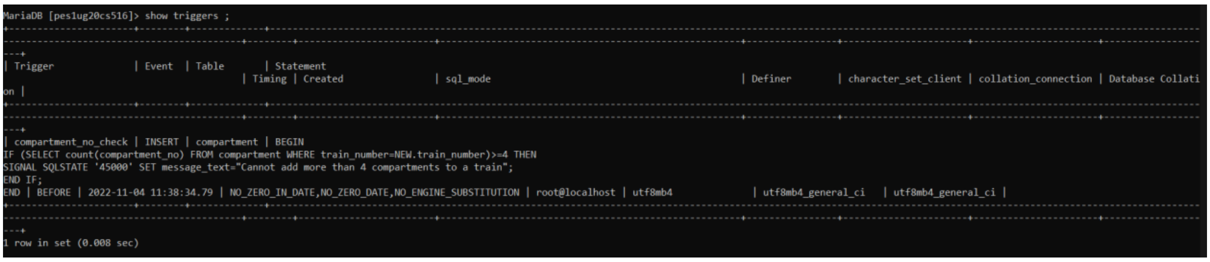
DBMS Lab-9

Name: Vrushank G **SRN: PES1UG20CS516** **Section: I**

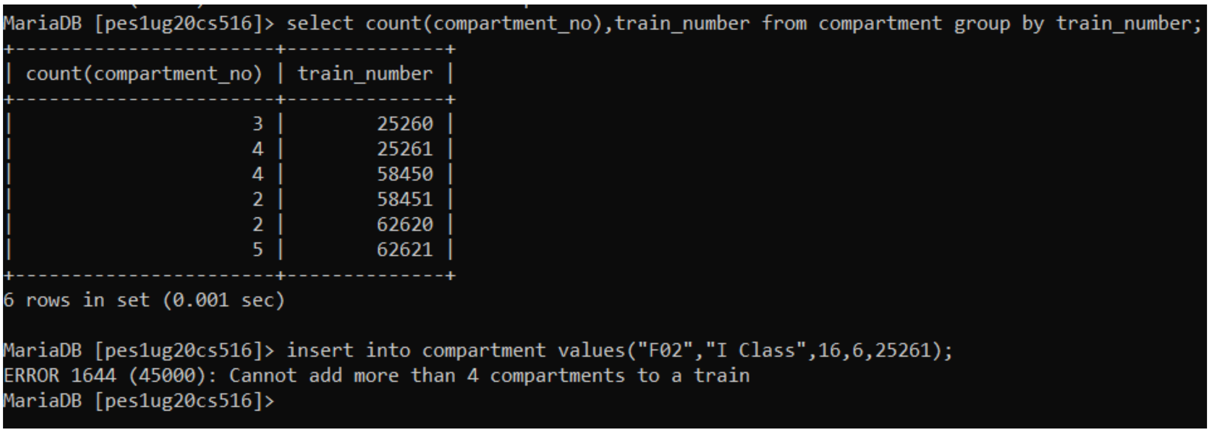
Lab 8 – Creating Triggers

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 $$
CREATE TRIGGER compartment_no_check BEFORE INSERT on compartment for each row
BEGIN
IF (SELECT count(compartment_no) FROM compartment WHERE
train_number=NEW.train_number)>=4 THEN
SIGNAL SQLSTATE '45000' SET message_text="Cannot add more than 4 compartments
to a train";
END IF;
END $$
DELIMITER ;
```



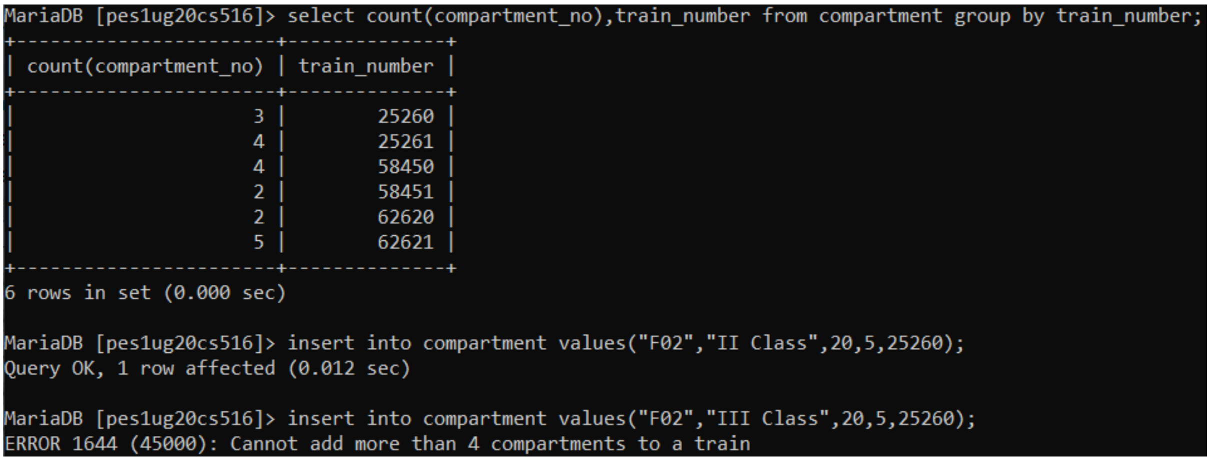
```
MariaDB [pes1ug20cs516]> show triggers ;
+---------------------+--------+-------------+--------------------------------------------------------------------------------------------------
-----------------------------------------+--------+------------------------+----------------------------------------------+----------------+----------------------+----------------------+------------------
---+
| Trigger             | Event  | Table       | Statement
                                         | Timing | Created                | sql_mode                                     | Definer        | character_set_client | collation_connection | Database Collati
on |
+---------------------+--------+-------------+--------------------------------------------------------------------------------------------------
-----------------------------------------+--------+------------------------+----------------------------------------------+----------------+----------------------+----------------------+------------------
---+
