



Database Management System Project
Topic: Railway Reservation System
Subject code: CS593

Group no. - 05

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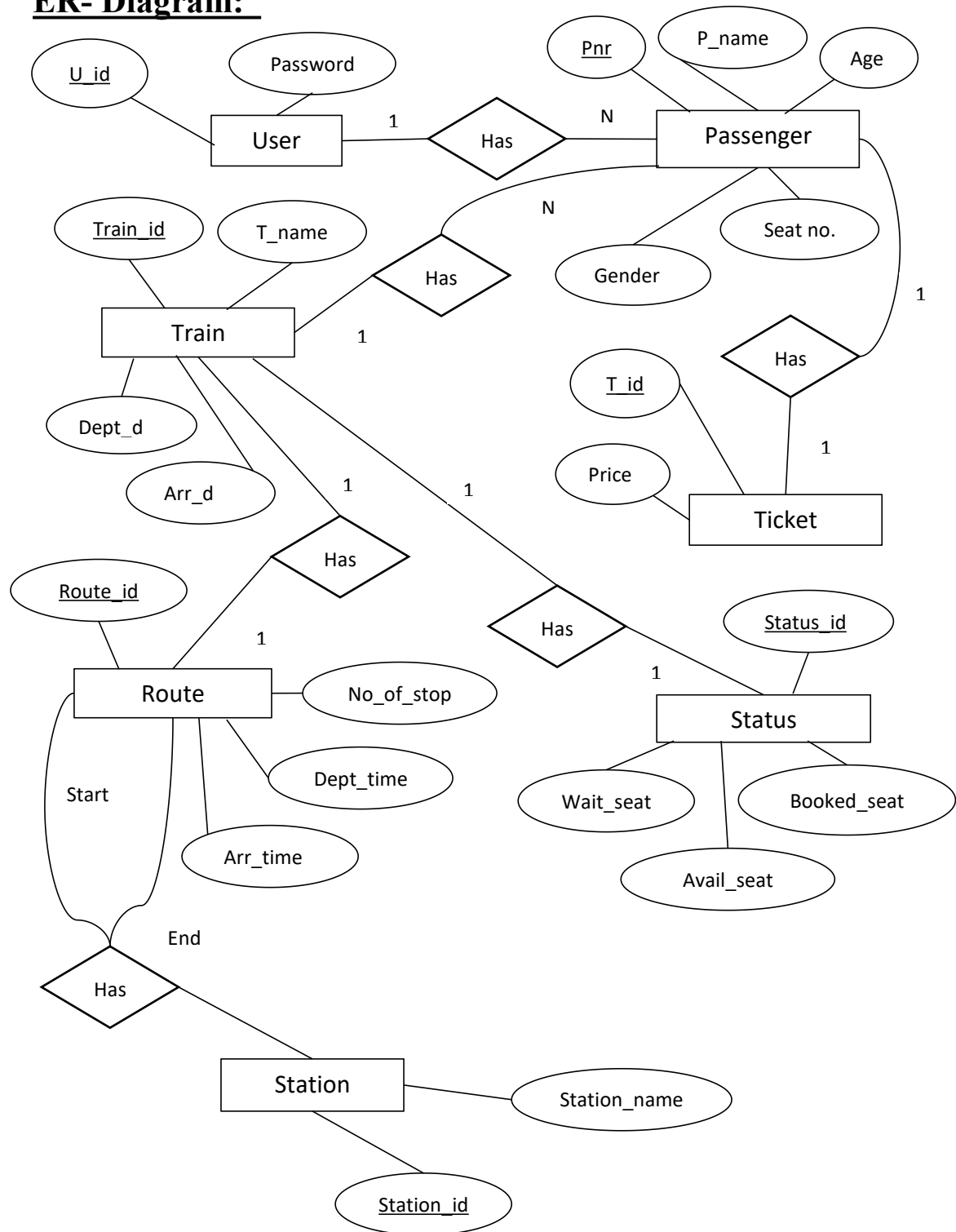
Introduction:

Railway Reservation System:

A railway reservation system is required by a booking platform where railway tickets are booked. It must have all information regarding the trains and the passengers. As for the trains, it must include data regarding the status of the train, the route of the train and also the information about the stations. As for the passengers it should have the details of the passengers and details of the ticket. Passengers should be booked under certain users who have access to the database.

