Project
on
Railway Management System

CSF205 - Database Management System

Submitted By:
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Submitted to
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Thanks for your valuable guidance and kind support.

Content

Project Description(Abstract)

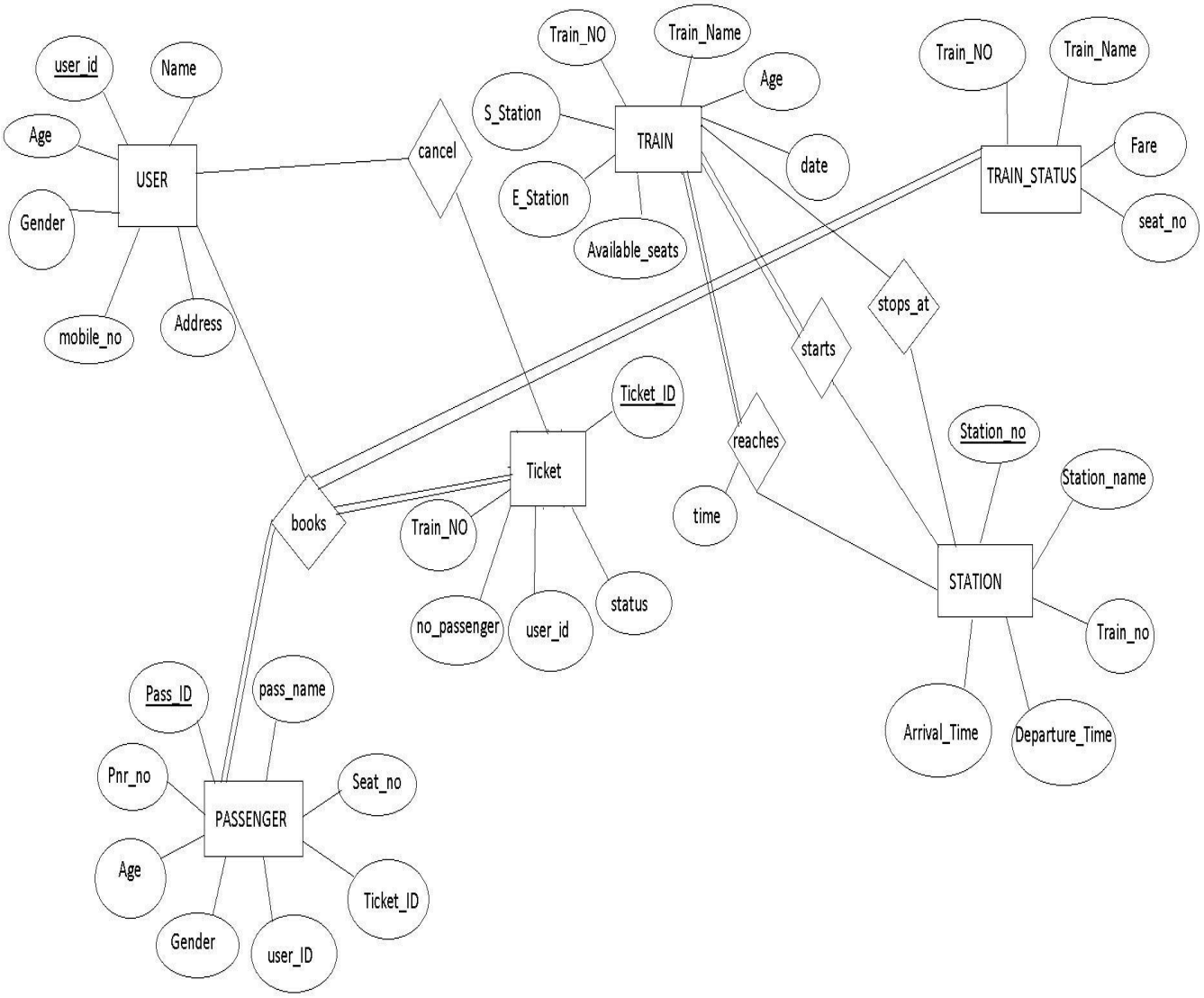
This project is about creating the database about Railway Management System. The railway management system facilitates the passengers to enquire about the trains available.

Booking and cancellation of tickets. enquire about the status of the booked ticket, etc. The aim of case study is to design and develop a database maintaining the records of different trains. Train status, and passengers. The record of train includes its number, name, whereas record of train status includes dates for which tickets are booked, total number of seats available.

Passengers can book their tickets for the train in which seats are available.
For this, passenger has to provide the desired train number.

