**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` (**  **`student\_id` INT(11) NOT NULL AUTO\_INCREMENT,**  **`student\_name` VARCHAR(100) NOT NULL,**  **`email` VARCHAR(50) NULL,**  **PRIMARY KEY (`student\_id`))**  **/\*-----------\*/**  **CREATE TABLE IF NOT EXISTS `courses` (**  **`course\_id` INT(11) NOT NULL AUTO\_INCREMENT,**  **`course\_name` VARCHAR(100) NOT NULL,**  **`credit\_hour` INT NULL,**  **PRIMARY KEY (`course\_id`))**  **/\*-----------\*/**  **CREATE TABLE IF NOT EXISTS `students\_courses` (**  **`student\_id` INT(11) NOT NULL,**  **`course\_id` INT NOT NULL,**  **`grade` INT(11) NULL,**  **`reg\_date` DATE NULL,**  **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 column student\_name varchar(150) not null ;** |
| **4** | **Add constraint to force unique email for each student** |
|  | **alter table students add constraint uniq\_email Unique(email) ;** |
| **5** | **Get Time, Date, Current user, MySQL Version using prompt?** |
|  | **Select NOW(); /\*Get Time\*/**  **use grades ;**  **select user from mysql.user; /\*To get all users\*/**  **select @@version;/\* To get 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(45) NOT NULL,**  **add `last\_name` VARCHAR(45) NOT NULL;** |
| **9** | **Insert your friend’s data into the table students.** |
|  | **insert into `students` (`student\_id`, `first\_name`, `last\_name`, `email`, `gender`, `birth\_date` ) values**  **('1','Omar','Walid',NULL,'male', '1999-12-17');**  **insert into `students` (`student\_id`, `first\_name`, `last\_name`, `email`, `gender`, `birth\_date` ) values ('2','Mahmoud','Mohamed',NULL,'male', '1999-12-9');**  **insert into `students` (`student\_id`, `first\_name`, `last\_name`, `email`, `gender`, `birth\_date` ) values ('3','Sara','Hussam',NULL,'female', '2004-12-18');** |
| **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';** |
| **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(student\_id) AS count**  **from students**  **group by gender;** |
| **9** | **Display the repeated first names and their counts if higher than 2.** |
|  | **select first\_name, COUNT(student\_id) 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** |