This is one of the most widely used system that requires a powerful database acting in the background. Under a reservation system there are thousands of trains which are boarded by millions of passengers. If not stored under a database through a properly programmed GUI, keeping track of trains and passengers is quite impossible. Thus, a database is strongly required in order to add, manipulate and delete passenger and train details effectively and efficiently.

ER- Diagram:



Sample SQL queries:

Creations:

● Users

```
create table users( user_id varchar2(20) primary key,  
                    password varchar2(20) not null  
                    );
```

```
alter table users add constraint chk1 check (lengthb(password)>=8);
```

```
SQL> desc users;  
Name                               Null?    Type  
-----  
USER_ID                            NOT NULL VARCHAR2(20)  
PASSWORD                           NOT NULL VARCHAR2(20)
```

● Passenger

```
create table passenger(   pnr varchar(8) primary key,  
                          p_name varchar2(30),  
                          age number,  
                          gender varchar(10),  
                          seat_no number,  
                          reserve_stat varchar2(10),  
                          u_id varchar2(20) not null references users(user_id),  
                          status_id varchar2(10) not null,  
                          train_id varchar2(10) not null);
```

```
SQL> desc passenger;  
Name                               Null?    Type  
-----  
PNR                                NOT NULL VARCHAR2(8)  
P_NAME                             VARCHAR2(30)  
AGE                                NUMBER  
GENDER                             VARCHAR2(10)  
SEAT_NO                             NUMBER  
RESERVE_STAT                        VARCHAR2(10)  
U_ID                                NOT NULL VARCHAR2(20)  
STATUS_ID                           NOT NULL VARCHAR2(10)  
TRAIN_ID                           NOT NULL VARCHAR2(10)
```

● Train Status

```
create table train_stat(tstatus_id varchar2(10) primary key,  
                        wait_seat number,  
                        avail_seat number,  
                        booked_seat number,  
                        train_id varchar2(10) not null);
```

```
SQL> desc train_stat;  
Name                                         Null?    Type  
-----  
TSTATUS_ID                                NOT NULL VARCHAR2(10)  
WAIT_SEAT                                  NUMBER  
AVAIL_SEAT                                 NUMBER  
BOOKED_SEAT                               NUMBER  
TRAIN_ID                                  NOT NULL VARCHAR2(10)
```

● Train

```
create table train( train_id varchar2(10) primary key,  
                   t_name varchar2(20) not null,  
                   car_no number,  
                   status_id varchar2(10) not null references  
train_stat(tstatus_id));
```

```
alter table train_stat add constraint train_fk foreign key(train_id)  
references train(train_id);
```

```
SQL> desc train;  
Name                                         Null?    Type  
-----  
TRAIN_ID                                NOT NULL VARCHAR2(10)  
T_NAME                                  NOT NULL VARCHAR2(20)  
CAR_NO                                  NUMBER  
STATUS_ID                               NOT NULL VARCHAR2(10)
```

● Station

```
create table station( station_id varchar2(10) primary key,  
                      station_name varchar2(30));
```

```
SQL> desc station;  
Name                                         Null?    Type  
-----  
STATION_ID                                NOT NULL VARCHAR2(10)  
STATION_NAME                               VARCHAR2(30)
```

● Route

```
create table route( route_id varchar2(10) primary key,  
                    from_st varchar2(10) references station(station_id),  
                    to_st varchar2(10) references station(station_id),  
                    arr_time varchar2(5),  
                    depart_time varchar2(5),  
                    no_of_stops number,  
                    train_id varchar2(10) references train(train_id));
```

```
SQL> desc route;  
Name                               Null?      Type  
-----  
ROUTE_ID                           NOT NULL   VARCHAR2(10)  
FROM_ST                             NULL       VARCHAR2(10)  
TO_ST                               NULL       VARCHAR2(10)  
ARR_TIME                           NULL       VARCHAR2(5)  
DEPART_TIME                         NULL       VARCHAR2(5)  
NO_OF_STOPS                        NULL       NUMBER  
TRAIN_ID                           NULL       VARCHAR2(10)
```

