

Lab-5 JOINS :

Details :

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Question 1 :

```
ALTER TABLE TICKET ADD COLUMN calculate_fare int(11);

CREATE VIEW temp1 AS SELECT pnr,distance,fare_per_km FROM
> ((TICKET AS tk INNER JOIN ROUTE_INFO AS ri ON
departure=from_station_name AND arrival=to_station_name )
> NATURAL JOIN FARE_TABLE);

UPDATE TICKET INNER JOIN temp1 ON temp1.pnr=temp1.pnr
> SET calculate_fare=temp1.distance*temp1.fare_per_km WHERE
TICKET.pnr=temp1.pnr;
```


Question 2 :

```
SELECT from_station_name, to_station_name, distance FROM
-> TRAIN NATURAL JOIN ROUTE_INFO
-> WHERE train_no=62621;
```

```
MariaDB [railways]> SELECT from_station_name, to_station_name, distance FROM
-> TRAIN NATURAL JOIN ROUTE_INFO
-> WHERE train_no=62621;
```

from_station_name	to_station_name	distance
Bengaluru	Bangarpet	71
Bangarpet	Katpadi	161
Katpadi	Sholigur	40
Sholingur	Chennai	90
Bengaluru	Katpadi	232
Bengaluru	Sholigur	272
Bengaluru	Chennai	362
Bangarpet	Sholigur	201
Bangarpet	Chennai	291
Katpadi	Chennai	130

```
10 rows in set (0.001 sec)
```

Question 3 :

```
SELECT T.train_no,name,compartment_no, C.availability
-> FROM (TRAIN AS T INNER JOIN COMPARTMENT AS C ON
T.train_no=C.train_no)
-> WHERE C.availability>10;
```

```
MariaDB [railways]> SELECT T.train_no,name,compartment_no, C.availability
-> FROM (TRAIN AS T INNER JOIN COMPARTMENT AS C ON T.train_no=C.train_no)
-> WHERE C.availability>10;
```

train_no	name	compartment_no	availability
62621	BEN-CHE Shatabdi	G02	12
62620	CHE-BEN Shatabdi	F01	15
25261	Managaluru Mail	S01	15
25261	Managaluru Mail	G01	33
25261	Managaluru Mail	G02	45
25260	Chennai Mail	S01	15
25260	Chennai Mail	S02	17
58451	BEN-MAN Express	G01	40

```
8 rows in set (0.001 sec)
```

Question 4 :

```
SELECT TP.name,T.calculate_fare
-> FROM (TICKET AS T INNER JOIN TICKET_PASSENGER AS TP ON
```

```
TP.pnr=T.pnr)  
-> WHERE T.calculate_fare > 500;
```

```
+-----+-----+  
| name          | calculate_fare |  
+-----+-----+  
| Ramya R       | 534            |  
| Saideepak Reddy | 1195           |  
| Sheela Reddy   | 1195           |  
| Sheela Seth    | 1195           |  
| Criston D Souza | 957            |  
| SaiDeepak Reddy | 1191           |  
| Sheela Reddy   | 1191           |  
| Anwar Hussein  | 649            |  
| Karishma Husein | 649            |  
| Hema Ullal     | 553            |  
| Hima Ullal     | 553            |  
| Asha Ullal     | 553            |  
| Criston D Souza | 559            |  
| Smriti Irani   | 806            |  
| Ajit Ullal     | 553            |  
+-----+-----+  
15 rows in set (0.001 sec)
```

Question 5 :

```
SELECT U.fname,U.lname,U.dob,T.pnr FROM  
-> (TICKET AS T LEFT OUTER JOIN USER AS U ON  
T.user_id=U.user_id);
```

```

+-----+-----+-----+-----+
| fname | lname | dob   | pnr   |
+-----+-----+-----+-----+
| Narendra | Modi | 1989-04-14 | PNR001 |
| Narendra | Modi | 1989-04-14 | PNR002 |
| Droupadi | Murmu | 1990-04-14 | PNR007 |
| Droupadi | Murmu | 1990-04-14 | PNR008 |
| Manmohan | Singh | 1991-04-08 | PNR003 |
| Manmohan | Singh | 1991-04-08 | PNR004 |
| Muhammed | Ali   | 2000-10-09 | PNR005 |
| Muhammed | Ali   | 2000-10-09 | PNR006 |
| Smriti   | Irani | 1999-12-16 | PNR010 |
| Ajit     | Sethi | 1966-04-14 | PNR011 |
| Arjun    | Allu  | 1967-04-08 | PNR012 |
| Samanta  | Prabhu | 1968-04-14 | PNR014 |
| Rahul    | Gandhi | 1970-04-08 | PNR015 |
+-----+-----+-----+-----+
13 rows in set (0.001 sec)