Once the train number and booking date are validated, it is checked whether the seat is available. If yes, the ticket is booked with confirm status and corresponding ticket ID is generated which is stored along with other details of the passenger. The ticket once booked can be cancelled at anytime. For this, the passenger has to provide the ticket ID (the unique key). The ticket ID is searched and the corresponding record is deleted. With this, the first ticket with waiting status also gets confirmed.

ER DIAGRAM


user_id
Name
Age
USER
Gender
mobile_no
Address
cancel
books
Train_NO
Train_Name
Age
S_Station
TRAIN
E_Station
Available_seats
date
Train_NO
Train_Name
Fare
TRAIN_STATUS
seat_no
stops_at
starts
reaches
time
Ticket_ID
Ticket
Train_NO
no_passenger
user_id
status
Station_no
Station_name
STATION
Train_no
Arrival_Time
Departure_Time
Pass_ID
pass_name
Pnr_no
Seat_no
PASSENGER
Age
Ticket_ID
Gender
user_ID

CREATE AND INSERT SQL QUERIES

```
mysql> use railway_management_system;
Database changed
mysql> show tables;
+---------------------------------------+
| Tables_in_railway_management_system |
+---------------------------------------+
| books                                 |
| cancel                                |
| passenger                             |
| reaches                               |
| starts                                |
| station                               |
| stops_at                              |
| ticket                                |
| train                                 |
| train_status                          |
| user                                  |
+---------------------------------------+
11 rows in set (0.04 sec)
```

USER TABLE:

create table user (user_id int Primary Key,Name varchar(50), Gender varchar(20),Age int,mobile_no varchar(10), Address varchar(50));

```
mysql> desc user;
+-----------+-------------+------+-----+---------+-------+
| Field     | Type        | Null | Key | Default | Extra |
+-----------+-------------+------+-----+---------+-------+
| user_id   | int         | NO   | PRI | NULL    |       |
| Name      | varchar(50) | NO   |     | NULL    |       |
| Gender    | varchar(20) | NO   |     | NULL    |       |
| Age       | int         | YES  |     | NULL    |       |
| mobile_no | varchar(10) | YES  |     | NULL    |       |
| Address   | varchar(50) | YES  |     | NULL    |       |
+-----------+-------------+------+-----+---------+-------+
6 rows in set (0.01 sec)
```

TRAIN TABLE:

create table TRAIN (Train_no int primary key,Train_name varchar(50),S_station varchar(20),E_station varchar(20),Available_seats int,date date);

```
mysql> desc train;
+-----------------+-------------+------+-----+---------+-------+
| Field           | Type        | Null | Key | Default | Extra |
+-----------------+-------------+------+-----+---------+-------+
| Train_no        | int         | NO   | PRI | NULL    |       |
| Train_Name      | varchar(50) | NO   |     | NULL    |       |
| S_station       | varchar(20) | YES  |     | NULL    |       |
| E_station       | varchar(20) | YES  |     | NULL    |       |
| Available_seats | int         | YES  |     | NULL    |       |
| date            | date        | YES  |     | NULL    |       |
+-----------------+-------------+------+-----+---------+-------+
6 rows in set (0.01 sec)
```

STATION TABLE:

create table STATION(station_no int primary key ,Station_name varchar(50),Train_no int,Arrival_time varchar(20),Departure_time varchar(10),Foreign key(Train_no) references Train(Train_no));

```
mysql> desc station;
+----------------+-------------+------+-----+---------+-------+
| Field          | Type        | Null | Key | Default | Extra |
+----------------+-------------+------+-----+---------+-------+
| Station_no     | int         | NO   | PRI | NULL    |       |
| Station_name   | varchar(20) | YES  |     | NULL    |       |
| Train_no       | int         | YES  | MUL | NULL    |       |
| Arrival_time   | varchar(10) | YES  |     | NULL    |       |
| Departure_time | varchar(10) | YES  |     | NULL    |       |
+----------------+-------------+------+-----+---------+-------+
5 rows in set (0.00 sec)
```

TRAIN_STATUS TABLE:

create table TRAIN_STATUS (train_no int ,seat_no int,fare float, train_name varchar(50), foreign key(train_no) references Train(train_no));

```
mysql> desc train_status;
+------------+-------------+------+-----+---------+-------+
| Field      | Type        | Null | Key | Default | Extra |
+------------+-------------+------+-----+---------+-------+
| train_no   | int         | YES  | MUL | NULL    |       |
| seat_no    | int         | YES  |     | NULL    |       |
| fare       | float       | YES  |     | NULL    |       |
| train_name | varchar(50) | YES  |     | NULL    |       |
+------------+-------------+------+-----+---------+-------+
4 rows in set (0.00 sec)
```

