

DBMS LAB 5

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SECTION: K

1. Find the average distance between subsequent stations for every train

```
Command Prompt - mysql -u root
MariaDB [cs667_rr]> select t.train_no, avg(distance) from train t join route_info r on t.train_no=r.train_no
group by t.train_no;
+-----+-----+
| train_no | avg(distance) |
+-----+-----+
| 25260 | 277.1667 |
| 25261 | 277.1667 |
| 58450 | 280.3333 |
| 58451 | 279.8333 |
| 62620 | 184.4000 |
| 62621 | 185.0000 |
+-----+-----+
6 rows in set (0.120 sec)

MariaDB [cs667_rr]>
```

2. Find the average distance between subsequent stations for every train and display them in descending order of distance.

```
Command Prompt - mysql -u root
MariaDB [cs667_rr]> select t.train_no, avg(distance) as avg_distance from train t join route_info r on t.train
_no=r.train_no group by t.train_no order by avg_distance desc;
+-----+-----+
| train_no | avg_distance |
+-----+-----+
| 58450 | 280.3333 |
| 58451 | 279.8333 |
| 25260 | 277.1667 |
| 25261 | 277.1667 |
| 62621 | 185.0000 |
| 62620 | 184.4000 |
+-----+-----+
6 rows in set (0.006 sec)

MariaDB [cs667_rr]> _
```

3. Display the list of train numbers and the total distance travelled by each in descending order of the distance travelled.

```
Command Prompt - mysql -u root
MariaDB [cs667_rr]> select t.train_no,sum(distance) as total_distance from train t join route_info r on t.train_no=r.train_no group by t.train_no;
+-----+-----+
| train_no | total_distance |
+-----+-----+
| 25260 | 1663 |
| 25261 | 1663 |
| 58450 | 1682 |
| 58451 | 1679 |
| 62620 | 1844 |
| 62621 | 1850 |
+-----+-----+
6 rows in set (0.003 sec)

MariaDB [cs667_rr]>
```

4. List those trains that have maximum and minimum number compartments and also display number of compartments they have. (2 queries one to find max and other to find min).

```
Command Prompt - mysql -u root
MariaDB [cs667_rr]> (select train_no,count(*) from compartment c group by train_no order by count(*) desc limit 1) union (select train_no,count(*) from compartment c group by train_no order by count(*) limit 1);
+-----+-----+
| train_no | count(*) |
+-----+-----+
| 62621 | 5 |
| 58451 | 2 |
+-----+-----+
2 rows in set (0.059 sec)

MariaDB [cs667_rr]>
```

5. Display the number of phone numbers corresponding to the user_id(s) ADM_001, USR_006, USR_10.

```
Command Prompt - mysql -u root
MariaDB [cs667_rr]> select user_id,count(phone_no) from user_phone where user_id="ADM_001" or user_id="USR_006" or user_id="USR_010" group by user_id;
+-----+-----+
| user_id | count(phone_no) |
+-----+-----+
| ADM_001 | 2 |
| USR_006 | 2 |
| USR_010 | 2 |
+-----+-----+
3 rows in set (0.006 sec)

MariaDB [cs667_rr]>
```

6. Find the average fare per km for each train type specified and display the train type and corresponding average fare per km as 'Avg_Fare' in decreasing order of Avg_Fare.

```
Command Prompt - mysql -u root
MariaDB [cs667_rr]> select train_type,avg(fare_per_km) as avg_fare from fare_table group by train_type order by
avg_fare desc;
+-----+-----+
| train_type | avg_fare |
+-----+-----+
| Superfast  | 2.1799999872843423 |
| Fast       | 1.8166666825612385 |
| Mail       | 1.53333333214124043 |
+-----+-----+
3 rows in set (0.026 sec)

MariaDB [cs667_rr]>
```

7. Retrieve all details of the oldest passenger.

```
Command Prompt - mysql -u root
MariaDB [cs667_rr]> select * from ticket_passenger having max(age);
+-----+-----+-----+-----+
| seat_no | name   | age | pnr   |
+-----+-----+-----+-----+
| F01-13 | Ramya R | 45  | PNR012 |
+-----+-----+-----+-----+
1 row in set (0.015 sec)

MariaDB [cs667_rr]> _
```

8. Count the number of passengers whose name consists of 'Ullal'. (Hint: Use the LIKE operator).

```
Command Prompt - mysql -u root
MariaDB [cs667_rr]> select count(*) name_contains_ullal from ticket_passenger where name like "%Ullal%";
+-----+
| name_contains_ullal |
+-----+
| 4 |
+-----+
1 row in set (0.001 sec)

MariaDB [cs667_rr]> select * from ticket_passenger where name like "%Ullal%";
+-----+-----+-----+-----+
| seat_no | name       | age | pnr   |
+-----+-----+-----+-----+
| S01-10 | Hema Ullal | 27  | PNR005 |
| S01-11 | Hima Ullal | 28  | PNR005 |
| S01-12 | Asha Ullal | 21  | PNR005 |
| S01-9  | Ajit Ullal | 31  | PNR005 |
+-----+-----+-----+-----+
4 rows in set (0.000 sec)

MariaDB [cs667_rr]> _
```