```

question 7 :

```

select t.pnr, tp.name, t.travel_date
from (TICKET as t right outer join TICKET_PASSENGER as tp on
t.pnr=tp.pnr);

```

```

+-----+-----+-----+
| pnr    | name                | travel_date |
+-----+-----+-----+
| PNR012 | Ramya R             | 2022-08-11  |
| PNR001 | Saideepak Reddy     | 2022-08-07  |
| PNR001 | Sheela Reddy        | 2022-08-07  |
| PNR011 | Sheela Seth         | 2022-08-22  |
| PNR008 | Criston D Souza    | 2022-08-02  |
| PNR002 | SaiDeepak Reddy     | 2022-08-14  |
| PNR002 | Sheela Reddy        | 2022-08-14  |
| PNR003 | Anwar Hussein       | 2022-08-01  |
| PNR003 | Karishma Husein     | 2022-08-01  |
| PNR004 | Anwar Hussein       | 2022-08-15  |
| PNR004 | Karishma Husein     | 2022-08-15  |
| PNR005 | Hema Ullal          | 2022-08-03  |
| PNR005 | Hima Ullal          | 2022-08-03  |
| PNR005 | Asha Ullal          | 2022-08-03  |
| PNR007 | Criston D Souza    | 2022-08-07  |
| PNR014 | Shradha Nayar       | 2022-08-17  |
| PNR010 | Samanta Prabhu      | 2022-08-19  |
| PNR010 | Rakshita Prabhu     | 2022-08-19  |
| PNR015 | Khushi Jha          | 2022-08-05  |
| PNR006 | Smriti Irani        | 2033-08-04  |
| PNR005 | Ajit Ullal          | 2022-08-03  |
+-----+-----+-----+
21 rows in set (0.001 sec)

```

question 8 :

```

SELECT TU.user_id,TU.train_no,T.name
FROM (TRAIN AS T RIGHT OUTER JOIN TRAIN_USER AS TU ON
TU.train_no=T.train_no);

```

```
MariaDB [railways]> SELECT TU.user_id,TU.train_no,TU.name
```

user_id	train_no	name
USR_007	25260	Chennai Mail
ADM_003	25260	Chennai Mail
ADM_001	25261	Managaluru Mail
ADM_003	25261	Managaluru Mail
ADM_001	25261	Managaluru Mail
ADM_003	25261	Managaluru Mail
ADM_001	25261	Managaluru Mail
ADM_002	25261	Managaluru Mail
USR_004	25261	Managaluru Mail
USR_005	25261	Managaluru Mail
USR_009	25261	Managaluru Mail
USR_015	25261	Managaluru Mail
ADM_003	58450	MAN-BEN Express

Question 9 :

```
CREATE VIEW temp3 AS SELECT
T.train_no,T.name,T.destination,RI.distance
FROM TRAIN AS T,ROUTE_INFO AS RI
WHERE T.source=RI.from_station_name AND
T.destination=RI.to_station_name;

CREATE VIEW temp4 AS SELECT
temp3.train_no,name,destination,distance,departure_time
FROM temp3 JOIN TICKET ON temp3.train_no=TICKET.train_no;

SELECT train_no,name FROM temp4
WHERE (destination!='Mangaluru' AND distance>100) AND
departure_time!='20:00:00';
```

```

+-----+-----+
| train_no | name |
+-----+-----+
| 62621 | BEN-CHE Shatabdi |
| 62620 | CHE-BEN Shatabdi |
| 25260 | Chennai Mail |
| 58450 | MAN-BEN Express |
| 62621 | BEN-CHE Shatabdi |
| 62620 | CHE-BEN Shatabdi |
| 25260 | Chennai Mail |
| 62621 | BEN-CHE Shatabdi |
| 25260 | Chennai Mail |
| 25260 | Chennai Mail |
+-----+-----+
10 rows in set (0.001 sec)

```

Question 10

```

SELECT
train_no,user_id,departure,arrival,departure_time,calculate_fare
FROM TICKET WHERE calculate_fare>(SELECT AVG(calculate_fare) FROM
TICKET);

```

```

+-----+-----+-----+-----+-----+-----+
| train_no | user_id | departure | arrival | departure_time | calculate_fare |
+-----+-----+-----+-----+-----+-----+
| 62621 | ADM_001 | Bengaluru | Chennai | 16:00:00 | 1195 |
| 62620 | ADM_001 | Chennai | Bengaluru | 08:00:00 | 1191 |
| 58450 | USR_002 | Mangaluru | Bengaluru | 08:00:00 | 806 |
| 62620 | ADM_002 | Chennai | Bangarpet | 08:00:00 | 957 |
| 62621 | USR_008 | Katapadi | Chennai | 19:00:00 | 1195 |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.001 sec)

```