TICKET TABLE:

create table TICKET(Ticket_id int primary key, user_id int,status char, no_passenger int, Train_no int,constraint foreign key(user_id) references USER(user_id),constraint foreign key(train_no) references TRAIN(train_no));

```
mysql> desc passenger;
+-----------+-------------+------+-----+---------+-------+
| Field     | Type        | Null | Key | Default | Extra |
+-----------+-------------+------+-----+---------+-------+
| Pass_id   | int         | NO   | PRI | NULL    |       |
| pass_name | varchar(20) | YES  |     | NULL    |       |
| Pnr_no    | varchar(10) | YES  |     | NULL    |       |
| Age       | int         | YES  |     | NULL    |       |
| Gender    | varchar(10) | YES  |     | NULL    |       |
| user_id   | int         | YES  | MUL | NULL    |       |
| Seat_no   | int         | YES  |     | NULL    |       |
| Ticket_id | int         | YES  | MUL | NULL    |       |
+-----------+-------------+------+-----+---------+-------+
8 rows in set (0.00 sec)
```

PASSENGER TABLE:

create table PASSENGERS(pass_id int primary key,pass_name varchar(20), pnr_no int, age int, gender varchar(20), user_id int,seat_no varchar(5), ticket_id int,constraint foreign key(user_id) references USER(user_id),constraint foreign key(ticket_id) references TICKET(id));

```
mysql> desc passenger;
+-----------+-------------+------+-----+---------+-------+
| Field     | Type        | Null | Key | Default | Extra |
+-----------+-------------+------+-----+---------+-------+
| Pass_id   | int         | NO   | PRI | NULL    |       |
| pass_name | varchar(20) | YES  |     | NULL    |       |
| Pnr_no    | varchar(10) | YES  |     | NULL    |       |
| Age       | int         | YES  |     | NULL    |       |
| Gender    | varchar(10) | YES  |     | NULL    |       |
| user_id   | int         | YES  | MUL | NULL    |       |
| Seat_no   | int         | YES  |     | NULL    |       |
| Ticket_id | int         | YES  | MUL | NULL    |       |
+-----------+-------------+------+-----+---------+-------+
8 rows in set (0.00 sec)
```

STARTS TABLE;

create table STARTS(train_no int primary key, station_no int, constraint foreign key(station_no) references STATION(station_no));

```
mysql> desc starts;
+------------+------+------+-----+---------+-------+
| Field      | Type | Null | Key | Default | Extra |
+------------+------+------+-----+---------+-------+
| train_no   | int  | NO   | PRI | NULL    |       |
| station_no | int  | YES  | MUL | NULL    |       |
+------------+------+------+-----+---------+-------+
2 rows in set (0.00 sec)
```

STOPS_AT TABLE:

create table STOPS_AT(train_no int, station_no int, constraint foreign key(train_no) references TRAIN(train_no),constraint foreign key(station_no) references STATION(station_no));

```
mysql> desc stops_at;
+------------+------+------+-----+---------+-------+
| Field      | Type | Null | Key | Default | Extra |
+------------+------+------+-----+---------+-------+
| train_no   | int  | YES  | MUL | NULL    |       |
| station_no | int  | YES  | MUL | NULL    |       |
+------------+------+------+-----+---------+-------+
2 rows in set (0.00 sec)
```

REACHES TABLE:

create table REACHES(train_no int,station_no int,time time,constraint foreign key(train_no) references TRAIN(train_no),constraint foreign key(station_no) references STATION(station_no));

```
mysql> desc reaches;
+------------+-------------+------+-----+---------+-------+
| Field      | Type        | Null | Key | Default | Extra |
+------------+-------------+------+-----+---------+-------+
| train_no   | int         | NO   | PRI | NULL    |       |
| station_no | int         | YES  | MUL | NULL    |       |
| time       | varchar(20) | YES  |     | NULL    |       |
+------------+-------------+------+-----+---------+-------+
3 rows in set (0.00 sec)
```

BOOKS TABLE:

create table BOOKS(user_id int,P ticket_id int,constraint foreign key(user_id) references USER(user_id),constraint foreign key(ticket_id) references TICKET(ticket_id));

```
mysql> desc books;
+-----------+------+------+-----+---------+-------+
| Field     | Type | Null | Key | Default | Extra |
+-----------+------+------+-----+---------+-------+
| user_id   | int  | YES  | MUL | NULL    |       |
| ticket_id | int  | YES  | MUL | NULL    |       |
+-----------+------+------+-----+---------+-------+
2 rows in set (0.00 sec)
```

