

DBMS Assignment

Lab 9

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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.

```
DELIMITER $$
CREATE TRIGGER compartment_check
BEFORE INSERT
ON compartment FOR EACH ROW
BEGIN
    DECLARE error_msg VARCHAR(255);
    declare count int;
    SET error_msg = ('Cannot have more than four compartment');
    IF (select count(*) from compartment where train_number = new.train_number) > 4
    THEN
        SIGNAL SQLSTATE '45000'
        SET MESSAGE_TEXT = error_msg;
    END IF;
END $$
DELIMITER ;
```

Output: -

```

MariaDB [(none)]> use 620_rr;
Database changed
MariaDB [620_rr]> DELIMITER $$
MariaDB [620_rr]> CREATE TRIGGER compartment_check
-> BEFORE INSERT
-> ON compartment FOR EACH ROW
-> BEGIN
-> DECLARE error_msg VARCHAR(255);
-> declare count int;
-> SET error_msg = ('Cannot have more than four compartment');
-> IF (select count(*) from compartment where train_number = new.train_number) > 4 THEN
-> SIGNAL SQLSTATE '45000'
-> SET MESSAGE_TEXT = error_msg;
-> END IF;
-> END $$
Query OK, 0 rows affected (0.059 sec)

MariaDB [620_rr]> DELIMITER ;
MariaDB [620_rr]> insert into compartment values ('S04','II Class',30,3,58450);
Query OK, 1 row affected (0.108 sec)

MariaDB [620_rr]> insert into compartment values ('F04','III Class',60,60,62621);
ERROR 1644 (45000): Cannot have more than four compartment
MariaDB [620_rr]>

```

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

```
DELIMITER $$
CREATE TRIGGER PAYMENT_BACKUP
BEFORE DELETE
ON ticket FOR EACH ROW
BEGIN
Insert into payment_back select * from payment_info where PNR = old.PNR;
delete from payment_info where PNR = old.PNR;
delete from ticket_passenger where PNR = old.PNR;
END $$
DELIMITER ;
```

Output: -

```
MariaDB [620_rr]> CREATE TABLE PAYMENT_BACK ( Transaction_ID varchar(30) PRIMARY KEY,
-> Bank varchar(30),
-> Card_No varchar(16),
-> Price int,
-> PNR varchar(10) NOT NULL);
Query OK, 0 rows affected (0.062 sec)

MariaDB [620_rr]> DELIMITER $$
MariaDB [620_rr]> CREATE TRIGGER PAYMENT_BACKUP
-> BEFORE DELETE
-> ON ticket FOR EACH ROW
-> BEGIN
-> Insert into payment_back select * from payment_info where PNR = old.PNR;
-> delete from payment_info where PNR = old.PNR;
-> delete from ticket_passenger where PNR = old.PNR;
-> END $$
Query OK, 0 rows affected (0.047 sec)

MariaDB [620_rr]> DELIMITER ;
MariaDB [620_rr]>
MariaDB [620_rr]> delete from ticket where pnr = 'PNR008';
Query OK, 1 row affected (0.051 sec)

MariaDB [620_rr]> select * from payment_back;
+-----+-----+-----+-----+-----+
| Transaction_ID | Bank  | Card_No   | Price | PNR    |
+-----+-----+-----+-----+-----+
| 746745         | KOTAK | 2.54564E+15 | NULL  | PNR008 |
+-----+-----+-----+-----+-----+
1 row in set (0.001 sec)
```