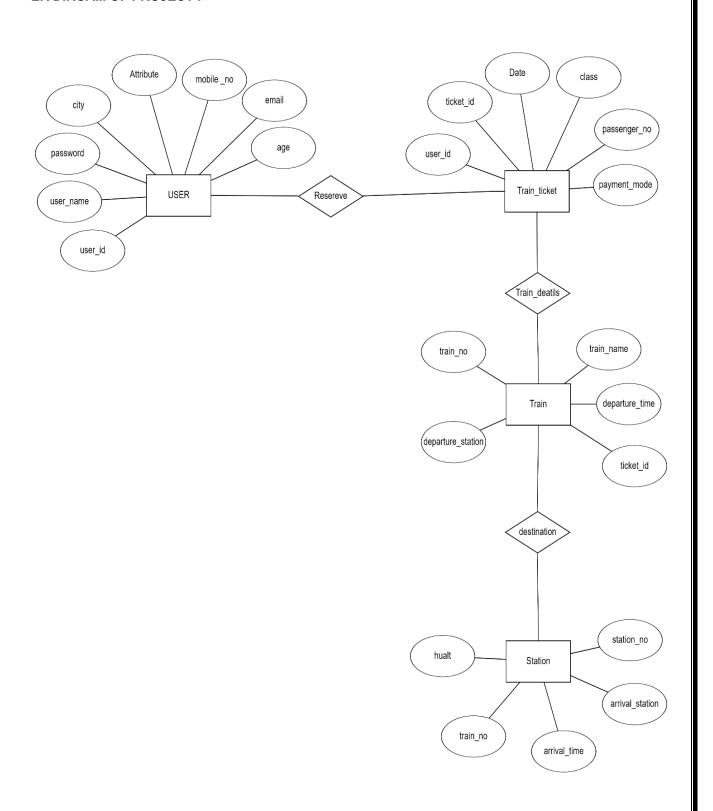


# INTRODUCTION

The main purpose of maintaining database for Railway Reservation System is to reduce the manual errors involved in the booking and cancelling of tickets and make it convenient for the customers and providers to maintain the data about their customers and also about the seats available at them. Due to automation many loopholes that exist in the manual maintenance of the records can be removed. The speed of obtaining and processing the data will be fast. For future expansion the proposed system can be web enabled so that clients can make various enquiries about trains between stations. Due to this, sometimes a lot of problems occur and they are facing many disputes with customers.

Database is an organized collection of data. The data is typically organized to model aspects of reality in a way that supports processes requiring information. A DBMS makes it possible for end users to create, read, update and delete data in a database. The DBMS essentially serves as an interface between the database and end users or application programs, ensuring that data is consistently organized and remains easily accessible. The DBMS manages three important things: the data, the database engine that allows data to be accessed, locked and modified and the database schema, which defines the database's logical structure. These three foundational elements help provide concurrency, security, data integrity and uniform administration procedures. The DBMS can offer both logical and physical data independence. That means it can protect users and applications from needing to know where data is stored or having to be concerned about changes to the physical structure of data.

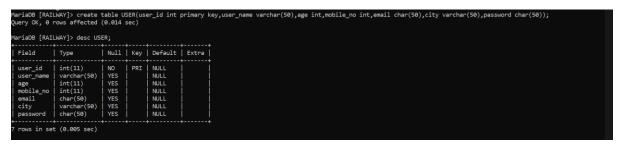
# **ER DIRGAM OF PROJECT:-**



#### 1. Create table USER :-

### Command:-

CREATE TABLE 'user' ( 'user\_id' int(11) NOT NULL, 'user\_name' varchar(50) DEFAULT NULL, 'age' int(11) DEFAULT NULL, 'mobile\_no' int(11) DEFAULT NULL, 'email' char(50) DEFAULT NULL, 'city' varchar(50) DEFAULT NULL, 'password' char(50) DEFAULT NULL, PRIMARY KEY ('user\_id');



### 2. Create table TRAIN\_TICKET :-

### Command:-

CREATE TABLE `user` (`user\_id` int(11) NOT NULL, `user\_name` varchar(50) DEFAULT NULL, `age` int(11) DEFAULT NULL, `mobile\_no` int(11) DEFAULT NULL, `email` char(50) DEFAULT NULL, `city` varchar(50) DEFAULT NULL, `password` char(50) DEFAULT NULL, PRIMARY KEY (`user\_id`);