Alterations:

1. SQL>alter table train drop column status_id;
(had conflicting foreign key)
SQL>alter table train add dept_date date;
SQL> alter table train add arr_date date;

```
SQL> desc train;
```

Name	Null?	Type
TRAIN_ID	NOT NULL	VARCHAR2(10)
T_NAME	NOT NULL	VARCHAR2(20)
CAR_NO		NUMBER
DEPT_DATE		DATE
ARR_DATE		DATE

2. SQL> alter table passenger add constraint cst2 foreign key(train_id) references train(train_id);
SQL> alter table passenger add compart no varchar(10);

```
SQL> desc passenger;
```

Name	Null?	Type
PNR	NOT NULL	VARCHAR2(8)
P_NAME		VARCHAR2(30)
AGE		NUMBER
GENDER		VARCHAR2(10)
SEAT_NO		NUMBER
RESERVE_STAT		VARCHAR2(10)
U_ID	NOT NULL	VARCHAR2(20)
TRAIN_ID	NOT NULL	VARCHAR2(10)
COMPART_NO		VARCHAR2(10)

Insertions:

Table: Users->

```
insert into users values('145FG','kolkata7');
insert into users values('147L2','prithviraj');
insert into users values('22LO4','dbmsproj');
```

```
SQL> select * from users;

USER_ID          PASSWORD
-----
12A87            password
145FG            kolkata7
147L2            prithviraj
22LO4            dbmsproj
```

Table: Station->

```
insert into station values('KOL001', 'Kolkata');
insert into station values('DEL012', 'Delhi');
insert into station values('AGR234', 'Agra');
insert into station values('VSK111', 'Vishakhapatnam');
insert into station values('BOM212', 'Mumbai');
insert into station values('CHH141', 'Chennai');
insert into station values('BAN154', 'Bengaluru');
```

```
SQL> select * from station;

STATION_ID STATION_NAME
-----
KOL001      Kolkata
DEL012      Delhi
AGR234      Agra
VSK111      Vishakhapatnam
BOM212      Mumbai
CHH141      Chennai
BAN154      Bengaluru
```

Table: Train->

```
insert into train values('HWDLJNS10','Janashatabdi',20);
insert into train values('AGVKDU11','Duranta',15);
insert into train values('HWBMBE45','Bombay Express',16);
insert into train values('CHDLRD14','Rajdhani',20);
insert into train values('HWDLRD10','Rajdhani',20);
insert into train values('BMDLRD74','Rajdhani',20);
insert into train values('HWDLJNS12','Janashatabdi',20);
insert into train values('BMDLRD84','Rajdhani',20);
```

```
SQL> select * from train;
```

TRAIN_ID	T_NAME	CAR_NO	DEPT_DATE	ARR_DATE
HWDLJNS10	Janashatabdi	20	30-OCT-19	01-NOV-19
AGVKDU11	Duranta	15	29-OCT-19	30-OCT-19
HWBMBE45	Bombay Express	16	26-OCT-19	27-OCT-19
CHDLRD14	Rajdhani	20	26-OCT-19	27-OCT-19
HWDLRD10	Rajdhani	20	02-NOV-19	03-NOV-19
BMDLRD74	Rajdhani	20	29-OCT-19	30-OCT-19
HWDLJNS12	Janashatabdi	20	27-OCT-19	28-OCT-19
BMDLRD84	Rajdhani	20	01-NOV-19	02-NOV-19