| compartment_no_check | INSERT | compartment | BEGIN
IF (SELECT count(compartment_no) FROM compartment WHERE train_number=NEW.train_number)>=4 THEN
SIGNAL SQLSTATE '45000' SET message_text="Cannot add more than 4 compartments to a train";
END IF;
END | BEFORE | 2022-11-04 11:38:34.79 | NO_ZERO_IN_DATE,NO_ZERO_DATE,NO_ENGINE_SUBSTITUTION | root@localhost | utf8mb4              | utf8mb4_general_ci   | utf8mb4_general_ci |
+---------------------+--------+-------------+--------------------------------------------------------------------------------------------------
-----------------------------------------+--------+------------------------+----------------------------------------------+----------------+----------------------+----------------------+------------------
---+
1 row in set (0.008 sec)
```



```
MariaDB [pes1ug20cs516]> select count(compartment_no),train_number from compartment group by train_number;
+-----------------------+--------------+
| count(compartment_no) | train_number |
+-----------------------+--------------+
|                     3 |        25260 |
|                     4 |        25261 |
|                     4 |        58450 |
|                     2 |        58451 |
|                     2 |        62620 |
|                     5 |        62621 |
+-----------------------+--------------+
6 rows in set (0.001 sec)

MariaDB [pes1ug20cs516]> insert into compartment values("F02","I Class",16,6,25261);
ERROR 1644 (45000): Cannot add more than 4 compartments to a train
MariaDB [pes1ug20cs516]>
```

DBMS Lab-9

Name: Vrushank G **SRN: PES1UG20CS516** **Section: I**

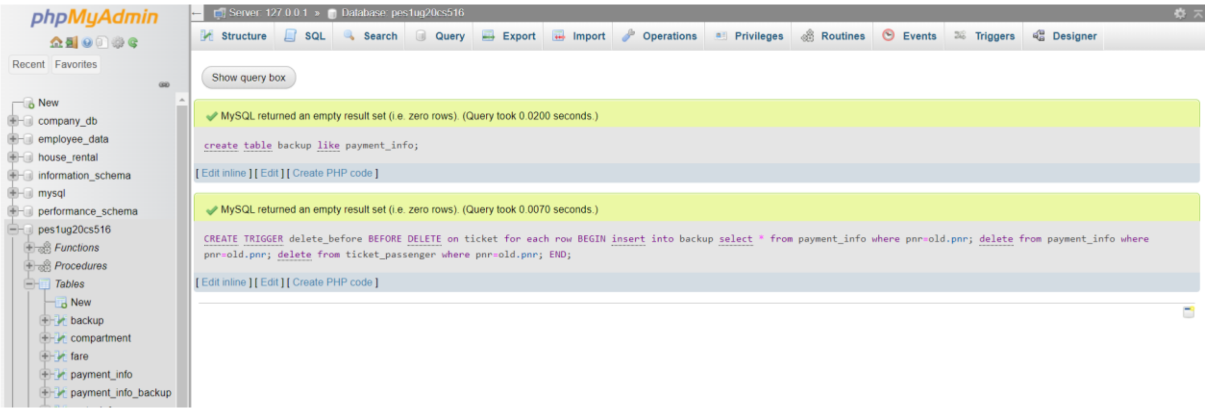