### 3. Create table TRAIN:

### Command:-

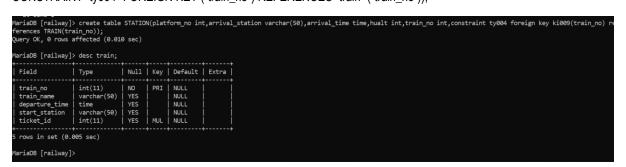
CREATE TABLE `train` (`train\_no` int(11) NOT NULL, `train\_name` varchar(50) DEFAULT NULL, `departure\_time` time DEFAULT NULL, `start\_station` varchar(50) DEFAULT NULL, `ticket\_id` int(11) DEFAULT NULL, PRIMARY KEY (`train\_no`), KEY `ad03` (`ticket\_id`), CONSTRAINT `ad03` FOREIGN KEY (`ticket\_id`) REFERENCES `train\_ticket` ('ticket\_id'));



### 4. Create table STATION:-

### Command:-

CREATE TABLE `station` (`platform\_no` int(11) DEFAULT NULL, `arrival\_station` varchar(50) DEFAULT NULL, `arrival\_time` time DEFAULT NULL, `hualt` int(11) DEFAULT NULL, `train\_no` int(11) DEFAULT NULL, KEY `ty004` (`train\_no`), CONSTRAINT `ty004` FOREIGN KEY (`train\_no`) REFERENCES `train` (`train\_no`));



## 5. Select \* from USERS :-

	user_name	age	mobile_no	email	city	password
1101		42	2147483647	vijay@gmail.com	kalyan	1234@1
1102	satish_pradhan	23	2147483647	satish@gmail.com	kalyan	3234@8
1103	mohit chouhan	27	2147483647	mohit@gmail.com	thane	3364@3
1104	pratham gaikwad	32	2147483647	pratham@gmail.com	mumbai	3234@1
1105	nitin jagtap	28	2147483647	nitin@gmail.com	dombivli	3334@1
1106	jatin_raj	32	2147483647	mayur@gmail.com	airoli	3234@7
1107	om_patil	42	2147483647	om@gmail.com	panvel	3335@0
1108	kartik_aryan	52	2147483647	kartik@gmail.ckartik	mumbai	8335@0
1109	amit_trivedi	48	2147483647	amit@gmail.com	amit_trivedi	2335@2
1110	manish_pal	42	2147483647	manish@gmail.com	thane	1335@1
1111	tapan sharma	49	2147483647	tapan@gmail.com	mumbai	9355@0
1112	ruh_jadhav	22	2147483647	mrunal@gmail.com	thane	9335@0
1113	rohit_kamble	32	2147483647	rohit@gmail.com	thane	3338@0
1114	harish_jagtap	41	2147483647	harish@gmail.com	mumbai	3885@0
1115	nayan_dutta	52	2090806083	nayan@gmail.com	kolkata	0335@10
1116	jayesh_kumar	32	2147483647	jayesh@gmail.com	mubai	3335@0
1117	komal_pawar	44	2147483647	komal@gmail.com	panvel	7735@0
1118	snehal_kamat	33	2147483647	sehal@gmail.com	thane	8835@0
1119	yogesh	62	2147483647	yogesh@gmail.com	panvel	5335@5
1120	kajal_gupta	22	2147483647	kajal@gmail.com	dadar	3835@0
1121	sunil_jadhav	42	2147483647	sunil@gmail.com	panvel	1335@1
1122	tejas_lokhande	38	2147483647	tejas@gmail.com	kasara	3675@7
1123	mahesh_rajput	42	2147483647	mahesh@gmail.com	thane	5555@5
1124	isha_khan	22	2147483647	isha@gmail.com	panvel	3311@11
1125	pravin sawant	52	2147483647	pravin@gmail.com	mumbai	7335@0

# 6. Select \* from TRAIN\_TICKET :-

```
0230617',28,'debit_card',1120),(121,'20231107',29,'credit_card',1121),(122,'20231206',70,'UPI',1122),(123,'20231108',30,'credit_card',1123),(124,'20230822',90,'UPI',1124),(
125,'20230306',39,'UPI',1125),
Records: 14 Duplicates: 0 Newrings: 0

Records: 15 Duplicates: 0 Newrings: 0

Records: 16 Duplicates: 0 Newrings: 0

Records:
```

