ER Diagram

User
- User_id
- Name
- Email

Passenger
- Passenger_id
- User_id
- TIcket_id

Ticket
- Ticket_id
- Station_id_in
- Station_id_out
- Train_id

Station
- Station_id
- Station_Name

Train
- Train_id
- Train_Name

Train_Status
- Location
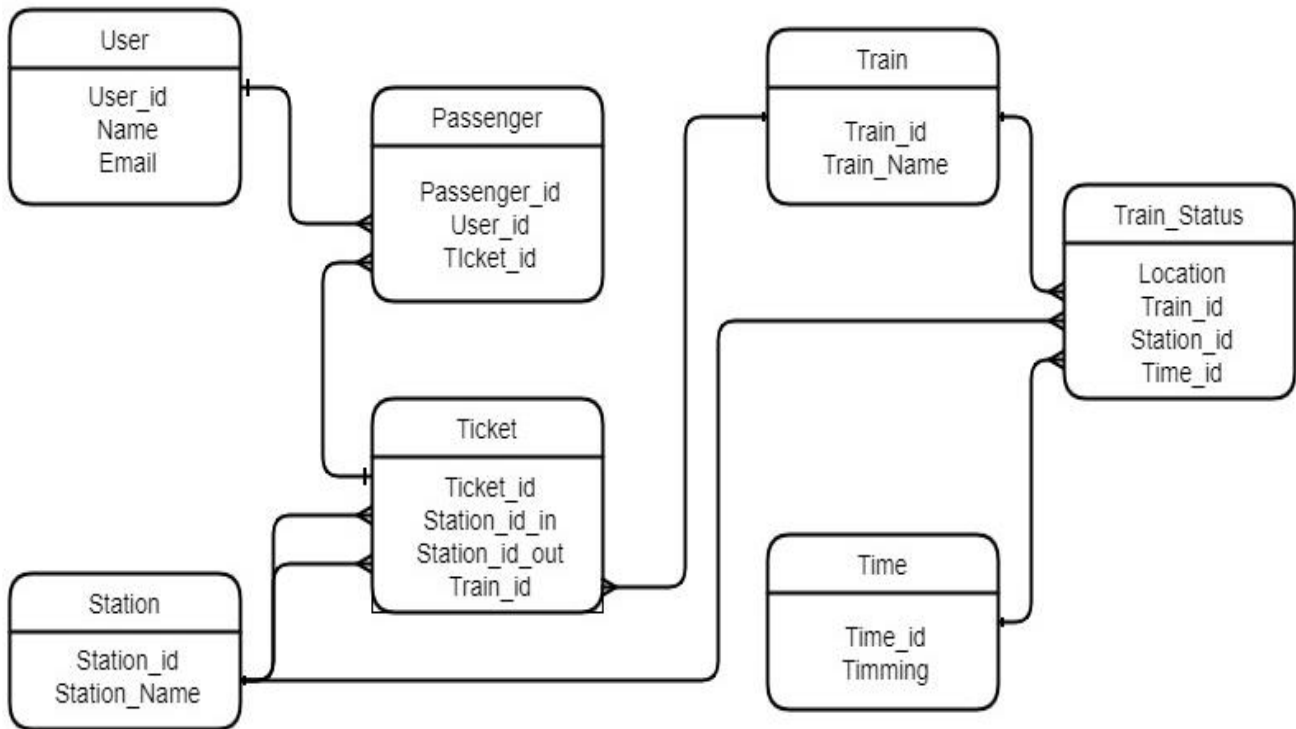- Train_id
- Station_id
- Time_id

Time
- Time_id
- Timming

Structure of Tables

User :

create table user (user_id int primary key(11), name varchar(20), email varchar(50));

```
MariaDB [(none)]> use train;
Database changed
MariaDB [train]> desc user;
+---------+-------------+------+-----+---------+-------+
| Field   | Type        | Null | Key | Default | Extra |
+---------+-------------+------+-----+---------+-------+
| user_id | int(11)     | NO   | PRI | NULL    |       |
| name    | varchar(20) | YES  |     | NULL    |       |
| email   | varchar(50) | YES  |     | NULL    |       |
+---------+-------------+------+-----+---------+-------+
3 rows in set (0.044 sec)
```