```
MariaDB [pes1ug20cs516]> select count(compartment_no),train_number from compartment group by train_number;
+----------------------+--------------+
| count(compartment_no) | train_number |
+----------------------+--------------+
|                     3 |        25260 |
|                     4 |        25261 |
|                     4 |        58450 |
|                     2 |        58451 |
|                     2 |        62620 |
|                     5 |        62621 |
+----------------------+--------------+
6 rows in set (0.000 sec)

MariaDB [pes1ug20cs516]> insert into compartment values("F02","II Class",20,5,25260);
Query OK, 1 row affected (0.012 sec)

MariaDB [pes1ug20cs516]> insert into compartment values("F02","III Class",20,5,25260);
ERROR 1644 (45000): Cannot add more than 4 compartments to a train
```

2. Create a new table called 'backup' in the railway reservation database with all the attributes of ticket, ticket passenger and paymentinfo.

You are supposed to initiate a 'deletetrigger' whenever a ticket record is deleted from ticket table.

This deletetrigger has to Fetch the data to be deleted from all the three tables(ticket, ticket passenger and paymentinfo) with the given ticket info and add the same into backup table. After that, deletion of ticket record should be allowed.

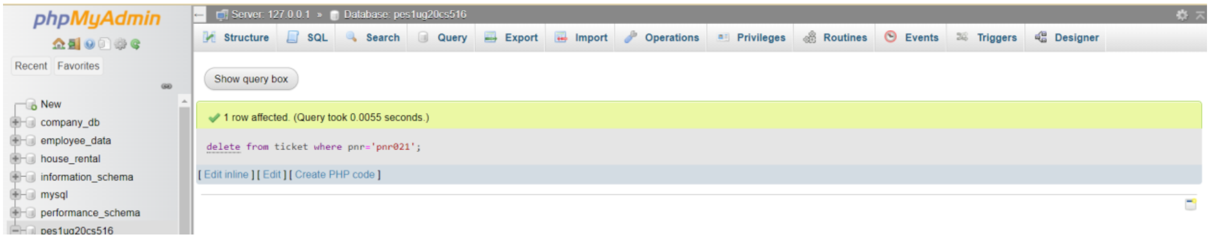


MySQL returned an empty result set (i.e. zero rows). (Query took 0.0200 seconds.)

```
create table backup like payment_info;
```

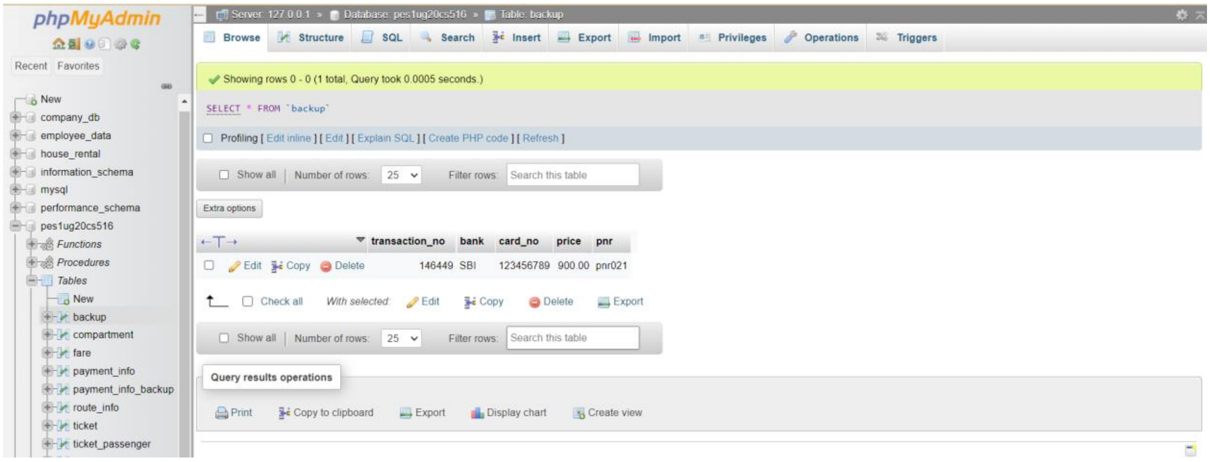
MySQL returned an empty result set (i.e. zero rows). (Query took 0.0070 seconds.)

```
CREATE TRIGGER delete_before BEFORE DELETE on ticket for each row BEGIN insert into backup 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;
```



1 row affected. (Query took 0.0055 seconds.)

```
delete from ticket where pnr='pnr021';
```



Showing rows 0 - 0 (1 total, Query took 0.0005 seconds.)

```
SELECT * FROM `backup`
```

transaction_no	bank	card_no	price	pnr
146449	SBI	123456789	900.00	pnr021