**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=NOW();*** |
| ***2*** | ***Display the registration date in the following format:***  ***Day, month/ year*** |
|  | ***SELECT DATE\_FORMAT(reg\_date, "%W, %M %Y") as formatted 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),***  ***CASE***  ***WHEN grade > 85 THEN "Excellent"***  ***WHEN grade > 75 THEN "Very good"***  ***WHEN grade > 65 THEN "good"***  ***WHEN grade > 55 THEN "pass"***  ***ELSE "failed"***  ***END***  ***FROM students JOIN students\_courses ON students.student\_id = students\_courses.student\_id;*** |
| ***4*** | ***Display the capitalized last name , and the grade , if he has no grade***  ***display the keyword absent. [using ifNULL function]*** |
|  | ***SELECT***  ***CONCAT(UCASE(SUBSTRING(last\_name, 1, 1)), LCASE(SUBSTRING(last\_name, 2))) as last\_name ,***  ***IFNULL(grade, "absent") as grade***  ***FROM students JOIN students\_courses ON students.student\_id = students\_courses.student\_id;*** |
| ***5*** | ***Display students' names, course name along with their grades.*** |
|  | ***EDITED***  ***SELECT***  ***CONCAT(first\_name, ' ', last\_name) as name,***  ***course\_name,***  ***grade***  ***FROM***  ***students\_courses as sc,***  ***students s,***  ***courses c***  ***WHERE sc.student\_id = s.student\_id***  ***AND sc.course\_id = c.course\_id;*** |
| ***6*** | ***For each course, display the course name, min grade, max grade, average grade, number of attended students.*** |
|  | ***SELECT***  ***course\_name,***  ***MIN(grade),***  ***MAX(grade),***  ***AVG(grade),***  ***COUNT(\*)***  ***FROM courses, students\_courses***  ***WHERE courses.course\_id = students\_courses.course\_id***  ***GROUP BY course\_name;*** |
| ***7*** | ***Use subquery to display the names of the students who were born before student no 1.*** |
|  | ***SELECT CONCAT(first\_name, ' ', last\_name) AS name***  ***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");*** |
| ***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";*** |
| ***11*** | ***Try to insert a male student through your view*** |
|  | ***INSERT INTO female\_students\_vu***  ***VALUES(10, 'Youssef', 'Magdy', NULL, NULL, 'male', '2002-02-12')*** |
| ***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*** |
|  | ***CREATE OR REPLACE 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*** |
|  | ***USE INFORMATION\_SCHEMA***  ***select table\_name, table\_schema, IS\_UPDATABLE from VIEWS;*** |
| ***15*** | ***Use the information schema to display the create time, table\_rows, auto\_increment, and the comments on the students table.*** |
|  | ***SELECT***  ***TABLE\_NAME,***  ***CREATE\_TIME,***  ***TABLE\_ROWS,***  ***AUTO\_INCREMENT,***  ***TABLE\_COMMENT***  ***FROM TABLES***  ***WHERE TABLE\_SCHEMA = 'os'***  ***AND TABLE\_NAME = 'students';*** |
| ***16*** | ***Create a nonunique index on the foreign key column (COURSE\_ID) in the students\_courses table.*** |
|  | ***use os;***  ***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*** |
|  | ***Edited***  ***CREATE USER 'youssef\_magdy'@'localhost' IDENTIFIED BY 'OS123';***  ***GRANT SELECT ON grades.\* TO 'youssef\_magdy'@'localhost';***  ***SELECT User, Host FROM mysql.user;*** |
| ***18*** | ***Connect to mysql using the user you created and try to insert one record in the courses table.*** |
|  | ***Edited***  ***mysql -u youssef\_magdy -p***    ***select \* from courses;***    ***INSERT INTO courses VALUES(NULL, DataStructures, 4);*** |
| ***19*** | ***Change your password.*** |
|  | ***ALTER USER 'youssef\_magdy'@'localhost' IDENTIFIED BY 'newwww';*** |
| ***20*** | ***Show your privileges.*** |
|  | ***Edited***  ***show grants;*** |