Table: Train_stat->

```
insert into train_stat values('ST100',0,1000,2000,'HWDLJNS10');
insert into train_stat values('ST101',500,0,2500,'AGVKDU11');
insert into train_stat values('ST102',0,400,2000,'HWBMBE45');
insert into train_stat values('ST103',0,40,2000,'CHDLRD14');
insert into train_stat values('ST104',544,0,2500,'HWDLRD10');
insert into train_stat values('ST105',40,0,2080,'BMDLRD74');
insert into train_stat values('ST106',0,200,2080,'HWDLJNS12');
insert into train_stat values('ST107',40,0,2600,'BMDLRD84');
```

```
SQL> select * from train_stat;
```

TSTATUS_ID	WAIT_SEAT	AVAIL_SEAT	BOOKED_SEAT	TRAIN_ID
ST100	0	1000	2000	HWDLJNS10
ST101	500	0	2500	AGVKDU11
ST102	0	400	2000	HWBMBE45
ST103	0	40	2000	CHDLRD14
ST104	544	0	2500	HWDLRD10
ST105	40	0	2080	BMDLRD74
ST107	40	0	2600	BMDLRD84
ST106	0	200	2080	HWDLJNS12

Table: Route->

```
insert into route
values('RT100','KOL001','DEL012','00:45','14:50',26,'HWDLJNS10');
insert into route
values('RT101','KOL001','DEL012','17:45','08:15',26,'HWDLJNS12');
insert into route
values('RT102','KOL001','DEL012','21:45','06:50',10,'HWDLRD10');
insert into route
values('RT103','AGR234','VSK111','17:45','10:15',30,'AGVKDU11');
insert into route
values('RT104','KOL001','BOM212','15:10','16:50',33,'HWBMBE45');
insert into route
values('RT105','CHH141','DEL012','02:25','21:15',12,'CHDLRD14');
insert into route
values('RT106','BOM212','DEL012','17:15','04:50',11,'BMDLRD74');
insert into route
values('RT107','BOM212','DEL012','23:45','08:45',10,'BMDLRD84');
```

```
SQL> select * from route;
```

ROUTE_ID	FROM_ST	TO_ST	DEPAR	ARR_T	NO_OF_STOPS	TRAIN_ID
RT100	KOL001	DEL012	00:45	14:50	26	HWDLJNS10
RT102	KOL001	DEL012	21:45	06:50	10	HWDLRD10
RT103	AGR234	VSK111	17:45	10:15	30	AGVKDU11
RT101	KOL001	DEL012	17:45	08:15	26	HWDLJNS12
RT104	KOL001	BOM212	15:10	16:50	33	HWBMBE45
RT105	CHH141	DEL012	02:25	21:15	12	CHDLRD14
RT106	BOM212	DEL012	17:15	04:50	11	BMDLRD74
RT107	BOM212	DEL012	23:45	08:45	10	BMDLRD84

Table: Passenger->

```
insert into passenger
values('ADM101','Prithviraj',20,'Male','140','Booked','145FG','HWDLRD
10');
insert into passenger
values('ADM102','Prasad',23,'Male','141','Booked','145FG','HWDLRD10')
;
```

```
SQL> select * from passenger;
```

PNR	P_NAME	AGE	GENDER	SEAT_NO	RESERVE_ST	U_ID	TRAIN_ID	COMPART_NO
ADM101	Prithviraj	20	Male	140	Booked	145FG	HWDLRD10	A09
ADM102	Prasad	23	Male	141	Booked	145FG	HWDLRD10	A04

Table: Ticket->

```
insert into ticket values('T102','ADM102',700);
insert into ticket values('T101','ADM101',600);
```

```
SQL> select * from ticket;
```

TICKET_ID	PNR	PRICE
T101	ADM101	600
T102	ADM102	700

Useful SQL queries related to the database:

1. Passengers booked by specific user id:

A. SQL> select * from passenger where u_id = '145FG';

```
SQL> select * from passenger;
```

PNR	P_NAME	AGE	GENDER	SEAT_NO	RESERVE_ST	U_ID	TRAIN_ID	COMPART_NO
ADM101	Prithviraj	20	Male	140	Booked	145FG	HWDLRD10	A09
ADM102	Prasad	23	Male	141	Booked	145FG	HWDLRD10	A04

2. Trains going to Delhi:

A. SQL> select train_id,to_st,t_name from route natural join train where to_st = (select station_id from station where station_name = 'Delhi');