Passenger :

create table passenger (passenger_id int(11) primary key, user_id int(11), ticket_id int(11));

alter table passenger add constraint fk_userid foreign key (user_id) references user(user_id);

alter table passenger add constraint fk_ticketid foreign key (ticket_id) references ticket(ticket_id);

```
MariaDB [train]> Desc Passenger;
+--------------+---------+------+-----+---------+-------+
| Field        | Type    | Null | Key | Default | Extra |
+--------------+---------+------+-----+---------+-------+
| passenger_id | int(11) | NO   | PRI | NULL    |       |
| user_id      | int(11) | YES  | MUL | NULL    |       |
| ticket_id    | int(11) | YES  | MUL | NULL    |       |
+--------------+---------+------+-----+---------+-------+
3 rows in set (0.013 sec)
```

Station :

create table station (station_id int(11) primary key, station_name varchar(20));

```
MariaDB [train]> DESC train;
+------------+-------------+------+-----+---------+-------+
| Field      | Type        | Null | Key | Default | Extra |
+------------+-------------+------+-----+---------+-------+
| train_id   | int(11)     | NO   | PRI | NULL    |       |
| train_name | varchar(20) | YES  |     | NULL    |       |
+------------+-------------+------+-----+---------+-------+
2 rows in set (0.046 sec)
```

Train:

create table train (train_id int(11) primary key, train_name varchar(20));

```
MariaDB [train]> DESC train;
+------------+-------------+------+-----+---------+-------+
| Field      | Type        | Null | Key | Default | Extra |
+------------+-------------+------+-----+---------+-------+
| train_id   | int(11)     | NO   | PRI | NULL    |       |
| train_name | varchar(20) | YES  |     | NULL    |       |
+------------+-------------+------+-----+---------+-------+
2 rows in set (0.046 sec)
```

Ticket:

create table ticket (ticket_id int(11) primary key, station_id_in int(11), station_id_out int(11), train_id int(11));

alter table ticket add constraint fk_stationid foreign key (station_id_in) references station(station_id);

alter table ticket add constraint fk_stationid2 foreign key (station_id_out) references station(station_id);

alter table ticket add constraint fk_trainid foreign key (train_id) references train(train_id);

```
MariaDB [train]> DESC ticket;
+----------------+---------+------+-----+---------+-------+
| Field          | Type    | Null | Key | Default | Extra |
+----------------+---------+------+-----+---------+-------+
| ticket_id      | int(11) | NO   | PRI | NULL    |       |
| station_id_in  | int(11) | YES  | MUL | NULL    |       |
| station_id_out | int(11) | YES  | MUL | NULL    |       |
| train_id       | int(11) | YES  | MUL | NULL    |       |
+----------------+---------+------+-----+---------+-------+
4 rows in set (0.025 sec)
```

Time:

create table time (time_id int(11) primary key, timming time);

```
MariaDB [train]> DESC time;
+---------+---------+------+-----+---------+-------+
| Field   | Type    | Null | Key | Default | Extra |
+---------+---------+------+-----+---------+-------+
| time_id | int(11) | NO   | PRI | NULL    |       |
| timming | time    | YES  |     | NULL    |       |
+---------+---------+------+-----+---------+-------+
2 rows in set (0.019 sec)
```

Train_status:

create table train_status (location int(11) primary key, train_id int(11), station_id int(11), time_id int(11));

alter table train_status add constraint fk_trainid foreign key (train_id) references train(train_id);

alter table train_status add constraint fk_stationid1 foreign key (station_id) references station(station_id);

alter table train_status add constraint fk_timeid foreign key (time_id) references time(time_id);

```
MariaDB [train]> DESC train_status;
+------------+---------+------+-----+---------+-------+
| Field      | Type    | Null | Key | Default | Extra |
+------------+---------+------+-----+---------+-------+
| location   | int(11) | NO   | PRI | NULL    |       |
| train_id   | int(11) | YES  | MUL | NULL    |       |
| station_id | int(11) | YES  | MUL | NULL    |       |
| time_id    | int(11) | YES  | MUL | NULL    |       |
+------------+---------+------+-----+---------+-------+
4 rows in set (0.009 sec)
```

