** |
| **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(\*) from students group by gender;** |
| **9** | **Display the repeated first names and their counts if higher than 2.** |
|  | **select first\_name, count(\*) as count from students group by first\_name having count >2;** |
| **10** | **Display the subject with highest grade** |
|  | **select course\_id, max(grade) from students\_courses;** |