**MySQL Labs**

**MySQL (Day2):**

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| ***1*** | ***Update students courses table, set the registration date value to “Today”;*** |
|  | ***UPDATE students\_courses set reg\_date = CURDATE();*** |
| ***2*** | ***Display the registration date in the following format:***  ***Day, month/ year*** |
|  | SELECT DATE\_FORMAT(reg\_date, "%d,%d/%Y") as new\_date FROM students\_courses; |
| ***3*** | ***Display the full name (first, last) of the student with his grade.***  ***if his garde is greater than 85% Excellent, from 75% to 85% Very good, from 65% to 75% Good and from 55% to 65% pass otherwise will be graded as failed.*** |
|  | **SELECT CONCAT(first\_name," ",last\_name) as full\_name,grade,**  **CASE WHEN grade > 85 THEN "Excellent"**  **WHEN grade > 74 AND grade < 85 THEN "Very Good"**  **WHEN grade > 64 AND grade < 85 THEN "Good"**  **WHEN grade > 54 AND grade <= 65 THEN "Passed"**  **ELSE "Failed"**  **END AS gr**  **FROM students s , students\_courses sc**  **WHERE s.student\_id = sc.student\_id;** |
| ***4*** | ***Display the capitalized last name , and the grade , if he has no grade display the keyword absent. [using ifNULL function]*** |
|  | ***select upper(last\_name),ifnull(grade,"absent")***  ***from students\_courses sc***  ***RIGHT JOIN students s***  ***ON sc.student\_id = s.student\_id;*** |
| ***5*** | ***Display students' names, course name along with their grades.*** |
|  | **Select first\_name,last\_name,grade from students\_courses sc JOIN students s ON sc.student\_id =s.student\_id ;** |
| ***6*** | ***For each course, display the course name, min grade, max grade, average grade, number of attended students.*** |
|  | **select course\_name,count(student\_id),MAX(grade),MIN(grade),AVG(grade)**  **from courses c**  **JOIN students\_courses sc**  **ON c.course\_id = sc.course\_id**  **GROUP BY c.course\_id;** |
| ***7*** | ***Use subquery to display the names of the students who were born before student no 1.*** |
|  | **select first\_name , last\_name,birth\_date**  **from students**  **where birth\_date < (select birth\_date from students where student\_id = 1);** |
| ***8*** | ***Use subquery to display the data of all the courses with a credit hour similar to MySQL's credit hours*** |
|  | ***select \****  ***from courses***  ***where credit\_hour = (select credit\_hour from courses WHERE course\_name = "MySQL") AND course\_name != “MySQL”;*** |
| ***10*** | ***Create a view called female\_students\_vu to display all the female students*** |
|  | **CREATE VIEW female\_students\_vu as select \* from students where gender = "female";**  **select \* from female\_students\_vu;** |
| ***11*** | ***Try to insert a male student through your view*** |
|  | ***INSERT INTO female\_students\_vu (student\_id,first\_name,last\_name,tel,email,gender,birth\_date)***  ***VALUES (13,"Hassan","Ibrahim",01535264798,"hassanibrahim@gmail.com",'male','1993-03-03');*** |
| ***12*** | ***Select all the data from your view and then from the students table*** |
|  | ***select \* from female\_students\_vu;***  ***select \* from students;*** |
| ***13*** | ***Prevent the ability to insert another male student through you view*** |
|  | ***ALTER VIEW female\_students\_vu as select \* from students where gender = "female" WITH check option;*** |
| ***14*** | ***Use the information schema to display the table name , schema and the updatability of the female\_students\_vu view*** |
|  | ***select \* from information\_schema.views where table\_name = 'female\_students\_vu';*** |
| ***15*** | ***Use the information schema to display the create time, table\_rows, auto\_increment, and the comments on the students table.*** |
|  | ***SELECT create\_time,table\_rows,auto\_increment,TABLE\_COMMENT***  ***FROM INFORMATION\_SCHEMA.TABLES***  ***WHERE table\_schema = 'php'***  ***AND table\_name = 'students';*** |
| ***16*** | ***Create a nonunique index on the foreign key column (COURSE\_ID) in the students\_courses table.*** |
|  | ***ALTER TABLE students\_courses ADD INDEX(course\_id);*** |
| ***17*** | ***Create a user with your name and give him the privilege to access the grades database*** |
|  | ***CREATE user user@localhost IDENTIFIED BY 'root';***  ***GRANT ALL PRIVILEGES ON grades.\* TO 'user'@'localhost';***  ***ACCESS DEINED FOR ALL DATABASES EXCEPT grades*** |
| ***18*** | ***Connect to mysql using the user you created and try to insert one record in the courses table.*** |
|  | **SYSTEM mysql -u account –p**  **INSERT INTO courses(course\_id,course\_name,credit\_hour) VALUES(7,"Python",4)** |
| ***19*** | ***Change your password.*** |
|  | ***SET PASSWORD FOR 'account'@'localhost' = 'foo';*** |
| ***20*** | ***Show your privileges.*** |
|  | ***SHOW GRANTS;***  ***SHOW GRANTS FOR CURRENT\_USER();*** |