CANCEL TICKET:

create table CANCEL(user_id int,ticket_id int, pass_id int, constraint foreign key(ticket_id) references TICKET(ticket_id),constraint foreign key(pass_id) references PASSENGERS(pass_id),constraint foreign key(user_id) references USER(user_id));

```
mysql> desc cancel;
+-----------+------+------+-----+---------+-------+
| Field     | Type | Null | Key | Default | Extra |
+-----------+------+------+-----+---------+-------+
| user_id   | int  | YES  | MUL | NULL    |       |
| ticket_id | int  | YES  | MUL | NULL    |       |
| pass_id   | int  | YES  | MUL | NULL    |       |
+-----------+------+------+-----+---------+-------+
3 rows in set (0.00 sec)
```

INSERT VALUES IN USER TABLE:

insert into user values(1,”Rakesh Singh”,”M”,25,”7085953455”,”Rudrapur”),

(2,”Mohit Arya”,”M”,20,”9876543210”,”Dehradun”), (3,”Ritika Yadav”,”F”,19,”7894561230”,”Bilaspur”),

(4,”Pragati Malik”,”f”,18,”9784561230”,”Rampur”), (5,”Ayush Tiwari”,”m”,22,”8794561230”,”Gonda”);

```
mysql> select * from user
    -> ;
+---------+---------------+--------+------+------------+----------+
| user_id | Name          | Gender | Age  | mobile_no  | Address  |
+---------+---------------+--------+------+------------+----------+
|       1 | Rakesh Singh  | M      |   25 | 7085953455 | Rudrapur |
|       2 | Mohit Arya    | M      |   20 | 9876543210 | Dehradun |
|       3 | Ritika Yadav  | F      |   19 | 7894561230 | Bilaspur |
|       4 | Pragati Malik | F      |   18 | 9784561230 | Rampur   |
|       5 | Ayush Tiwari  | M      |   22 | 8794561230 | Gonda    |
+---------+---------------+--------+------+------------+----------+
5 rows in set (0.04 sec)
```

INSERT VALUES IN TRAIN TABLE:

insert into TRAIN values (130,'Mumbai Express','mumbai','pune',211,'2022-04-11'),

(416,'Andra Pradesh Express','New Delhi','Tamil Nadu',561,'2022-04-10'),

(523,'doon Express','Dehradun','Khatgodam',212,'2022-04-09'),

(723,’Andra Pradesh Express’,’Hydrabad Deacn’,’Delhi’,528,’2022-04-12’),

(724,”’gonda express’,’gonda’,’Dehradun’,205,’2022-04-16’);

```
mysql> select * from train;
+----------+----------------------+----------------+-----------+----------------+------------+
| Train_no | Train_Name           | S_station      | E_station | Available_seats | date       |
+----------+----------------------+----------------+-----------+----------------+------------+
|      130 | Mumbai Express       | Mumbai         | Pune      |             211 | 2022-04-11 |
|      416 | Andra Pradesh Express | New Delhi      | Tamil Nadu |             561 | 2022-04-10 |
|      523 | Doon Express         | Dehradun       | Khatgodam |             212 | 2022-04-09 |
|      723 | Andra Pradesh Express | Hyderabad Decan | Delhi     |             528 | 2022-04-12 |
|      724 | Gonda Express        | Gonda          | Dehradun  |             205 | 2022-04-16 |
+----------+----------------------+----------------+-----------+----------------+------------+
5 rows in set (0.03 sec)
```

INSERT VALUES IN STATION TABLE:

insert into STATION values (3001,'Hyderabad Decan',723,'8:00 PM',’8:10 PM’),

(6001,'New Delhi',130,'3:00 PM',’3:15 PM’), (7001,'Dehradun',523,'5:00 PM',’5:15 PM’),

(8001,'Gonda',724,'6:00 PM',’6:05 PM’), (9001,'Mumbai',130,'12:10 PM',’12:15 PM’);

```
mysql> select * from station;
+------------+------------------+----------+--------------+----------------+
| Station_no | Station_name     | Train_no | Arrival_time | Departure_time |
+------------+------------------+----------+--------------+----------------+
|       3001 | Hyderabad Deccan |      723 | 8:00 PM      | 8:10 PM        |
|       6001 | New Delhi        |      130 | 3:00 PM      | 3:15 PM        |
|       7001 | Dehradun         |      523 | 5:00 PM      | 5:15 PM        |
|       8001 | Gonda            |      724 | 6:00 AM      | 6:05 AM        |
|       9001 | Mumbai           |      130 | 12:10 PM     | 12:15 PM       |
+------------+------------------+----------+--------------+----------------+
5 rows in set (0.02 sec)
```

