Lab 9- Creating Triggers GAURAV MAHAJAN PES1UG20CS150 SECTION C

Assignment 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.

```
DELIMITER $$
CREATE TRIGGER after_insert_Compartment1
AFTER INSERT
ON compartment FOR EACH ROW
BEGIN
DECLARE error_msg VARCHAR(255);
DECLARE c1 INT;
SET error_msg = ('Number of compartments is greater than four');
SET c1 = (SELECT COUNT(compartment_no) FROM compartment WHERE train_number = new.train_number GROUP BY train_number);
IF c1 > 4 THEN
SIGNAL SQLSTATE '45000'
SET MESSAGE_TEXT = error_msg;
END IF;
END $$
DELIMITER;
```

```
MariaDB [PES1UG20CS150_RRS_UPDATED]> source C:/Users/Gaurav/Desktop/DBMS LAB/9/trigger1.sql;
Query OK, 0 rows affected (0.016 sec)
lariaDB [PES1UG20CS150_RRS_UPDATED]> select train_number, count(compartment_no) from compartment group by train_number;
               count(compartment_no)
 train number
         25261
         58450
         58451
         62620
         62621
 rows in set (0.019 sec)
| lariaDB [PES1UG20CS150_RRS_UPDATED]> insert into compartment values('A03','II Class',16,9,58451)
Query OK, 1 row affected (0.007 sec)
MariaDB [PES1UG20CS150_RRS_UPDATED]> insert into compartment values('A03','II Class',16,9,25260);
Query OK, 1 row affected (0.006 sec)
MariaDB [PES1UG20CS150_RRS_UPDATED]> insert into compartment values('A03','II Class',16,9,25261);
ERROR 1644 (45000): Number of compartments is greater than four
MariaDB [PES1UG20CS150_RRS_UPDATED]> insert into compartment values('A03','II Class',16,9,62621);
ERROR 1644 (45000): Number of compartments is greater than four
```

Assignment2:

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

CREATE TABLE BACKUP(pnr varchar(10),train_no int(11), travel_date date,departure varchar(30),arrival varchar(30),departure_time time,arrival_time time, passenger_id varchar(20),train_type varchar(20), compartment_type varchar(10),compartment_no varchar(10),seat_no varchar(10),name varchar(30),age int(11), transaction_no int(11),bank varchar(20),card_no varchar(20),price decimal(10,2));

ALTER TABLE ticket_passenger ADD CONSTRAINT dt FOREIGN KEY (pnr) REFERENCES ticket(pnr) on delete cascade;

ALTER TABLE payment_info ADD CONSTRAINT dp FOREIGN KEY (pnr) REFERENCES ticket(pnr) on delete cascade;

DELIMITER \$\$

CREATE TRIGGER del_ticket

BEFORE DELETE

ON TICKET FOR EACH ROW

BEGIN

INSERT INTO BACKUP (SELECT * FROM (TICKET NATURAL JOIN(TICKET_PASSENGER NATURAL JOIN PAYMENT_INFO)) WHERE pnr=old.pnr);

END; \$\$

DELIMITER:

```
MariaDB [PES1UG20CS150_RRS_UPDATED]> source C:/Users/Gaurav/Desktop/DBMS LAB/9/trigger2.sql;
Query OK, 0 rows affected (0.026 sec)

Query OK, 21 rows affected (0.077 sec)
Records: 21 Duplicates: 0 Warnings: 0

Query OK, 13 rows affected (0.072 sec)
Records: 13 Duplicates: 0 Warnings: 0

Query OK, 0 rows affected (0.016 sec)

MariaDB [PES1UG20CS150_RRS_UPDATED]> delete from ticket where pnr="pnr002"
->;
Query OK, 1 row affected (0.036 sec)
```

```
ariaDB [PES1UG20CS150_RRS_UPDATED]> select * from backup
pnr | train_no | travel_date | departure | arrival | departure_time | arrival_time | passenger_id | train_type |
ompartment_type | compartment_no | seat_no | name | age | transaction_no | bank | card_no | pri
               62620 | 2022-08-14 | Chennai | Bengaluru | 08:00:00 | 12:25:00
| F02 | F02-11 | SaiDeepak Reddy | 27 | 676756
                                                                                                                ADM_001
                                                                                                                                   Superfast
PNR002
                                                                                                  676756 | CANARA BANK | 7.36756E+15 | 2166
Class
               62620 | 2022-08-14 | Chennai | Bengaluru | 08:00:00 | 12:25:00
| F02 | F02-12 | Sheela Reddy | 25 | 676756
                                                                                                                ADM_001
                                                                                                                                    Superfast
PNR002
                                                                                                   676756 | CANARA BANK | 7.36756E+15 | 2166
Class
00 |
rows in set (0.001 sec)
```