

# DBMS Assignment Lab 4

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PES1UG20CS462

```
mysql> use pes1ug20cs462;  
Database changed  
mysql> _
```

- 1) Find the average distance between subsequent stations for every train

```
mysql> select train_no, avg(distance) as AVG_DIST from route_info group by train_no;  
+-----+-----+  
| train_no | AVG_DIST |  
+-----+-----+  
| 25260 | 277.1667 |  
| 25261 | 277.1667 |  
| 58450 | 280.3333 |  
| 58451 | 279.8333 |  
| 62620 | 184.4000 |  
| 62621 | 185.0000 |  
+-----+-----+  
6 rows in set (0.00 sec)
```

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

```
mysql> select train_no, avg(distance) as AVG_DIST from route_info group by train_no order by AVG_DIST desc;  
+-----+-----+  
| train_no | AVG_DIST |  
+-----+-----+  
| 58450 | 280.3333 |  
| 58451 | 279.8333 |  
| 25260 | 277.1667 |  
| 25261 | 277.1667 |  
| 62621 | 185.0000 |  
| 62620 | 184.4000 |  
+-----+-----+  
6 rows in set (0.01 sec)
```

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

```
mysql> select train_no, sum(distance) as total_distance from route_info group by train_no order by total_distance desc;
+-----+-----+
| train_no | total_distance |
+-----+-----+
| 62621 | 1850 |
| 62620 | 1844 |
| 58450 | 1682 |
| 58451 | 1679 |
| 25260 | 1663 |
| 25261 | 1663 |
+-----+-----+
6 rows in set (0.01 sec)
```

- 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)

```
mysql> select train_number, count(compartment_no) as MAX_COMPARTMENT from compartment group by train_number order by MAX_COMPARTMENT desc limit 1;
+-----+-----+
| train_number | MAX_COMPARTMENT |
+-----+-----+
| 62621 | 5 |
+-----+-----+
1 row in set (0.01 sec)

mysql> select train_number, count(compartment_no) as MIN_COMPARTMENT from compartment group by train_number order by MIN_COMPARTMENT asc limit 1;
+-----+-----+
| train_number | MIN_COMPARTMENT |
+-----+-----+
| 58451 | 2 |
+-----+-----+
1 row in set (0.00 sec)
```

- 5) Display the number of phone numbers corresponding to the user\_id(s) ADM\_001, USR\_006, USR\_10

```
mysql> select user_id, count(phone_no) as NO_PHONE from user_phone where user_id in ("ADM_001", "USR_006", "USR_010") group by user_id;
+-----+-----+
| user_id | NO_PHONE |
+-----+-----+
| ADM_001 | 2 |
| USR_006 | 2 |
| USR_010 | 2 |
+-----+-----+
3 rows in set (0.01 sec)
```

- 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

```
mysql> select Train_Type, avg(fare_per_km) as AVG_FARE_PER_KM from fare group by Train_Type order by AVG_FARE_PER_KM desc;
+-----+-----+
| Train_Type | AVG_FARE_PER_KM |
+-----+-----+
| Fast       | 2.0000          |
| Superfast  | 2.0000          |
| Mail       | 1.3333          |
+-----+-----+
3 rows in set (0.00 sec)
```

- 7) Retrieve all details of the oldest passenger.

```
mysql> select * from ticket_passenger where age = (select max(age) from ticket_passenger);
+-----+-----+-----+-----+
| seat_no | name   | age | pnr   |
+-----+-----+-----+-----+
| F01-13  | Ramya R | 45  | PNR012 |
+-----+-----+-----+-----+
1 row in set (0.01 sec)
```

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

```
mysql> select count(*) as NO_OF_PEOPLE from ticket_passenger where name like "%Ulla%";
+-----+
| NO_OF_PEOPLE |
+-----+
| 4             |
+-----+
1 row in set (0.01 sec)
```