Content of Tables

User :

```
MariaDB [train]> SELECT * FROM user;
+---------+---------+--------------------+
| user_id | name    | email              |
+---------+---------+--------------------+
|       1 | Ajay    | ajay@gmail.com     |
|       2 | Abhay   | abhay@mail.com     |
|       3 | Brijesh | brijesh@email.com  |
|       4 | Chetan  | chetan@yahoo.in    |
|       5 | Dhawal  | dhawal@hotmail.co  |
|       6 | Rumit   | rumit@mail.com     |
|       7 | Varsha  | varsha@itved.com   |
|       8 | Neha    | neha@kaggel.com    |
|       9 | Mihir   | mihir@mail.com     |
|      10 | Shree   | shree@gmail.com    |
+---------+---------+--------------------+
10 rows in set (0.003 sec)
```

Passenger :

```
MariaDB [train]> SELECT * FROM passenger;;
+--------------+---------+-----------+
| passenger_id | user_id | ticket_id |
+--------------+---------+-----------+
|            1 |       4 |        24 |
|            2 |      10 |        35 |
|            3 |       3 |        30 |
|            4 |       1 |        16 |
|            5 |       2 |        33 |
|            6 |       5 |        36 |
|            7 |       6 |        37 |
|            8 |       7 |        42 |
|            9 |       8 |        16 |
|           10 |       9 |        31 |
+--------------+---------+-----------+
10 rows in set (0.001 sec)
```

Station :

```
MariaDB [train]> SELECT * FROM station;
+------------+-----------------+
| station_id | station_name    |
+------------+-----------------+
|          1 | Mumbai CSMT     |
|          2 | Dadar Central   |
|          3 | Thane           |
|          4 | Kalyan Junction |
|          5 | Neral Junction  |
|          6 | Karjat Junction |
|          7 | Khandala        |
|          8 | Lonavala        |
|          9 | Talegaon        |
|         10 | Khakdi          |
|         11 | Shivaji Nagar   |
|         12 | Pune Junction   |
+------------+-----------------+
12 rows in set (0.027 sec)
```

Train :

```
MariaDB [train]> SELECT * FROM train;
+----------+---------------------+
| train_id | train_name          |
+----------+---------------------+
|        1 | Intercity SF Express |
|        2 | Deccan Express      |
+----------+---------------------+
2 rows in set (0.000 sec)
```

Ticket :

```
MariaDB [train]> SELECT * FROM ticket;
+-----------+---------------+----------------+----------+
| ticket_id | station_id_in | station_id_out | train_id |
+-----------+---------------+----------------+----------+
|        16 |             1 |             12 |        1 |
|        18 |             1 |              7 |        1 |
|        20 |             3 |             12 |        1 |
|        22 |             7 |             12 |        1 |
|        23 |             5 |             11 |        1 |
|        24 |             2 |              6 |        1 |
|        25 |            10 |              3 |        1 |
|        26 |            11 |              2 |        1 |
|        27 |             9 |              6 |        1 |
|        28 |             7 |             12 |        1 |
|        29 |            11 |              4 |        1 |
|        30 |             6 |              2 |        1 |
|        31 |             1 |             12 |        2 |
|        32 |             1 |              7 |        2 |
|        33 |             3 |             12 |        2 |
|        34 |             7 |             12 |        2 |
|        35 |             5 |             11 |        2 |
|        36 |             2 |              6 |        2 |
|        37 |            10 |              3 |        2 |
|        38 |            11 |              5 |        2 |
|        39 |             9 |              3 |        2 |
|        40 |             7 |              9 |        2 |
|        41 |            11 |              3 |        2 |
|        42 |             6 |              1 |        2 |
+-----------+---------------+----------------+----------+
24 rows in set (0.000 sec)
```

Time :

```
MariaDB [train]> SELECT * FROM time;
+---------+----------+
| time_id | timming  |
+---------+----------+
|       1 | 07:00:00 |
|       2 | 07:15:00 |
|       3 | 07:30:00 |
|       4 | 07:45:00 |
|       5 | 08:00:00 |
|       6 | 08:15:00 |
|       7 | 08:30:00 |
|       8 | 08:45:00 |
|       9 | 09:00:00 |
|      10 | 09:15:00 |
|      11 | 09:30:00 |
|      12 | 09:45:00 |
|      13 | 10:00:00 |
|      14 | 10:15:00 |
|      15 | 10:30:00 |
|      16 | 10:45:00 |
|      17 | 11:00:00 |
|      18 | 11:15:00 |
|      19 | 11:30:00 |
|      20 | 12:00:00 |
|      21 | 12:15:00 |
|      22 | 12:30:00 |
|      23 | 12:45:00 |
|      24 | 13:00:00 |
|      25 | 13:15:00 |
|      26 | 13:30:00 |
|      27 | 13:45:00 |
|      28 | 14:00:00 |
|      29 | 14:15:00 |
|      30 | 14:30:00 |
|      31 | 14:45:00 |
|      32 | 15:00:00 |
|      33 | 15:15:00 |
|      34 | 15:30:00 |
|      35 | 15:45:00 |
|      36 | 16:00:00 |
|      37 | 16:15:00 |
|      38 | 16:30:00 |
|      39 | 16:45:00 |
|      40 | 17:00:00 |
+---------+----------+
40 rows in set (0.000 sec)
```

