MySQL Labs

**MySQL (Day3):**

**insert into students\_courses**

**values**

**(1,4,60,NULL),**

**(2,1,NULL,NULL),**

**(2,4,75,NULL),**

**(3,1,NULL,NULL),**

**(3,2,NULL,NULL),**

**(3,3,75,NULL);**

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| *1* | ***Create function to calculate the number of students who get grade less than 80 in a certain exam (course id will be sent as a parameter)*** |
|  | **CREATE FUNCTION students\_grades\_less\_than\_80 (P\_course\_id integer(2)) RETURNS INTEGER(5) BEGIN DECLARE v\_no INTEGER(5); SET v\_no= (select count(\*) from students\_courses WHERE grade <80 AND course\_id=p\_course\_id); RETURN v\_no ; END $** |
| *2* | ***Create stored procedure to display the names of the absence students of a certain courses.(Absent means has no grades)*** |
|  | **DELIMITER $**  **CREATE PROCEDURE absent\_students (p\_course\_id Integer(2))**  **BEGIN**  **SELECT S.first\_name, S.last\_name**  **FROM students S**  **RIGHT OUTER JOIN students\_courses SC ON S.student\_id = SC.student\_id**  **WHERE SC.course\_id = p\_course\_id AND SC.grade IS NULL;**  **END $**  **DELIMITER ;** |
| *3* | ***Create stored procedure to calculate the average grades for certain course.*** |
|  | **CREATE PROCEDURE avgg\_grades (IN p\_course\_id INT)**  **BEGIN**  **SELECT AVG(grade) AS average\_grade**  **FROM students\_courses sc**  **WHERE sc.course\_id = p\_course\_id;**  **END $ delimiter ;** |
| *4* | ***Create trigger to keep track the changes(updates) of the grades in the studnets\_courses table***  ***( create changes table with the following fields:***  ***id int primary key ,***  ***user varchar(30),***  ***action varchar(40),***  ***old\_grade int,***  ***new\_grade int,***  ***change\_date date).***  ***Test the trigger by updating grade int the “Students\_courses” table***  ***Confirm that the row is added in the” change\_table”*** |
|  | **CREATE TABLE changes (id INT AUTO\_INCREMENT PRIMARY KEY,user VARCHAR(30),action VARCHAR(40),old\_grade INT,new\_grade INT,change\_date DATE);**  **CREATE TRIGGER changes\_grades after update on students\_courses for each row insert into changes (id ,us**  **er , action , old\_grade, new\_grade , change\_date ) values ( old.student\_id ,current\_user(),'update', old.grade , new.grade,current\_date());**  **global update students\_courses set grade = 85 where course\_id=1 ;** |
| *5* | ***Create event to delete the changes tables every 5 minute*** |
|  | **CREATE EVENT delete\_changes ON SCHEDULE EVERY '5' MINUTE DO Delete from changes;**  **set@@global.event\_scheduler=1;** |
| ***6*** | **Create a user with your name and give him the privilege to access the grades database** |
|  | **CREATE USER 'Ahmed1'@'localhost' IDENTIFIED BY 'Ahmed';**  **GRANT ALL ON grades.\* TO'Ahmed1'@'localhost' ;**  **SHOW GRANTS FOR'Ahmed'@'localhost';** |
| ***7*** | **Connect to mysql using the user you created and try to insert one record in the courses table.** |
|  | **Mysql -u Ahmed1-p ;**  **INSERT INTO courses VALUES ('1', 'PHP', '16');** |
| ***8*** | **Change your password.** |
|  | **set password = password('1234');** |
| ***9*** | **Show your privileges.** |
|  | **Show GRANTS;** |