**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 auto\_increment , student\_name varchar(100) not null , email varchar(50) , tel varchar(20));**  **> create table courses ( course\_id int primary key auto\_increment , course\_name varchar(100) not null , credit\_hour int);**  **> create table students\_courses (student\_id int ,course\_id int ,grade int , reg\_date date** ,  Primary key(student\_id , course\_id),  **FOREIGN KEY**(**student\_id**)**REFERENCES** students(student\_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**  **MODIFY email varchar(50) unique**; |
| **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 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(50);**  **Alter table students**  **ADD COLUMN last\_name varchar(50);** |
| **9** | **Insert your friend’s data into the table students.** |
|  | **insert into students values (null, 'ingy@gmail.com','0100','female',22/5/2000, 'ingy','elsakhawy');** |
| **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=”males”**; |

**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 student**  **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< '1992-10-01' 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 first\_name**  **From students**  **Where first\_name =’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(\*)**  **From students**  **Group by first\_name**  **Having count (\*)>2;** |
| **10** | **Display the subject with highest grade** |
|  | **SELECT \***  **FROM course**  **WHERE course\_id = (**  **SELECT course\_id**  **FROM students\_courses**  **ORDER BY grade DESC**  **LIMIT 1**  **);** |