Train_Status :

```
MariaDB [train]> SELECT * FROM train_status;
+----------+----------+------------+---------+
| location | train_id | station_id | time_id |
+----------+----------+------------+---------+
|        1 |        1 |          1 |       5 |
|        2 |        1 |          2 |       6 |
|        3 |        1 |          3 |       7 |
|        7 |        1 |          4 |       8 |
|        8 |        1 |          5 |       9 |
|        9 |        1 |          6 |      10 |
|       10 |        1 |          7 |      11 |
|       11 |        1 |          8 |      12 |
|       12 |        1 |          9 |      13 |
|       13 |        1 |         10 |      14 |
|       14 |        1 |         11 |      15 |
|       15 |        1 |         12 |      16 |
|       16 |        1 |          1 |      17 |
|       17 |        1 |          1 |      18 |
|       18 |        1 |          2 |      19 |
|       19 |        1 |          3 |      20 |
|       20 |        1 |          4 |      21 |
|       21 |        1 |          5 |      23 |
|       22 |        1 |          6 |      22 |
|       23 |        1 |          7 |      21 |
|       24 |        1 |          8 |      20 |
|       25 |        1 |          9 |      19 |
|       26 |        1 |         10 |      18 |
|       27 |        1 |         11 |      17 |
|       28 |        2 |          2 |      13 |
|       29 |        2 |          3 |      14 |
|       30 |        2 |          4 |      15 |
|       31 |        2 |          5 |      16 |
|       32 |        2 |          6 |      17 |
|       33 |        2 |          7 |      18 |
|       34 |        2 |          8 |      19 |
|       35 |        2 |          9 |      20 |
|       36 |        2 |         10 |      21 |
|       37 |        2 |         11 |      22 |
|       38 |        2 |         12 |      23 |
|       39 |        2 |         11 |      24 |
|       40 |        2 |         10 |      25 |
|       41 |        2 |          9 |      26 |
|       42 |        2 |          8 |      27 |
|       43 |        2 |          7 |      28 |
|       44 |        2 |          6 |      29 |
|       45 |        2 |          5 |      30 |
|       46 |        2 |          4 |      31 |
|       47 |        2 |          3 |      32 |
|       48 |        2 |          2 |      33 |
|       49 |        2 |          1 |      34 |
+----------+----------+------------+---------+
46 rows in set (0.000 sec)
```

Subqueries

Locate the train at a particular time:

select station_name from station where station_id in (select station_id from train_status where time_id = (select time_id from time where timimg='09:30:00') and train_id = (select train_id from train where train_name="Intercity SF Express"));

```
MariaDB [train]> select station_name from station where station_id in (select station_id from train_status where
    -> time_id = (select time_id from time where timming='09:30:00') and train_id = (select train_id
    -> from train where train_name="Intercity SF Express" ) );
+--------------+
| station_name |
+--------------+
| Khandala     |
+--------------+
1 row in set (0.001 sec)
```

Location from where the individual is travelling:

select station_name from station where station_id in (select station_id_in from ticket where ticket_id = (select ticket_id from passenger where user_id = (select user_id from user where name = 'abhay'))) union select station_name from station where station_id in (select station_id_out from ticket where ticket_id = (select ticket_id from passenger where user_id = (select user_id from user where name = 'abhay')));

```
MariaDB [train]> select station_name from station where station_id in (select station_id_in from ticket
    -> where ticket_id = (select ticket_id from passenger where user_id = (select user_id from
    -> user where name = 'abhay' ))) union select station_name from station where station_id
    -> in (select station_id_out from ticket where ticket_id = (select ticket_id from passenger
    -> where user_id = (select user_id from user where name = 'abhay' )));
+--------------+
| station_name |
+--------------+
| Thane        |
| Pune Junction |
+--------------+
2 rows in set (0.014 sec)
```

