**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, ' %d , %b / %Y')***  ***-> 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 fullname , grade, IF(grade>='85','Excellent', IF(grade in('85','75'),'Very good',IF(grade in('75','65'),'good',IF(grade in('65','55'),'pass', 'fail')))) as result**  **-> 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') as result***  ***-> from students s , students\_courses sc***  ***-> where s.student\_id=sc.student\_id;*** |
| ***5*** | ***Display students' names, course name along with their grades.*** |
|  | ***select CONCAT(first\_name," ", last\_name) as fullname , grade , course\_name***  ***-> from students s , students\_courses sc , courses c***  ***-> where s.student\_id=sc.student\_id***  ***-> and c.course\_id=sc.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(s.student\_id)**  **-> from students s , students\_courses sc , courses c**  **-> where s.student\_id=sc.student\_id**  **-> and c.course\_id=sc.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 fullname***  ***-> 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 like '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 (`student\_id`, `first\_name`, `last\_name`, `tel`, `email`, `gender`, `birth\_date` )***  ***-> values***  ***-> ('7','Ahmed','Ibrahim',NULL,NULL,'male', '1991-09-01');*** |
| ***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 TABLE\_NAME, TABLE\_SCHEMA, IS\_UPDATABLE FROM information\_schema.VIEWS***  ***-> where table\_name = 'female\_students\_vu'***  ***-> and TABLE\_SCHEMA = 'grade'\G;*** |
| ***15*** | ***Use the information schema to display the create time, table\_rows, auto\_increment, and the comments on the students table.*** |
|  | ***select TABLE\_ROWS, AUTO\_INCREMENT,***  ***-> CREATE\_TIME, TABLE\_COMMENT***  ***-> FROM INFORMATION\_SCHEMA.TABLES***  ***-> where table\_name = 'students'***  ***-> and TABLE\_SCHEMA = 'grade'\G;*** |
| ***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 'ro'@'localhost' IDENTIFIED BY '1999';***  ***GRANT ALL ON grade.\* TO 'ro'@'localhost';*** |
| ***18*** | ***Connect to mysql using the user you created and try to insert one record in the courses table.*** |
|  | ***insert into `courses` (`course\_id`, `course\_name`, `credit\_hour`) values('50','operating system','3');*** |
| ***19*** | ***Change your password.*** |
|  | ***SET PASSWORD FOR 'ro'@'localhost' = PASSWORD('2211');*** |
| ***20*** | ***Show your privileges.*** |
|  | ***show grants for current\_user();*** |