TRAIN_ID	TO_ST	T_NAME
HWDLJNS10	DEL012	Janashatabdi
HWDLRD10	DEL012	Rajdhani
HWDLJNS12	DEL012	Janashatabdi
CHDLRD14	DEL012	Rajdhani
BMDLRD74	DEL012	Rajdhani
BMDLRD84	DEL012	Rajdhani

3. Trains starting from Kolkata;

A. SQL> select train_id,to_st,t_name from route natural join train where from_st = (select station_id from station where station_name = 'Kolkata');

TRAIN_ID	TO_ST	T_NAME
HWDLJNS10	DEL012	Janashatabdi
HWDLRD10	DEL012	Rajdhani
HWDLJNS12	DEL012	Janashatabdi
HWBMBE45	BOM212	Bombay Express

4. Trains starting from Kolkata going to Delhi:

A. SQL> select train_id,to_st,t_name from route natural join train where from_st = (select station_id from station where station_name = 'Kolkata') and to_st = (select station_id from station where station_name = 'Delhi');

TRAIN_ID	TO_ST	T_NAME
HWDLJNS10	DEL012	Janashatabdi
HWDLRD10	DEL012	Rajdhani
HWDLJNS12	DEL012	Janashatabdi

5. Details of passengers going from Kolkata to Delhi:

A. SQL> select pnr, p_name, age , gender , train_id from passenger natural join train natural join route where from_st = (select station_id from station where station_name = 'Kolkata') and to_st = (select station_id from station where station_name = 'Delhi');

PNR	P_NAME	AGE	GENDER	TRAIN_ID
ADM101	Prithviraj	20	Male	HWDLRD10
ADM102	Prasad	23	Male	HWDLRD10

6. Trains having zero vacancy:

A. SQL> select train_id,t_name from train natural join train_stat where wait_seat > 0;

TRAIN_ID	T_NAME
AGVKDU11	Duranta
HWDLRD10	Rajdhani
BMDLRD74	Rajdhani
BMDLRD84	Rajdhani

7. Stations connected via train named Rajdhani:

A. SQL> select from_st, to_st from route natural join train where t_name = 'Rajdhani';

FROM_ST	TO_ST
KOL001	DEL012
CHH141	DEL012
BOM212	DEL012
BOM212	DEL012

8. status of the trains going from Kolkata:

A. SQL> select train_id, wait_seat, avail_seat, booked_seat from route natural join (train natural join train_stat) where from_st = (select station_id from station where station_name = 'Kolkata');

TRAIN_ID	WAIT_SEAT	AVAIL_SEAT	BOOKED_SEAT
HWDLJNS10	0	1000	2000
HWBMBE45	0	400	2000
HWDLRD10	544	0	2500
HWDLJNS12	0	200	2080

9. Status of trains reaching Delhi:

A. SQL> select train_id, wait_seat, avail_seat, booked_seat from route natural join (train natural join train_stat) where to_st = (select station_id from station where station_name = 'Delhi');

TRAIN_ID	WAIT_SEAT	AVAIL_SEAT	BOOKED_SEAT
HWDLJNS10	0	1000	2000
CHDLRD14	0	40	2000
HWDLRD10	544	0	2500
BMDLRD74	40	0	2080
BMDLRD84	40	0	2600
HWDLJNS12	0	200	2080

10. No. of train cars in Rajdhani along with stations :

A. SQL> select train_id, t_name, car_no, from_st , to_st from train natural join route where t_name = 'Rajdhani';

TRAIN_ID	T_NAME	CAR_NO	FROM_ST	TO_ST
HWDLRD10	Rajdhani	20	KOL001	DEL012
CHDLRD14	Rajdhani	20	CHH141	DEL012
BMDLRD74	Rajdhani	20	BOM212	DEL012
BMDLRD84	Rajdhani	20	BOM212	DEL012

11. No. of stops of trains named Janashatabdi:

A. SQL> select train_id, t_name, no_of_stops , from_st , to_st from train natural join route where t_name = 'Janashatabdi';