Name of the train from which user is travelling:

select user.name , train.train_name from user ,train where user_id=(select user_id from user where name = 'dhawal') and train_id = (select train_id from ticket where ticket_id = (select ticket_id from passenger where user_id = (select user_id from user where name = 'dhawal')));

```
MariaDB [train]> select user.name , train.train_name from user ,train where
    -> user_id=(select user_id from user where name = 'dhawal') and train_id =
    -> (select train_id from ticket where ticket_id =
    -> (select ticket_id from passenger where user_id = (select user_id from user where name = 'dhawal') ));
+--------+----------------+
| name   | train_name     |
+--------+----------------+
| Dhawal | Deccan Express |
+--------+----------------+
1 row in set (0.000 sec)
```

Joins

Joining ticket with train and station name to understand where passengers are travelling and by which train:

SELECT ticket.ticket_id, station.station_name, train.train_name FROM ticket join station ON ticket.station_id_in = station.station_id or ticket.station_id_out = station.station_id join train ON train.train_id = ticket.train_id order by ticket.ticket_id;

```
MariaDB [train]> SELECT ticket.ticket_id, station.station_name, train.train_name FROM ticket
join station ON ticket.station_id_in = station.station_id or ticket.station_id_out = station.
station_id join train ON train.train_id = ticket.train_id order by ticket.ticket_id;
+-----------+----------------+----------------------+
| ticket_id | station_name   | train_name           |
+-----------+----------------+----------------------+
|        16 | Mumbai CSMT    | Intercity SF Express |
|        16 | Pune Junction  | Intercity SF Express |
|        18 | Mumbai CSMT    | Intercity SF Express |
|        18 | Khandala       | Intercity SF Express |
|        20 | Pune Junction  | Intercity SF Express |
|        20 | Thane          | Intercity SF Express |
|        22 | Khandala       | Intercity SF Express |
|        22 | Pune Junction  | Intercity SF Express |
|        23 | Neral Junction | Intercity SF Express |
|        23 | Shivaji Nagar  | Intercity SF Express |
|        24 | Dadar Central  | Intercity SF Express |
|        24 | Karjat Junction| Intercity SF Express |
|        25 | Thane          | Intercity SF Express |
|        25 | Khakdi         | Intercity SF Express |
|        26 | Dadar Central  | Intercity SF Express |
|        26 | Shivaji Nagar  | Intercity SF Express |
|        27 | Karjat Junction| Intercity SF Express |
|        27 | Talegaon       | Intercity SF Express |
|        28 | Khandala       | Intercity SF Express |
|        28 | Pune Junction  | Intercity SF Express |
|        29 | Shivaji Nagar  | Intercity SF Express |
|        29 | Kalyan Junction| Intercity SF Express |
|        30 | Dadar Central  | Intercity SF Express |
|        30 | Karjat Junction| Intercity SF Express |
|        31 | Mumbai CSMT    | Deccan Express       |
|        31 | Pune Junction  | Deccan Express       |
|        32 | Mumbai CSMT    | Deccan Express       |
|        32 | Khandala       | Deccan Express       |
|        33 | Thane          | Deccan Express       |
|        33 | Pune Junction  | Deccan Express       |
|        34 | Khandala       | Deccan Express       |
|        34 | Pune Junction  | Deccan Express       |
|        35 | Neral Junction | Deccan Express       |
|        35 | Shivaji Nagar  | Deccan Express       |
|        36 | Dadar Central  | Deccan Express       |
|        36 | Karjat Junction| Deccan Express       |
|        37 | Khakdi         | Deccan Express       |
|        37 | Thane          | Deccan Express       |
|        38 | Neral Junction | Deccan Express       |
|        38 | Shivaji Nagar  | Deccan Express       |
|        39 | Thane          | Deccan Express       |
|        39 | Talegaon       | Deccan Express       |
|        40 | Khandala       | Deccan Express       |
|        40 | Talegaon       | Deccan Express       |
|        41 | Thane          | Deccan Express       |
|        41 | Shivaji Nagar  | Deccan Express       |
|        42 | Mumbai CSMT    | Deccan Express       |
|        42 | Karjat Junction| Deccan Express       |
+-----------+----------------+----------------------+
48 rows in set (0.009 sec)
```