INSERT VALUES IN TRAIN_STATUS TABLE:

insert into TRAIN_STATUS values(523,81,150,’Doon Express’),

(523,4,150,’Doon Express’), (130,10,75,’Mumbai Express’),

(130,67,75,’Mumbai Express’), (130,56,75,’Mumbai Express’),

(130,70,75,’Mumbai Express’), (723,42,750,’Andra Pradesh Express’),

(723,20,750,’Andra pradesh Express’), (723,87,750,’Andra Pradesh Express’),

(724,55,220,’Gonda Express’), (416,34,880,’Andra pradesh Express’);

```
mysql> select * from train_status;
+----------+---------+------+-----------------------+
| train_no | seat_no | fare | train_name            |
+----------+---------+------+-----------------------+
|      523 |      81 |  150 | Doon Express          |
|      523 |       4 |  150 | Doon Express          |
|      130 |      10 |   75 | Mumbai Express        |
|      130 |      67 |   75 | Mumbai Express        |
|      130 |      56 |   75 | Mumbai Express        |
|      130 |      70 |   75 | Mumbai Express        |
|      723 |      42 |  750 | Andra Pradesh Express |
|      723 |      20 |  750 | Andra Pradesh Express |
|      723 |      87 |  750 | Andra Pradesh Express |
|      724 |      55 |  220 | Gonda Express         |
|      416 |      34 |  880 | Andra Pradesh Express |
+----------+---------+------+-----------------------+
11 rows in set (0.05 sec)
```

INSERT VALUES IN TICKET TABLE:

insert into TICKET values (101,4,2,523,”confirmed”), (122,1,1,416,”waiting”), (143,2,4,138,”confirmed”), (152,3,3,723,”confirmed”), (252,5,1,724,”confirmed”);

```
mysql> select * from ticket;
+-----------+---------+--------------+----------+-----------+
| Ticket_id | User_id | no_passenger | Train_no | Status    |
+-----------+---------+--------------+----------+-----------+
|       101 |       4 |            2 |      523 | Confirmed |
|       122 |       1 |            1 |      416 | Waiting   |
|       143 |       2 |            4 |      130 | Confirmed |
|       152 |       3 |            3 |      723 | Confirmed |
|       252 |       5 |            1 |      724 | Confirmed |
+-----------+---------+--------------+----------+-----------+
5 rows in set (0.06 sec)
```

INSERT VALUES IN PASSENGER TABLE:

insert into PASSENGERS values (66,”Rani Mukharji”,663345,'F',3,42 ,152), (70,”Dharm Pratap”,111222,'M',3,20 ,152), (80,”Mohit Chikara”,693693,'M',5,55 ,252), (100,”Miland Gaba”,007878,'M',2,10 ,143), (111,”Sikha Pant”,456789,'F',2,67 ,143), (114,”Neha Kakkar”,754484,'F',3,87 ,152), (121,”Mohit singh”,987658,'M',1,34 ,122), (130,”Nitin uppal”,908754,'M',4,81 ,101), (165,”Rakesh singh”,567324,'M',4,4 ,101), (178,”Rohit sharma”,670987,'M',2,56,143), (191,”Neha Aggrawal”,342134,'F',2,70 ,143);

```
mysql> select * from passenger;
+---------+--------------+--------+------+--------+---------+---------+-----------+
| Pass_id | pass_name    | Pnr_no | Age  | Gender | user_id | Seat_no | Ticket_id |
+---------+--------------+--------+------+--------+---------+---------+-----------+
|      66 | Rani Mukharji | 663345 |   44 | F      |       3 |      42 |       152 |
|      70 | Dharm pratap  | 111222 |   19 | M      |       3 |      20 |       152 |
|      80 | Mohit Chikara | 693693 |   30 | M      |       5 |      55 |       252 |
|     100 | Milland Gaba  | 007878 |   27 | M      |       2 |      10 |       143 |
|     111 | Sikha Pant    | 456789 |   18 | F      |       2 |      67 |       143 |
|     114 | Neha Kakkar   | 754484 |   25 | F      |       3 |      87 |       152 |
|     121 | Mohit Singh   | 987658 |   23 | M      |       1 |      34 |       122 |
|     130 | Nitin Uppal   | 908745 |   19 | M      |       4 |      81 |       101 |
|     165 | Rakesh Singh  | 567324 |   34 | M      |       4 |       4 |       101 |
|     178 | Rohit Sharma  | 670987 |   45 | M      |       2 |      56 |       143 |
|     191 | Neha Aggrawal | 342134 |   24 | F      |       2 |      70 |       143 |
+---------+--------------+--------+------+--------+---------+---------+-----------+
11 rows in set (0.02 sec)
```

