|  |  |
| --- | --- |
| *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)*** |
|  | ***delimiter $***  ***create function calaculate\_number (p\_course\_id int)***  ***returns int (5)***  ***begin***  ***declare v\_students\_numbers int;***  ***set v\_students\_numbers = (select count(student\_id) from students\_courses where course\_id = p\_course\_id and grade < 80);***  ***return v\_students\_numbers;***  ***end$***  ***delimiter;***  ***select calaculate\_number(4); /\* course\_id \*/*** |
| *2* | ***Create stored procedure to display the names of the absence students of a certain courses.(Absent means has no grades)*** |
|  | ***delimiter $***  ***create procedure display\_names (p\_course\_id int)***  ***begin***  ***select s.first\_name***  ***from students s, students\_courses c***  ***where s.student\_id = c.student\_id***  ***and c.grade is null***  ***and p\_course\_id = c.course\_id;***  ***end$***  ***delimiter;***  ***call display\_names(2); /\* course\_id \*/*** |
| *3* | ***Create stored procedure to calculate the average grades for certain course.*** |
|  | **delimiter $**  **create procedure calculate\_average (p\_course\_id int)**  **begin**  **select avg(grade) from students\_courses where 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”*** |
|  | **/\* part1\*/**  **create table changes\_table ( id int primary key auto\_increment, user varchar(30),action varchar(40), old\_grade int, new\_grade int,change\_date date);**  **Create trigger changes\_table\_trig**  **After update on students\_courses**  **For each row**  **Insert into changes\_table (user, action , old\_grade , new\_grade ,change\_date)**  **values (current\_user(),’ update’ ,old.grade, new.grade , current\_date() );**  **/\* part2\*/**  **update students\_courses**  **-> set grade = 50 where student\_id = 1 and course\_id = 1;**  **/\* part3\*/**  **select \* from changes\_table;** |
| *5* | ***Create event to delete the changes tables every 5 minute*** |
|  | **create event delete\_changes**  **-> on schedule every 5 minute**  **-> do delete from changes\_table;** |
| ***6*** | **Create a user with your name and give him the privilege to access the grades database** |
|  | **CREATE USER 'ahmed'@'localhost' IDENTIFIED BY '123';**  **grant select on grades.\* to ahmed@localhost;** |
| ***7*** | **Connect to mysql using the user you created and try to insert one record in the courses table.** |
|  | **mysql -u ahmed -p**  **insert into students (student\_id,email,tel,gender,birth\_day,first\_name,last\_name)**  **-> values(1010,'ahmed@sobhy.com',0155454877,'male','8/12/1997','ahmed','sobhi');** |
| ***8*** | **Change your password.** |
|  | **/\* for user ahmed (new created) \*/**  **set password = password ('abc');**  **/\* for root \*/**  **alter user 'root'@'localhost' identified by '123456';** |
| ***9*** | **Show your privileges.** |
|  | **show grants;** |

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);**