**Name :**

**Roll No :**

**Title :** Write and execute suitable database triggers .Consider row level and statement level triggers.

mysql> show databases;

+ +

| Database |

+ +

| information\_schema |

| mysql |

| performance\_schema |

| sakila |

| sl1 |

| student\_grade |

| sys |

| world |

+ +

8 rows in set (0.01 sec)

mysql> create database sl1\_prac; Query OK, 1 row affected (0.02 sec)

mysql> use sl1\_prac; Database changed

mysql> create table emp(id int primary key,name varchar(15) not null,city varchar(15) not null,post varchar(15) not null,email varchar(30) not null

);

Query OK, 0 rows affected (0.13 sec)

mysql> desc emp;

+ + + + + + +

| Field | Type | Null | Key | Default | Extra |

+ + + + + + +

| id | int | NO | PRI | NULL | |

| name | varchar(15) | NO | | NULL | |

| city | varchar(15) | NO | | NULL | |

| post | varchar(15) | NO | | NULL | |

| email | varchar(30) | NO | | NULL | |

+ +

+ + +

+ +

1. rows in set (0.01 sec)

mysql> alter table emp add salary int not null; Query OK, 0 rows affected (0.04 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> desc emp;

+ + +

+ + + +

| Field | Type | Null | Key | Default | Extra |

+ + + + + + +

| id | int | NO | PRI | NULL | |

| name | varchar(15) | NO | | NULL | |

| city | varchar(15) | NO | | NULL | |

| post | varchar(15) | NO | | NULL | |

| email | varchar(30) | NO | | NULL | |

| salary | int | NO | | NULL | |

+ + +

1. rows in set (0.00 sec)

+ + + +

mysql> insert into emp values(1,'Jack','Pune','Manager','jack@gmail.com',50000); Query OK, 1 row affected (0.01 sec)

mysql> insert into emp values(2,'Mark','Mumbai','President','mark@gmail.com',55000); Query OK, 1 row affected (0.01 sec)

mysql> insert into emp values(3,'Jossef','Nasik','Salesperson','jossef@gmail.com',40000); Query OK, 1 row affected (0.01 sec)

mysql> insert into emp values(4,'John','Thane','Salesperson','john@gmail.com',38000); Query OK, 1 row affected (0.01 sec)

mysql> select \* from emp;

+ + + + + + +

| id | name | city | post | email | salary |

+ + + + + + +

|  |  |  |
| --- | --- | --- |
| | 1 | Jack | | Pune | Manager | [jack@gmail.com](mailto:jack@gmail.com) | | 50000 | |
| | 2 | Mark | | Mumbai | President | [mark@gmail.com](mailto:mark@gmail.com) | | 55000 | |
| | 3 | Jossef | | Nasik | Salesperson | [jossef@gmail.com](mailto:jossef@gmail.com) | | 40000 | |
| | 4 | John | | Thane | Salesperson | [john@gmail.com](mailto:john@gmail.com) | | 38000 | |

+ + + + + + +

4 rows in set (0.00 sec)

mysql> create table transaction\_log(user\_id varchar(15),description varchar(30));

Query OK, 0 rows affected (0.03 sec)

mysql> desc transaction\_log;

+ + + + + + +

| Field | Type | Null | Key | Default | Extra |

+ + + + + + +

| user\_id | varchar(15) | YES | | NULL | |

| description | varchar(30) | YES | | NULL | |

+ +

1. rows in set (0.01 sec)

+ + + + +

mysql> delimiter //

mysql> create trigger mytrigger

-> before delete on emp

-> for each row

-> begin

-> insert into transaction\_log

-> (user\_id,description)

-> values(user(),'Employee deleted');

-> end //

Query OK, 0 rows affected (0.01 sec)

mysql> delimiter ;

mysql> delete from emp where id=1; Query OK, 1 row affected (0.01 sec)

mysql> select \* from emp;

+ + + + + + +

| id | name | city | post | email | salary |

+ + + + + + +

| 2 | Mark | Mumbai | President | [mark@gmail.com](mailto:mark@gmail.com) | 55000 |

| 3 | Jossef | Nasik | Salesperson | [jossef@gmail.com](mailto:jossef@gmail.com) | 40000 |

| 4 | John | Thane | Salesperson | [john@gmail.com](mailto:john@gmail.com) | 38000 |

+ + + + + + +

1. rows in set (0.00 sec)

mysql> select \* from transaction\_log;

+ + +

| user\_id | description |

+ + +

| root@localhost | Employee deleted |

+ + +

1. row in set (0.00 sec)

mysql> delete from emp where id=2; Query OK, 1 row affected (0.01 sec)

mysql> select \* from emp;

+ + + + + + +

| id | name | city | post | email | salary |

+ + + + + + +

| 3 | Jossef | Nasik | Salesperson | [jossef@gmail.com](mailto:jossef@gmail.com) | 40000 |

| 4 | John | Thane | Salesperson | [john@gmail.com](mailto:john@gmail.com) | 38000 |

+ + + + + + +

1. rows in set (0.00 sec)

mysql> select \* from transaction\_log;

+ + +

| user\_id | description |

+ + +

| root@localhost | Employee deleted |

| root@localhost | Employee deleted |

+ + +

2 rows in set (0.00 sec)

mysql> drop trigger mytrigger; Query OK, 0 rows affected (0.02 sec)

mysql> create table account(acct\_num int,amount decimal(10,2)); Query OK, 0 rows affected (0.09 sec)

mysql> create trigger ins\_sum before insert on account

-> for each row set @sum=@sum+New.amount; Query OK, 0 rows affected (0.02 sec)

mysql> set @sum=0;

Query OK, 0 rows affected (0.00 sec)

mysql> insert into account values(137,14.98),(141,1937.50),(97,-100.00); Query OK, 3 rows affected (0.01 sec)

Records: 3 Duplicates: 0 Warnings: 0

mysql> select @sum as 'Total amount inserted';

+ +

| Total amount inserted |

+ +

| 1852.48 |

+ +

1 row in set (0.00 sec)

mysql> drop trigger ins\_sum;

Query OK, 0 rows affected (0.02 sec)

mysql> use sl1; Database changed

mysql> select \* from emp;

+ + + + +

| id | name | post | salary |

+ + + + +

| 1 | Jack | Manager | 50000.00 |

| 2 | Mark | President | 50000.00 |

| 3 | John | Salesperson | 45000.00 |

| 4 | Jossef | Salesperson | 40000.00 |

+ + + + +

4 rows in set (0.00 sec)

mysql> delimiter //

mysql> create trigger mytri before update on emp

-> for each row

-> begin

-> if New.salary<50000 then

-> set New.salary=30000;

-> else

-> set New.salary=New.salary+500;

-> end if;

-> end //

Query OK, 0 rows affected (0.02 sec) mysql> delimiter ;

mysql> update emp set salary=40000 where name='John'; Query OK, 1 row affected (0.01 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> select \* from emp;

+ + + + +

| id | name | post | salary |

+ + + + +

| 1 | Jack | Manager | 50000.00 |

| 2 | Mark | President | 50000.00 |

| 3 | John | Salesperson | 30000.00 |

| 4 | Jossef | Salesperson | 40000.00 |

+ + + + +

4 rows in set (0.00 sec)