INSERT VALUES IN STARTS TABLE:

insert into STARTS values (723,3001), (523,7001);

```
mysql> select * from starts;
+----------+------------+
| train_no | station_no |
+----------+------------+
|      723 |       3001 |
|      523 |       7001 |
|      724 |       8001 |
|      130 |       9001 |
+----------+------------+
4 rows in set (0.02 sec)
```

INSERT VALUES IN STOPS_AT TABLE:

insert into STOPS_AT values (130,9001), (724,8001), (523,7001), (723,3001);

```
mysql> select * from stops_at;
+----------+------------+
| train_no | station_no |
+----------+------------+
|      130 |       9001 |
|      724 |       8001 |
|      523 |       7001 |
|      723 |       3001 |
+----------+------------+
4 rows in set (0.01 sec)
```

INSERT VALUES IN REACHES TABLE:

insert into REACHES values (130,9001,'12:10 Pm'),

(523,7001,'5:00 Pm'), (723,3001,'8:00 Pm'), (724,8001,'6:00 Pm');

```
mysql> select * from reaches;
+----------+------------+----------+
| train_no | station_no | time     |
+----------+------------+----------+
|      130 |       9001 | 12:10 PM |
|      523 |       7001 | 5:00 PM  |
|      723 |       3001 | 8:00 PM  |
|      724 |       8001 | 6:00 PM  |
+----------+------------+----------+
4 rows in set (0.01 sec)
```

INSERT VALUES IN BOOKS TABLE:

insert into BOOKS values (4,101),(1,122), (2,143),(3,152), (5,252);

```
mysql> select * from books;
+---------+-----------+
| user_id | ticket_id |
+---------+-----------+
|       4 |       101 |
|       1 |       122 |
|       2 |       143 |
|       3 |       152 |
|       5 |       252 |
+---------+-----------+
5 rows in set (0.01 sec)
```

INSERT VALUES IN CANCEL TABLE:

insert into CANCEL values (3,152,66), (1,122,121), (2,143,191);

```
mysql> select * from cancel;
+---------+-----------+---------+
| user_id | ticket_id | pass_id |
+---------+-----------+---------+
|       3 |       152 |      66 |
|       1 |       122 |     121 |
|       2 |       143 |     191 |
+---------+-----------+---------+
3 rows in set (0.05 sec)
```

QUERY PERFORMED

1 . print user id and Name of all those user who booked tickets for ‘Andra Pradesh Express’.

```
mysql> select u.user_id,u.name from user u,train t,ticket tc where u.user_id=tc.user_id and t.train_no=tc.trai
n_no and t.train_name like 'Andra Pradesh Express';
+---------+-------------+
| user_id | name        |
+---------+-------------+
|       1 | Rakesh Singh |
|       3 | Ritika Yadav |
+---------+-------------+
2 rows in set (0.00 sec)
```

2. print details of passengers travelling under ticket number ‘143’.

```
mysql> select * from passenger where ticket_id like 143;
+----------+---------------+---------+------+--------+---------+---------+-----------+
| Pass_id  | pass_name     | Pnr_no  | Age  | Gender | user_id | Seat_no | Ticket_id |
+----------+---------------+---------+------+--------+---------+---------+-----------+
|      100 | Milland Gaba  | 007878  |   27 | M      |       2 |      10 |       143 |
|      111 | Sikha Pant    | 456789  |   18 | F      |       2 |      67 |       143 |
|      178 | Rohit Sharma  | 670987  |   45 | M      |       2 |      56 |       143 |
|      191 | Neha Aggrawal | 342134  |   24 | F      |       2 |      70 |       143 |
+----------+---------------+---------+------+--------+---------+---------+-----------+
4 rows in set (0.00 sec)
```

