

MySQL Labs

MySQL (Day1):

1.	Create a database called grades
	create database grades;
2.	<p>Create the following tables in the grades database:</p> <div><div><p><i>students</i></p><p><i>student_id</i> int <i>pk</i> <i>student_name</i> varchar (100) <i>not null</i> <i>email</i> varchar (50) <i>tel</i> varchar (20)</p></div><div><p><i>courses</i></p><p><i>course_id</i> int <i>pk</i> <i>course_name</i> varchar(100) <i>not null</i> <i>credit_hour</i> int</p></div><div><p><i>students_courses</i></p><p><i>course_id</i> <u>int</u> <i>student_id</i> <u>int</u> <i>grade</i> int <i>reg_date</i> date</p></div></div>
	<pre>create table students (student_id int not null, student_name varchar(100) not null, email varchar(50), tel varchar(20), primary key(student_id)); create table courses (course_id int not null, course_name varchar(100) not null,</pre>

	<pre> credit_hour int, primary key(course_id)); create table students_courses(course_id int not null, student_id int not null, 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)); </pre>
3	<p>Modify the <code>students</code> table to allow for longer Student names (150 char) Confirm your modification.</p>
	<pre>alter table students modify student_name varchar(150);</pre>
4	<p>Add constraint to force unique email for each student</p>
	<pre>alter table students add constraint unique_email unique (email);</pre>
5	<p>Get Time, Date, Current user, MySQL Version using prompt?</p>
	<pre> select current_timestamp; select current_user; select version(); </pre>
6	<p>Add <code>gender</code> column for the <code>students</code> table. It holds two value (male or female)</p>
	<pre> alter table students add column gender varchar(20), add constraint check_gender check(gender in('female','male')); </pre>
7	<p>Add <code>birth_date</code> column for the <code>students</code> table.</p>
	<pre>alter table students add column birth_date date;</pre>
8	<p>Drop the <code>student_name</code> column and replace it with <code>first name</code> and <code>last name</code>.</p>
	<pre> alter table students drop column student_name, add column first_name varchar(100) not null, add column last_name varchar(100) not null; </pre>
9	<p>Insert your friend's data into the table <code>students</code>.</p>
	<pre> insert into students set student_id=1,email='omniagoher@gmail.com',tel='0100254566', gender='female',birth_date='1999-09-09',first_name='omnia',last_name='goher'; </pre>
10	<p>Create a new table (<code>male_students</code>) based on <code>students</code> table and fill it with the data of male students</p>
	<pre> create table male_students as select * from students where gender='male'; </pre>

Part II

Create another database “php”

Use php

Run Lab Script then answer the following

1	Display all students' information.
	<code>select * from students;</code>
2	Display <u>male</u> students only.
	<code>select * from students where gender='male';</code>
3	Display the <u>number of female</u> students.
	<code>select count(student_id) as number_of_female from students where gender='female';</code>
4	Display the <u>students' data</u> for the students who are born before 1992-10-01.
	<code>select * from students where birth_date<'1992-10-01';</code>
5	Display the <u>students' data</u> for the male students who are born before 1991-10-01.
	<code>select * from students where birth_date<'1991-10-01' and gender='male';</code>
6	Display <u>course_id</u> and their grades sorted by grades.
	<code>select course_id, grade from students_courses order by grade;</code>
7	Display <u>students' names</u> that begin with A.
	<code>select * from students where first_name like 'A%';</code>
8	Display the <u>gender, number of males and females</u> .
	<code>select gender, count(*) as count from students group by gender;</code>
9	Display the <u>repeated first names</u> and <u>their counts</u> if higher than 2.
	<code>select first_name, count(*) as count from students group by first_name having count>2;</code>
10	Display the <u>subject with highest grade</u>
	<code>select course_id from students_courses where grade = (select max(grade) from students_courses);</code>