Joining train_status to train location, train, and it's time to understand train schedule according to train location and train name:

select train_status.location, train.train_name, station.station_name, time.timimg from train_status join train on train_status.train_id = train.train_id join station on train_status.station_id = station.station_id join time on train_status.time_id = time.time_id order by time.timming;

```
MariaDB [train]> select train_status.location, train.train_name, station.station_name, time.t
imming from train_status join train on train_status.train_id = train.train_id join station on
 train_status.station_id = station.station_id join time on train_status.time_id = time.time_i
d order by time.timming;
+----------+---------------------+-----------------+----------+
| location | train_name          | station_name    | timming  |
+----------+---------------------+-----------------+----------+
|        1 | Intercity SF Express | Mumbai CSMT     | 08:00:00 |
|        2 | Intercity SF Express | Dadar Central   | 08:15:00 |
|        3 | Intercity SF Express | Thane           | 08:30:00 |
|        7 | Intercity SF Express | Kalyan Junction | 08:45:00 |
|        8 | Intercity SF Express | Neral Junction  | 09:00:00 |
|        9 | Intercity SF Express | Karjat Junction | 09:15:00 |
|       10 | Intercity SF Express | Khandala        | 09:30:00 |
|       11 | Intercity SF Express | Lonavala        | 09:45:00 |
|       12 | Intercity SF Express | Talegaon        | 10:00:00 |
|       28 | Deccan Express      | Dadar Central   | 10:00:00 |
|       29 | Deccan Express      | Thane           | 10:15:00 |
|       13 | Intercity SF Express | Khakdi          | 10:15:00 |
|       14 | Intercity SF Express | Shivaji Nagar   | 10:30:00 |
|       30 | Deccan Express      | Kalyan Junction | 10:30:00 |
|       15 | Intercity SF Express | Pune Junction   | 10:45:00 |
|       31 | Deccan Express      | Neral Junction  | 10:45:00 |
|       27 | Intercity SF Express | Shivaji Nagar   | 11:00:00 |
|       32 | Deccan Express      | Karjat Junction | 11:00:00 |
|       16 | Intercity SF Express | Mumbai CSMT     | 11:00:00 |
|       17 | Intercity SF Express | Mumbai CSMT     | 11:15:00 |
|       33 | Deccan Express      | Khandala        | 11:15:00 |
|       26 | Intercity SF Express | Khakdi          | 11:15:00 |
|       18 | Intercity SF Express | Dadar Central   | 11:30:00 |
|       34 | Deccan Express      | Lonavala        | 11:30:00 |
|       25 | Intercity SF Express | Talegaon        | 11:30:00 |
|       24 | Intercity SF Express | Lonavala        | 12:00:00 |
|       19 | Intercity SF Express | Thane           | 12:00:00 |
|       35 | Deccan Express      | Talegaon        | 12:00:00 |
|       36 | Deccan Express      | Khakdi          | 12:15:00 |
|       23 | Intercity SF Express | Khandala        | 12:15:00 |
|       20 | Intercity SF Express | Kalyan Junction | 12:15:00 |
|       22 | Intercity SF Express | Karjat Junction | 12:30:00 |
|       37 | Deccan Express      | Shivaji Nagar   | 12:30:00 |
|       38 | Deccan Express      | Pune Junction   | 12:45:00 |
|       21 | Intercity SF Express | Neral Junction  | 12:45:00 |
|       39 | Deccan Express      | Shivaji Nagar   | 13:00:00 |
|       40 | Deccan Express      | Khakdi          | 13:15:00 |
|       41 | Deccan Express      | Talegaon        | 13:30:00 |
|       42 | Deccan Express      | Lonavala        | 13:45:00 |
|       43 | Deccan Express      | Khandala        | 14:00:00 |
|       44 | Deccan Express      | Karjat Junction | 14:15:00 |
|       45 | Deccan Express      | Neral Junction  | 14:30:00 |
|       46 | Deccan Express      | Kalyan Junction | 14:45:00 |
|       47 | Deccan Express      | Thane           | 15:00:00 |
|       48 | Deccan Express      | Dadar Central   | 15:15:00 |
|       49 | Deccan Express      | Mumbai CSMT     | 15:30:00 |
+----------+---------------------+-----------------+----------+
46 rows in set (0.023 sec)
```