3. Display all those train numbers which reach station number ‘523’.

```
mysql> select t.* from train t,station s,reaches r where t.train_no=r.train_no and r.station_no=s.station_no a
nd s.station_name like 'dehradun';
+----------+-------------+-----------+-----------+----------------+------------+
| Train_no | Train_Name  | S_station | E_station | Available_seats | date       |
+----------+-------------+-----------+-----------+----------------+------------+
|      523 | Doon Express | Dehradun  | Khatgodam |            212 | 2022-04-09 |
+----------+-------------+-----------+-----------+----------------+------------+
1 row in set (0.00 sec)
```

4. Display time at which train number---- reaches station number-----.

```
mysql> select r.*,s.station_name from reaches r,station s where r.station_no=s.station_no;
+----------+------------+----------+------------------+
| train_no | station_no | time     | station_name     |
+----------+------------+----------+------------------+
|      130 |       9001 | 12:10 PM | Mumbai           |
|      523 |       7001 | 5:00 PM  | Dehradun         |
|      723 |       3001 | 8:00 PM  | Hyderabad Deccan |
|      724 |       8001 | 6:00 PM  | Gonda            |
+----------+------------+----------+------------------+
4 rows in set (0.00 sec)
```

5. Display details of all thise users who cancled tickets for train number----.

```
mysql> select u.* from user u,cancel c,ticket t where c.user_id=u.user_id and c.ticket_id=t.ticket_id ;
+---------+-------------+--------+------+------------+----------+
| user_id | Name        | Gender | Age  | mobile_no  | Address  |
+---------+-------------+--------+------+------------+----------+
|       3 | Ritika Yadav | F      |   19 | 7894561230 | Bilaspur |
|       1 | Rakesh Singh | M      |   25 | 7085953455 | Rudrapur |
|       2 | Mohit Arya   | M      |   20 | 9876543210 | Dehradun |
+---------+-------------+--------+------+------------+----------+
3 rows in set (0.00 sec)
```

6. Display the train number with increasing order of the fare--.

```
mysql> select ts.train_no,ts.fare,t.train_name from train_status ts,train t where t.train_no=ts.train_no order
 by fare asc;
+----------+------+----------------------+
| train_no | fare | train_name           |
+----------+------+----------------------+
|      130 |   75 | Mumbai Express       |
|      130 |   75 | Mumbai Express       |
|      130 |   75 | Mumbai Express       |
|      130 |   75 | Mumbai Express       |
|      523 |  150 | Doon Express         |
|      523 |  150 | Doon Express         |
|      724 |  220 | Gonda Express        |
|      723 |  750 | Andra Pradesh Express |
|      723 |  750 | Andra Pradesh Express |
|      723 |  750 | Andra Pradesh Express |
|      416 |  880 | Andra Pradesh Express |
+----------+------+----------------------+
11 rows in set (0.00 sec)
```

7. Display passenger details for train ‘Doon Express’.

```
mysql> select p.* from passenger p,train t,ticket tc where tc.train_no=t.train_no and tc.ticket_id=p.ticket_id
 and t.train_name like 'doon express';
+---------+-------------+--------+------+--------+---------+---------+-----------+
| Pass_id | pass_name   | Pnr_no | Age  | Gender | user_id | Seat_no | Ticket_id |
+---------+-------------+--------+------+--------+---------+---------+-----------+
|     130 | Nitin Uppal | 908745 |   19 | M      |       4 |      81 |       101 |
|     165 | Rakesh Singh | 567324 |   34 | M      |       4 |       4 |       101 |
+---------+-------------+--------+------+--------+---------+---------+-----------+
2 rows in set (0.00 sec)
```

8. Display the details of all those passengers whose status is confirmed .

```
mysql> select t.* from ticket t where t.status like 'confirmed';
+-----------+---------+--------------+----------+-----------+
| Ticket_id | User_id | no_passenger | Train_no | Status    |
+-----------+---------+--------------+----------+-----------+
|       101 |       4 |            2 |      523 | Confirmed |
|       143 |       2 |            4 |      130 | Confirmed |
|       152 |       3 |            3 |      723 | Confirmed |
|       252 |       5 |            1 |      724 | Confirmed |
+-----------+---------+--------------+----------+-----------+
4 rows in set (0.00 sec)
```

9. Display the details of all those passengers whose status is confirmed for train number ‘130’.

```
mysql> select t.* from ticket t where t.status like 'confirmed' and t.train_no=130;
+----------+---------+-------------+----------+-----------+
| Ticket_id | User_id | no_passenger | Train_no | Status    |
+----------+---------+-------------+----------+-----------+
|       143 |       2 |           4 |      130 | Confirmed |
+----------+---------+-------------+----------+-----------+
1 row in set (0.00 sec)
```

