**MySQL Labs**

**MySQL (Day1):**

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|  | **Create a database called grades** |
|  | **CRAETE DATABASE grades;**  **Use 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 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,**  **PRIMARY KEY(course\_id,student\_id),**  **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) NOT NULL;** |
| **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 CURRENT\_TIME();**  SELECT CURDATE();  SELECT USER(); or SELECT CURRENT\_USER();  SELECT VERSION(); |
| **6** | **Add gender column for the students table. It holds two value (male or female)** |
|  | **ALTER TABLE students ADD gender ENUM("Female","Male") NOT NULL DEFAULT "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(150) NOT NULL;**  **ALTER TABLE students ADD last\_name varchar(150) NOT NULL;** |
| **9** | **Insert your friend’s data into the table students.** |
|  | **INSERT INTO students(student\_id,** **email,** **tel,** **gender,** **birth\_date,** **first\_name,** **last\_name) values(1,”**[**ahmed@yahoo.com**](mailto:ahmed@yahoo.com)**”,”0123456789”,”Male”,”1990-2-2”,”Ahmed”,”Ali”), (2,”**[**mahmoud@yahoo.com**](mailto:mahmoud@yahoo.com)**”,”0123458231”,”Male”,”1995-9-4”,”Mahmoud”,”Sayed”), (3,”**[Dina**@yahoo.com**](mailto:Dina@yahoo.com)**”,”0953456789”,”Female”,”1997-8-11”,”Dina”,”Hamdy”)** |
| **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**

**RUN FIRST :**

**(CREATE DATABASE php;**

**\. C:/Users/Ahmad Abd Elhameed/Downloads/ITI\_Main/MySQL/lab1/php.txt;**

**Use php;)**

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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 gender = “male” and birth\_date < “1991-10-01”;** |
| **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 first\_name from students WHERE first\_name LIKE "A%";** |
| **8** | **Display the gender, number of males and females.** |
|  | **Select gender,COUNT(\*) counts from students group by gender;** |
| **9** | **Display the repeated first names and their counts if higher than 2.** |
|  | SELECT first\_name, COUNT(\*) AS cnt  FROM students  GROUP BY first\_name  HAVING cnt > 1;  SELECT first\_name, count(first\_name) as count  FROM students  GROUP BY first\_name  HAVING count >= 2;  SELECT first\_name,COUNT(\*) AS Occurrence FROM  students GROUP BY first\_name HAVING COUNT(\*)>1; |
| **10** | **Display the subject with highest grade** |
|  | **select course\_id,MAX(grade) from students\_courses group by(course\_id) order by 2 desc limit 1;** |