

DATABASE
MANAGEMENT
SYSTEM
LAB-6
AGGREGATE
FUNCTIONS

NAME: VISHWAS M

SRN : PES2UG20CS390

SEC : F

DATE : 01/10/2022

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

The screenshot shows the phpMyAdmin interface with the SQL query: `select avg(distance) from route_info group by route_info.Train_nos;` The results are displayed in a table with 6 rows, showing the average distance for each train.

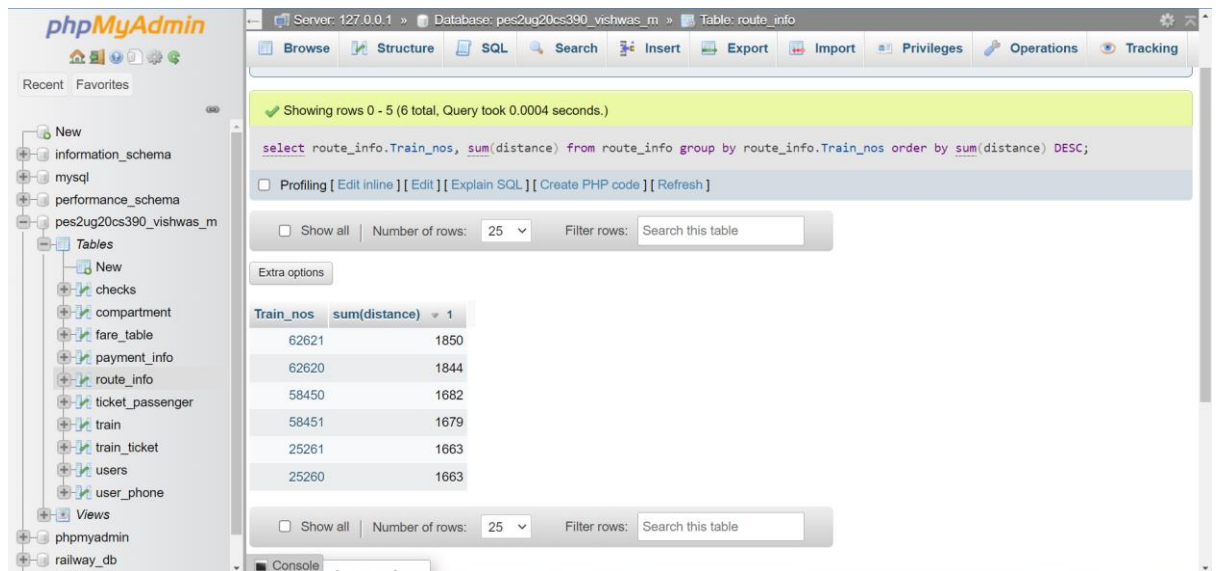
avg(distance)
277.1667
277.1667
280.3333
279.8333
184.4000
185.0000

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

The screenshot shows the phpMyAdmin interface with the SQL query: `select avg(distance) from route_info group by route_info.Train_nos order by avg(distance) DESC;` The results are displayed in a table with 6 rows, showing the average distance for each train in descending order.

avg(distance)
280.3333
279.8333
277.1667
277.1667
185.0000
184.4000

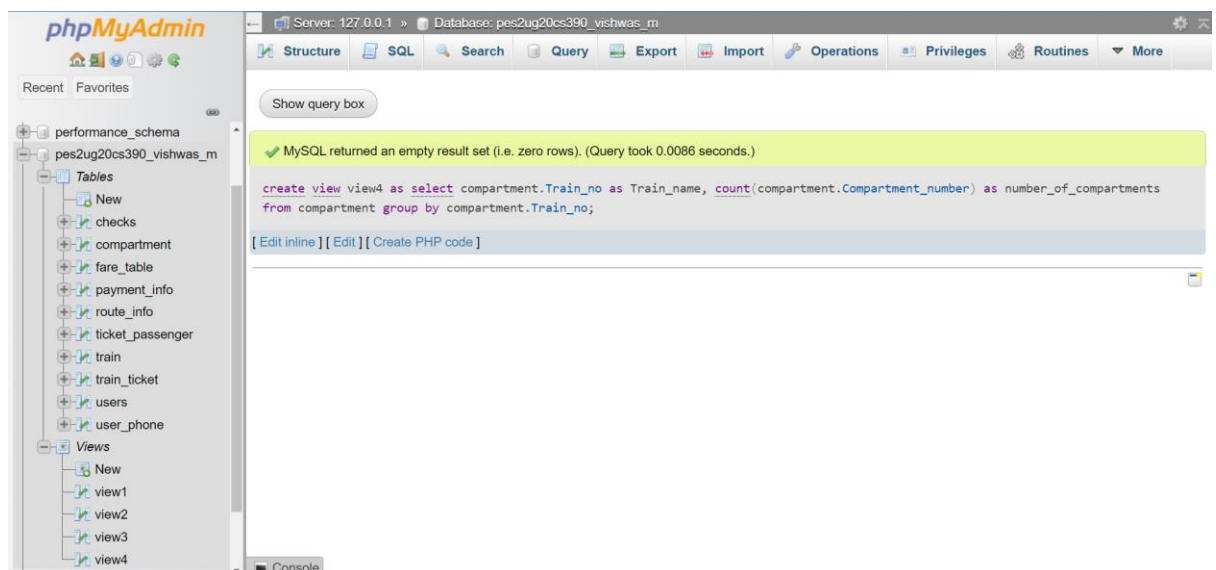
- 3) Display the list of train numbers and the distance travelled by each in descending order of the distance travelled