10. Display details of train number with passenger name for fare greater than 500.

```
mysql> select t.*,p.pass_name ,p.ticket_id from train_status t,passenger p where t.seat_no=p.seat_no and t.fare>500;
+----------+---------+------+----------------------+--------------+-----------+
| train_no | seat_no | fare | train_name           | pass_name    | ticket_id |
+----------+---------+------+----------------------+--------------+-----------+
|      723 |      42 |  750 | Andra Pradesh Express | Rani Mukharji |       152 |
|      723 |      20 |  750 | Andra Pradesh Express | Dharm pratap  |       152 |
|      723 |      87 |  750 | Andra Pradesh Express | Neha Kakkar   |       152 |
|      416 |      34 |  880 | Andra Pradesh Express | Mohit Singh   |       122 |
+----------+---------+------+----------------------+--------------+-----------+
4 rows in set (0.00 sec)
```

11. Display detalis of train with passenger name and ticket id.

```
mysql> select t.*,p.pass_name ,p.ticket_id from train_status t,passenger p where t.seat_no=p.seat_no;
+----------+---------+------+----------------------+--------------+-----------+
| train_no | seat_no | fare | train_name           | pass_name    | ticket_id |
+----------+---------+------+----------------------+--------------+-----------+
|      723 |      42 |  750 | Andra Pradesh Express | Rani Mukharji |       152 |
|      723 |      20 |  750 | Andra Pradesh Express | Dharm pratap  |       152 |
|      724 |      55 |  220 | Gonda Express        | Mohit Chikara |       252 |
|      130 |      10 |   75 | Mumbai Express       | Milland Gaba  |       143 |
|      130 |      67 |   75 | Mumbai Express       | Sikha Pant    |       143 |
|      723 |      87 |  750 | Andra Pradesh Express | Neha Kakkar   |       152 |
|      416 |      34 |  880 | Andra Pradesh Express | Mohit Singh   |       122 |
|      523 |      81 |  150 | Doon Express         | Nitin Uppal   |       101 |
|      523 |       4 |  150 | Doon Express         | Rakesh Singh  |       101 |
|      130 |      56 |   75 | Mumbai Express       | Rohit Sharma  |       143 |
|      130 |      70 |   75 | Mumbai Express       | Neha Aggrawal |       143 |
+----------+---------+------+----------------------+--------------+-----------+
11 rows in set (0.00 sec)
```

12. Display Max, Min and AVG fare of trains.

```
mysql> select max(fare),min(fare),avg(fare) from train_status;
+-----------+-----------+--------------------+
| max(fare) | min(fare) | avg(fare)          |
+-----------+-----------+--------------------+
|       880 |        75 | 359.09090909090907 |
+-----------+-----------+--------------------+
1 row in set (0.04 sec)
```

13. Display Name of trains

```
mysql> select distinct train_name from train;
+-------------------------+
| train_name              |
+-------------------------+
| Mumbai Express          |
| Andra Pradesh Express   |
| Doon Express            |
| Gonda Express           |
+-------------------------+
4 rows in set (0.01 sec)
```

14. Display train number and station name where arrival time is ‘5:00 PM’.

```
mysql> select train_no ,station_name from station where arrival_time='5:00 PM';
+----------+--------------+
| train_no | station_name |
+----------+--------------+
|      523 | Dehradun     |
+----------+--------------+
1 row in set (0.00 sec)
```

15. Display the Date, train name , train number and available seats where train start from ‘mumbai’ and end at ‘pune’.

```
mysql> select date,train_no, train_name,available_seats  from train where s_station='mumbai' and e_station='pune';
+------------+----------+---------------+-----------------+
| date       | train_no | train_name    | available_seats |
+------------+----------+---------------+-----------------+
| 2022-04-11 |      130 | Mumbai Express |             211 |
+------------+----------+---------------+-----------------+
1 row in set (0.00 sec)
```

16. Display total number of booked seats in mumbai express.

```
mysql> select count(no_passenger)  as 'booked_seat_in_mumbai' from ticket where train_no=130;
+----------------------+
| booked_seat_in_mumbai |
+----------------------+
|                    1 |
+----------------------+
1 row in set (0.01 sec)
```

CONCLUSION

It was a wonderful and learning experience for us while working on this project .this project took us through the various faces of project development and gave us real insight into the world of railway database management system.

The joy of work and the thrill involved while tackling the various problems and challenges gave us a feel of developers industry.

We enjoyed each and every bit of work we had put into this project.

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