Views

Using views to store above joined tables for future references:

create view ticket_info as SELECT ticket.ticket_id, station.station_name as boarding, station.station_name as deboarding, train.train_name FROM ticket join station ON ticket.station_id_in = station.station_id or ticket.station_id_out = station_o.station_id join train ON train.train_id = ticket.train_id order by ticket.ticket_id;

```
MariaDB [train]> create view ticket_info as SELECT ticket.ticket_id, station.station_name as
boarding, station.station_name as deboarding, train.train_name FROM ticket join station ON ti
cket.station_id_in = station.station_id or ticket.station_id_out = station.station_id join tr
ain ON train.train_id = ticket.train_id order by ticket.ticket_id;
Query OK, 0 rows affected (0.025 sec)

MariaDB [train]> select * from ticket_info;
+-----------+----------------+----------------+---------------------+
| ticket_id | boarding       | deboarding     | train_name          |
+-----------+----------------+----------------+---------------------+
|        16 | Mumbai CSMT    | Mumbai CSMT    | Intercity SF Express |
|        16 | Pune Junction  | Pune Junction  | Intercity SF Express |
|        18 | Khandala       | Khandala       | Intercity SF Express |
|        18 | Mumbai CSMT    | Mumbai CSMT    | Intercity SF Express |
|        20 | Thane          | Thane          | Intercity SF Express |
|        20 | Pune Junction  | Pune Junction  | Intercity SF Express |
|        22 | Khandala       | Khandala       | Intercity SF Express |
|        22 | Pune Junction  | Pune Junction  | Intercity SF Express |
|        23 | Neral Junction | Neral Junction | Intercity SF Express |
|        23 | Shivaji Nagar  | Shivaji Nagar  | Intercity SF Express |
|        24 | Dadar Central  | Dadar Central  | Intercity SF Express |
|        24 | Karjat Junction| Karjat Junction| Intercity SF Express |
|        25 | Khakdi         | Khakdi         | Intercity SF Express |
|        25 | Thane          | Thane          | Intercity SF Express |
|        26 | Dadar Central  | Dadar Central  | Intercity SF Express |
|        26 | Shivaji Nagar  | Shivaji Nagar  | Intercity SF Express |
|        27 | Karjat Junction| Karjat Junction| Intercity SF Express |
|        27 | Talegaon       | Talegaon       | Intercity SF Express |
|        28 | Pune Junction  | Pune Junction  | Intercity SF Express |
|        28 | Khandala       | Khandala       | Intercity SF Express |
|        29 | Kalyan Junction| Kalyan Junction| Intercity SF Express |
|        29 | Shivaji Nagar  | Shivaji Nagar  | Intercity SF Express |
|        30 | Dadar Central  | Dadar Central  | Intercity SF Express |
|        30 | Karjat Junction| Karjat Junction| Intercity SF Express |
|        31 | Mumbai CSMT    | Mumbai CSMT    | Deccan Express      |
|        31 | Pune Junction  | Pune Junction  | Deccan Express      |
|        32 | Mumbai CSMT    | Mumbai CSMT    | Deccan Express      |
|        32 | Khandala       | Khandala       | Deccan Express      |
|        33 | Pune Junction  | Pune Junction  | Deccan Express      |
|        33 | Thane          | Thane          | Deccan Express      |
|        34 | Khandala       | Khandala       | Deccan Express      |
|        34 | Pune Junction  | Pune Junction  | Deccan Express      |
|        35 | Neral Junction | Neral Junction | Deccan Express      |
|        35 | Shivaji Nagar  | Shivaji Nagar  | Deccan Express      |
|        36 | Karjat Junction| Karjat Junction| Deccan Express      |
|        36 | Dadar Central  | Dadar Central  | Deccan Express      |
|        37 | Thane          | Thane          | Deccan Express      |
|        37 | Khakdi         | Khakdi         | Deccan Express      |
|        38 | Neral Junction | Neral Junction | Deccan Express      |
|        38 | Shivaji Nagar  | Shivaji Nagar  | Deccan Express      |
|        39 | Thane          | Thane          | Deccan Express      |
|        39 | Talegaon       | Talegaon       | Deccan Express      |
|        40 | Khandala       | Khandala       | Deccan Express      |
|        40 | Talegaon       | Talegaon       | Deccan Express      |
|        41 | Shivaji Nagar  | Shivaji Nagar  | Deccan Express      |
|        41 | Thane          | Thane          | Deccan Express      |
|        42 | Mumbai CSMT    | Mumbai CSMT    | Deccan Express      |
|        42 | Karjat Junction| Karjat Junction| Deccan Express      |
+-----------+----------------+----------------+---------------------+
48 rows in set (0.003 sec)
```

