DBMS Lab Assignment

Week-9

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Section: H

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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.

Output:

```
    -> 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 (0.045 sec)

MariaDB [pes1ug20cs450]> DELIMITER ;
MariaDB [pes1ug20cs450]> insert into compartment values ('S04','II Class',30,3,25261);
Query OK, 1 row affected (0.017 sec)

MariaDB [pes1ug20cs450]> insert into compartment values ('S04','II Class',30,3,58450);
Query OK, 1 row affected (0.013 sec)

MariaDB [pes1ug20cs450]> select * from compartment;
+--------------+----------------+----------+--------------+--------------+
| compartment_no | compartment_type | capacity | availability | train_number |
+--------------+----------------+----------+--------------+--------------+
| F01          | I Class        |       16 |            0 |        25260 |
| F01          | I Class        |       16 |            0 |        25261 |
| F01          | I Class        |       16 |            4 |        58450 |
| F01          | I Class        |       16 |            5 |        58451 |
| F01          | I Class        |       16 |           15 |        62620 |
| F01          | I Class        |       16 |            6 |        62621 |
| F02          | I Class        |       16 |            0 |        62620 |
| G01          | III Class      |       60 |           33 |        25261 |
| G01          | III Class      |       60 |            2 |        58450 |
| G01          | III Class      |       60 |           40 |        58451 |
| G01          | III Class      |       60 |           10 |        62621 |
| G02          | III Class      |       60 |           45 |        25261 |
| G02          | III Class      |       60 |           12 |        62621 |
| S01          | II Class       |       30 |           15 |        25260 |
| S01          | II Class       |       30 |           15 |        25261 |
| S01          | II Class       |       30 |            5 |        58450 |
| S01          | II Class       |       30 |            4 |        62621 |
| S02          | II Class       |       30 |           17 |        25260 |
| S02          | II Class       |       30 |            3 |        58450 |
| S02          | II Class       |       30 |            6 |        62621 |
| S04          | II Class       |       30 |            3 |        25261 |
| S04          | II Class       |       30 |            3 |        58450 |
+--------------+----------------+----------+--------------+--------------+
22 rows in set (0.000 sec)

MariaDB [pes1ug20cs450]> insert into compartment values ('S05','II Class',30,3,25261);
ERROR 1644 (45000): Cannot have more than four compartment
```

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

Output:

```
MariaDB [pes1ug20cs450]> CREATE TRIGGER backup_payments
    -> BEFORE DELETE
    -> ON ticket_details 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 (0.019 sec)

MariaDB [pes1ug20cs450]> DELIMITER ;
MariaDB [pes1ug20cs450]> desc payment_back;
+----------------+-------------+------+-----+---------+-------+
| Field          | Type        | Null | Key | Default | Extra |
+----------------+-------------+------+-----+---------+-------+
| Transaction_ID | varchar(30) | NO   | PRI | NULL    |       |
| Bank           | varchar(30) | YES  |     | NULL    |       |
| Card_No        | varchar(16) | YES  |     | NULL    |       |
| Price          | int(11)     | YES  |     | NULL    |       |
| PNR            | varchar(10) | NO   |     | NULL    |       |
+----------------+-------------+------+-----+---------+-------+
5 rows in set (0.026 sec)

MariaDB [pes1ug20cs450]> delete from ticket_details where PNR = 'PNR001';
Query OK, 1 row affected (0.019 sec)

MariaDB [pes1ug20cs450]> select * from payment_back;
+----------------+------+-------------+-------+--------+
| Transaction_ID | Bank | Card_No     | Price | PNR    |
+----------------+------+-------------+-------+--------+
| 342344         | IOB  | 5.62357E+15 |  2172 | PNR001 |
+----------------+------+-------------+-------+--------+
1 row in set (0.000 sec)

MariaDB [pes1ug20cs450]>
```