The screenshot shows the phpMyAdmin interface with the database 'pes2ug20cs390_vishwas_m' selected. The 'route_info' table is chosen from the 'Tables' list. A SQL query is executed, displaying the results in a table format. The query is: `select route_info.Train_nos, sum(distance) from route_info group by route_info.Train_nos order by sum(distance) DESC;`

Train_nos	sum(distance)
62621	1850
62620	1844
58450	1682
58451	1679
25261	1663
25260	1663

- 4) List those trains that have maximum and minimum number compartments as train name and number of compartments



The screenshot shows the phpMyAdmin interface with the database 'pes2ug20cs390_vishwas_m' selected. The 'compartment' table is chosen from the 'Tables' list. A SQL query is executed to create a view 'view4'. The query is: `create view view4 as select compartment.Train_no as Train_name, count(compartment.Compartment_number) as number_of_compartments from compartment group by compartment.Train_no;`

phpMyAdmin

Server: 127.0.0.1 » Database: pes2ug20cs390_vishwas_m » View: view4

Browse Structure SQL Search Export Privileges Operations Tracking

Recent Favorites

performance_schema
pes2ug20cs390_vishwas_m

Tables

- New
- checks
- compartment
- fare_table
- payment_info
- route_info
- ticket_passenger
- train
- train_ticket
- users
- user_phone

Views

- New
- view1
- view2
- view3
- view4

SELECT * FROM `view4`

☐ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

☐ Show all | Number of rows: 25 | Filter rows: Search this table

Extra options

Train_name	number_of_compartments
25260	3
25261	4
58450	4
58451	2
62620	2
62621	5

☐ Show all | Number of rows: 25 | Filter rows: Search this table

Query results operations

Console Copy to clipboard Export Display chart Create view

phpMyAdmin

Server: 127.0.0.1 » Database: pes2ug20cs390_vishwas_m » View: view4

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Tables

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Views

- New
- view1
- view2
- view3
- view4

Showing rows 0 - 1 (2 total, Query took 0.0305 seconds.)

select Train_name, view4.number_of_compartments from view4 where view4.number_of_compartments in (select min(view4.number_of_compartments) from view4);

☐ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

☐ Show all | Number of rows: 25 | Filter rows: Search this table

Extra options

Train_name	number_of_compartments
62620	2
58451	2

☐ Show all | Number of rows: 25 | Filter rows: Search this table

Query results operations

Print Copy to clipboard Export Display chart Create view

Console

phpMyAdmin

Server: 127.0.0.1 » Database: pes2ug20cs390_vishwas_m » View: view4

Showing rows 0 - 0 (1 total, Query took 0.0008 seconds.)

```
select Train_name, view4.number_of_compartments from view4 where view4.number_of_compartments in (select max(view4.number_of_compartments) from view4);
```

Train_name: 62621, number_of_compartments: 5

Query results operations: Print, Copy to clipboard, Export, Display chart, Create view

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

phpMyAdmin

Server: 127.0.0.1 » Database: pes2ug20cs390_vishwas_m » Table: user_phone

Showing rows 0 - 2 (3 total, Query took 0.0006 seconds.)

```
select user_phone.User_ID, count(user_phone.phone_no) from user_phone where user_phone.User_ID in ('ADM_001', 'USR_006', 'USR_010') group by user_phone.User_ID;
```

User_ID	count(user_phone.phone_no)
ADM_001	2
USR_006	2
USR_010	2

Query results operations: Copy to clipboard, Export, Display chart, Create view

- 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

The screenshot shows the phpMyAdmin interface with the 'fare_table' selected. The SQL query executed is: `select fare_table.train_type, avg(fare_table.fare_per_km) as Avg_Fare from fare_table group by fare_table.train_type order by Avg_Fare DESC;` The results show three train types: Superfast, Fast, and Mail, with their respective average fares per km.

train_type	Avg_Fare
Superfast	2.1799999872843423
Fast	1.8166666825612385
Mail	1.5333333214124043

- 7) Retrieve all details of the oldest passenger.

The screenshot shows the phpMyAdmin interface with the 'users' table selected. The SQL query executed is: `select * from users where users.Age=(select MAX(users.Age) from users);` The results show a single user, Aji Sethi, who is 56 years old.

User_ID	User_type	F_name	L_name	Age	DOB	Pin_code	Street_no
USR_008	PSGR	Ajit	Sethi	56	1966-04-14	575001	6

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

The screenshot shows the phpMyAdmin interface with the following details:

- Server:** 127.0.0.1
- Database:** pes2ug20cs390_vishwas_m
- Table:** users
- SQL Query:**

```
select users.F_name,users.L_name,COUNT(users.User_ID)as COUNT from users where users.F_name like '%Ullal' or users.L_name like '%Ullal';
```
- Query Results:**

F_name	L_name	COUNT
Ajit	Ullal	1
- Query results operations:** Print, Copy to clipboard, Export, Display chart, Create view
- Bookmark this SQL query:** Label: ☐ Let every user access this bookmark