# 7. Select \* from TRAIN :-

ain_no	train_name	departure_time	start_station	ticket_id
		+		
4001	rajdhani_express	09:27:03	mumbai	101
4002	bharat_express	11:30:00	mumbai	102
4003	decan_queen	11:30:00	pune	103
4004	janshtapdi_express	22:30:00	gujrat	104
4005	chennai_express	11:20:00	chennai	105
4006	ajanta_express	21:30:00	auruangabad	106
4007	bharat_express	11:30:00	mumbai	107
4008	uday_express	11:30:00	bangluru	108
4009	yuva_express	24:30:00	delhi	109
4010	bharat_express	11:30:00	mumbai	102
4011	garib_rath	11:30:00	hydrabad	110
4012	maharaja_express	12:30:00	mumbai	111
4013	hawda_express	11:30:00	mumbai	113
4014	janshtapdi_express	21:30:00	surat	114
4015	rajdhani_express	11:30:00	kolhapur	115
4016	hawda_express	12:30:00	mumbai	116
4017	bharat_express	23:30:00	pune	117
4018	garib_rath	11:30:00	surat	118
4019	rajhdhani_express	11:30:00	solapur	119
4020	bharat_express	11:30:00	mumbai	120
4021	bharat_express	11:30:00	mumbai	121
4022	bharat_express	11:30:00	mumbai	122
4023	bharat_express	11:30:00	mumbai	123
4024	bharat_express	11:30:00	mumbai	124
4025	yuva_express	12:30:08	surat	125

# 8. Select \* from STATION :-

	arrival_station			
1	kolhapur	16:30:00	6	4001
3	vadodra	16:30:00	3	4002
4	mumbai	13:30:00	3	4003
4	mumbai	08:30:00	8	4004
4	mumbai	09:30:00	j 5	4005
5	mumbai	11:30:00	12	4006
5	nashik	09:30:00	2	4007
3	chennai	08:30:00	1	4008
1	nashik	14:30:00	1	4008
3	surat	12:30:00	6	4010
1	mumbai	12:30:00	6	4011
3	jaipur	13:30:00	3	4012
6	elahabad	16:30:00	3	4013
4	elahabad	07:30:00	3	4014
4	mumbai	11:30:00	3	4015
7	aurangabad	21:30:00	2	4016
7	mumbai	24:30:00	2	4017
5	mumbai	13:30:00	1	4018
5	mumbai	13:50:00	4	4019
5	pune	24:00:00	4	4020
5	pune	24:00:00	4	4021
5	pune	24:00:00	4	4022
5	pune	24:00:00	4	4023
5	pune	24:00:00	4	4024
6	mumbai	08:00:00	3	4025

7

# **SUBQUERIES**

1. Show user\_name from user where city is 'kalyan' :-

### Command:-

select user\_name from USER where user\_id in(select user\_id from USER where city='kalyan');

2. Show train\_no from train where train\_name is 'bharat express' :-

### Command:-

select \* from train where train\_no in(select train\_no from train where train\_name='bharat\_express');

3. Show train\_name from train where platform\_no is '5' :-

### Command:-

select train\_name from train where ticket\_id in(select ticket\_id from train where train\_no in(select train\_no from station where platform\_no=5));

4. Show train\_name from train where arrival\_station is 'pune' :-

## Command:-

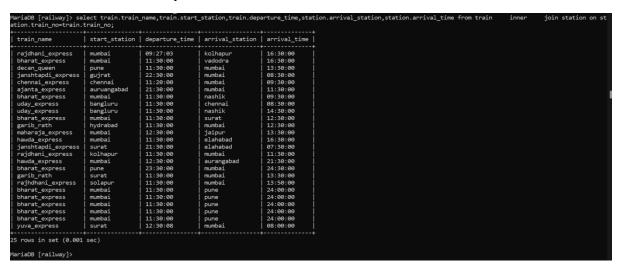
select train\_name from train where ticket\_id in(select ticket\_id from train where train\_no in(select train\_no from station where arrival\_station='pune'));

# **JOINS**

1. Display train\_name,train\_start station,departure\_time and station.arrival\_station, arrival\_time in joins query at one table:-

## Command :-

select train.train\_name,train.start\_station,train.departure\_time,station.arrival\_station,station.arrival\_time from train inner join station on station.train\_no=train.train\_no;



2. Display how many reserve passengers in train at which time with the help of joins?

### Command:-

select train\_ticket.passenger\_no,train.train\_name,train.departure\_time from train\_ticket left join train on train\_train\_no=train.train\_no;

## 3. Display train reservation date and arrival timings with the help of joins :-

### Command:-

Select train\_ticket.date,train.train\_name,train.departure\_time from train\_ticket right join train on train.train\_no=train.train\_no;