

## 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)

MariaDB [PES1UG20CS150_RRS_UPDATED]> select train_number, count(compartment_no) from compartment group by train_number;
+-----+-----+
| train_number | count(compartment_no) |
+-----+-----+
| 25260 | 3 |
| 25261 | 4 |
| 58450 | 4 |
| 58451 | 2 |
| 62620 | 2 |
| 62621 | 5 |
+-----+-----+
6 rows in set (0.019 sec)

MariaDB [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;
```

```
+-----+-----+-----+
-----+-----+
-----+
2 rows in set (0.001 sec)
```