create view schedule as select train_status.location, train.train_name, station.station_name, time.timming from train_status join train on train_status.train_id = train.train_id join station on train_status.station_id = station.station_id join time on train_status.time_id = time.time_id order by time.timming;

```
MariaDB [train]> create view schedule as select train_status.location, train.train_name, stat
ion.station_name, time.timming from train_status join train on train_status.train_id = train.
train_id join station on train_status.station_id = station.station_id join time on train_stat
us.time_id = time.time_id order by time.timming;
Query OK, 0 rows affected (0.026 sec)

MariaDB [train]> select * from schedule;
+----------+----------------------+------------------+----------+
| location | train_name           | station_name     | timming  |
+----------+----------------------+------------------+----------+
|        1 | Intercity SF Express  | Mumbai CSMT      | 08:00:00 |
|        2 | Intercity SF Express  | Dadar Central    | 08:15:00 |
|        3 | Intercity SF Express  | Thane            | 08:30:00 |
|        7 | Intercity SF Express  | Kalyan Junction  | 08:45:00 |
|        8 | Intercity SF Express  | Neral Junction   | 09:00:00 |
|        9 | Intercity SF Express  | Karjat Junction  | 09:15:00 |
|       10 | Intercity SF Express  | Khandala         | 09:30:00 |
|       11 | Intercity SF Express  | Lonavala         | 09:45:00 |
|       12 | Intercity SF Express  | Talegaon         | 10:00:00 |
|       28 | Deccan Express        | Dadar Central    | 10:00:00 |
|       29 | Deccan Express        | Thane            | 10:15:00 |
|       13 | Intercity SF Express  | Khakdi           | 10:15:00 |
|       14 | Intercity SF Express  | Shivaji Nagar    | 10:30:00 |
|       30 | Deccan Express        | Kalyan Junction  | 10:30:00 |
|       15 | Intercity SF Express  | Pune Junction    | 10:45:00 |
|       31 | Deccan Express        | Neral Junction   | 10:45:00 |
|       27 | Intercity SF Express  | Shivaji Nagar    | 11:00:00 |
|       32 | Deccan Express        | Karjat Junction  | 11:00:00 |
|       16 | Intercity SF Express  | Mumbai CSMT      | 11:00:00 |
|       17 | Intercity SF Express  | Mumbai CSMT      | 11:15:00 |
|       33 | Deccan Express        | Khandala         | 11:15:00 |
|       26 | Intercity SF Express  | Khakdi           | 11:15:00 |
|       18 | Intercity SF Express  | Dadar Central    | 11:30:00 |
|       34 | Deccan Express        | Lonavala         | 11:30:00 |
|       25 | Intercity SF Express  | Talegaon         | 11:30:00 |
|       24 | Intercity SF Express  | Lonavala         | 12:00:00 |
|       19 | Intercity SF Express  | Thane            | 12:00:00 |
|       35 | Deccan Express        | Talegaon         | 12:00:00 |
|       36 | Deccan Express        | Khakdi           | 12:15:00 |
|       23 | Intercity SF Express  | Khandala         | 12:15:00 |
|       20 | Intercity SF Express  | Kalyan Junction  | 12:15:00 |
|       22 | Intercity SF Express  | Karjat Junction  | 12:30:00 |
|       37 | Deccan Express        | Shivaji Nagar    | 12:30:00 |
|       38 | Deccan Express        | Pune Junction    | 12:45:00 |
|       21 | Intercity SF Express  | Neral Junction   | 12:45:00 |
|       39 | Deccan Express        | Shivaji Nagar    | 13:00:00 |
|       40 | Deccan Express        | Khakdi           | 13:15:00 |
|       41 | Deccan Express        | Talegaon         | 13:30:00 |
|       42 | Deccan Express        | Lonavala         | 13:45:00 |
|       43 | Deccan Express        | Khandala         | 14:00:00 |
|       44 | Deccan Express        | Karjat Junction  | 14:15:00 |
|       45 | Deccan Express        | Neral Junction   | 14:30:00 |
|       46 | Deccan Express        | Kalyan Junction  | 14:45:00 |
|       47 | Deccan Express        | Thane            | 15:00:00 |
|       48 | Deccan Express        | Dadar Central    | 15:15:00 |
|       49 | Deccan Express        | Mumbai CSMT      | 15:30:00 |
+----------+----------------------+------------------+----------+
46 rows in set (0.003 sec)
```