DBMS Lab 9

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PES1UG20CS084

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1) Write a trigger on insert to compartment table when a new compartment gets added to a train and make sure that total number of compartments available in the train does not exceed more than 4.

```sql
delimiter &&
DELIMITER $$
CREATE TRIGGER no_compartment2
after insert on compartment for each row
BEGIN
DECLARE error_msg VARCHAR(350);
declare number_compartments int;
SET error_msg = ('the no of compartments should not be more than 4');
set number_compartments=(select count(*) from
compartment where train_number=new.train_number);
IF number_compartments>4 THEN
SIGNAL SQLSTATE '45000'
SET MESSAGE_TEXT = error_msg;
END IF;
END $$
DELIMITER ;
INSERT into compartment
values('A01','IClass',16,0,25260);
INSERT into compartment
values('B01','IClass',16,0,25260);
select * from compartment;
```

```
MariaDB [pes1ug20cs084]> delimiter &&
MariaDB [pes1ug20cs084]> DELIMITER $$
MariaDB [pes1ug20cs084]> CREATE TRIGGER compartmenttrigger
    -> after insert on compartment for each row
    -> BEGIN
    -> DECLARE error_msg VARCHAR(350);
    -> declare number_compartments int;
    -> SET error_msg = ('the no of compartments should not be more than 4');
    -> set number_compartments=(select count(*) from
    -> compartment where train_number=new.train_number);
    -> IF number_compartments>4 THEN
    -> SIGNAL SQLSTATE '45000'
    -> SET MESSAGE_TEXT = error_msg;
    -> END IF;
    -> END $$
Query OK, 0 rows affected (0.022 sec)

MariaDB [pes1ug20cs084]> DELIMITER ;
MariaDB [pes1ug20cs084]> INSERT into compartment
    -> values('A01','IClass',16,0,25260);
Query OK, 1 row affected (0.006 sec)

MariaDB [pes1ug20cs084]> INSERT into compartment
    -> values('B01','IClass',16,0,25260);
ERROR 1644 (45000): the no of compartments should not be more than 4
```

2) Create a trigger to add payment information to the backup table when we try to delete some information from the ticket table.

```sql
create table test as select * from ticket join (ticket_passenger join
payment_info using(pnr)) using(pnr);
create table backup like test;
drop table test;
DELIMITER &&
CREATE TRIGGER deletetrigger
BEFORE DELETE ON ticket
FOR EACH ROW
BEGIN
INSERT INTO backup (select * from ticket join (ticket_passenger join
payment_info using(pnr)) using(pnr) where pnr=old.pnr);
delete from payment_info where pnr=old.pnr;
delete from ticket_passenger where pnr =old.pnr;
end &&
delimiter ;
delete from ticket where pnr='PNR001';
select * from backup;
```

```
MariaDB [pes1ug20cs084]> create table test as select * from ticket join (ticket_passenger join payment_info using(pnr)) using(pnr);
Query OK, 21 rows affected (0.034 sec)
Records: 21  Duplicates: 0  Warnings: 0

MariaDB [pes1ug20cs084]> create table backup like test;
Query OK, 0 rows affected (0.010 sec)

MariaDB [pes1ug20cs084]> drop table test;
Query OK, 0 rows affected (0.006 sec)

MariaDB [pes1ug20cs084]> DELIMITER &&
MariaDB [pes1ug20cs084]> CREATE TRIGGER deletetrigger
    -> BEFORE DELETE ON ticket
    -> FOR EACH ROW
    -> BEGIN
    -> INSERT INTO backup (select * from ticket join (ticket_passenger join payment_info using(pnr)) using(pnr) where pnr=old.pnr);
    -> delete from payment_info where pnr=old.pnr;
    -> delete from ticket_passenger where pnr =old.pnr;
    -> end &&
Query OK, 0 rows affected (0.004 sec)

MariaDB [pes1ug20cs084]> delimiter ;
MariaDB [pes1ug20cs084]> delete from ticket where pnr='PNR001';
Query OK, 1 row affected (0.009 sec)
```

```
MariaDB [pes1ug20cs084]> select * from backup;
+--------+----------+------------+-----------+---------+----------------+-------------+--------------+------------+------------------+----------------+---------+----------------+------+
| pnr    | train_no | travel_date | departure | arrival | departure_time | arrival_time | passenger_id | train_type | compartment_type | compartment_no | seat_no | name           | age  |
| transaction_no | bank | card_no    | price |
+--------+----------+------------+-----------+---------+----------------+-------------+--------------+------------+------------------+----------------+---------+----------------+------+
| PNR001 |    62621 | 2022-08-07 | Bengaluru | Chennai | 16:00:00       | 20:30:00    | ADM_001      | Superfast  | I Class          | F01            | F01-3   | Saideepak Reddy | 27  |
|    342344 | IOB  | 5.62357E+15 | NULL |
| PNR001 |    62621 | 2022-08-07 | Bengaluru | Chennai | 16:00:00       | 20:30:00    | ADM_001      | Superfast  | I Class          | F01            | F01-4   | Sheela Reddy    | 25  |
|    342344 | IOB  | 5.62357E+15 | NULL |
+--------+----------+------------+-----------+---------+----------------+-------------+--------------+------------+------------------+----------------+---------+----------------+------+
2 rows in set (0.001 sec)
```