TRAIN_ID	T_NAME	NO_OF_STOPS	FROM_ST	TO_ST
HWDLJNS10	Janashatabdi	26	KOL001	DEL012
HWDLJNS12	Janashatabdi	26	KOL001	DEL012

12. No. of stops of trains connecting from Kolkata to Delhi:

A. SQL> select train_id, t_name, no_of_stops , from_st , to_st from train natural join route where to_st = (select station_id from station where station_name = 'Delhi') and from_st = (select station_id from station where station_name = 'Kolkata') order by no_of_stops asc;

TRAIN_ID	T_NAME	NO_OF_STOPS	FROM_ST	TO_ST
HWDLRD10	Rajdhani	10	KOL001	DEL012
HWDLJNS12	Janashatabdi	26	KOL001	DEL012
HWDLJNS10	Janashatabdi	26	KOL001	DEL012

13. Arrival time of trains connect from Kolkata to Delhi:

A. SQL> select train_id, t_name, arr_time , from_st , to_st from train natural join route where to_st = (select station_id from station where station_name = 'Delhi') and from_st = (select station_id from station where station_name = 'Kolkata') order by arr_time asc;

TRAIN_ID	T_NAME	ARR_T	FROM_ST	TO_ST
HWDLRD10	Rajdhani	06:50	KOL001	DEL012
HWDLJNS12	Janashatabdi	08:15	KOL001	DEL012
HWDLJNS10	Janashatabdi	14:50	KOL001	DEL012

14. Details of trains leaving from Mumbai or from Chennai:

A. SQL> select train_id, t_name, arr_time, depart_time, from_st , to_st from train natural join route where from_st = (select station_id from station where station_name = 'Mumbai') or from_st = (select station_id from station where station_name = 'Chennai');

TRAIN_ID	T_NAME	ARR_T	DEPAR	FROM_ST	TO_ST
CHDLRD14	Rajdhani	21:15	02:25	CHH141	DEL012
BMDLRD74	Rajdhani	04:50	17:15	BOM212	DEL012
BMDLRD84	Rajdhani	08:45	23:45	BOM212	DEL012

15. Trains which have less than 20 stops:

A. SQL> select train_id, t_name, no_of_stops , from_st , to_st from train natural join route where no_of_stops < 20;

TRAIN_ID	T_NAME	NO_OF_STOPS	FROM_ST	TO_ST
HWDLRD10	Rajdhani	10	KOL001	DEL012
CHDLRD14	Rajdhani	12	CHH141	DEL012
BMDLRD74	Rajdhani	11	BOM212	DEL012
BMDLRD84	Rajdhani	10	BOM212	DEL012

16. Passengers with ticket price more than 600 (inner join):

A. SQL> select passenger.pnr, p_name , train_id, ticket_id from passenger, ticket where passenger.pnr = ticket.pnr and price >600 ;

PNR	P_NAME	TRAIN_ID	TICKET_ID
ADM102	Prasad	HWDLRD10	T102

17. Cities from which Rajdhani leaves (outer join left):

A. SQL> select distinct station_name from train natural join route left join station on route.from_st = station.station_id where t_name = 'Rajdhani';

STATION_NAME
Mumbai
Kolkata
Chennai

18. Trains with more than 100 on waiting seats:

A. SQL> select train_id, t_name, wait_seat from train natural join train_stat where wait_seat > 100;

TRAIN_ID	T_NAME	WAIT_SEAT
AGVKDU11	Duranta	500
HWDLRD10	Rajdhani	544

19. Trains which have available seats:

A. SQL> select train_id, t_name, avail_seat from train natural join train_stat where avail_seat > 0;

TRAIN_ID	T_NAME	AVAIL_SEAT
HWDLJNS10	Janashatabdi	1000
HWBMBE45	Bombay Express	400
CHDLRD14	Rajdhani	40
HWDLJNS12	Janashatabdi	200

20. Total seats in each trains:

A. SQL> select train_id, (wait_seat+avail_seat+booked_seat)
TOTAL_SEATS from train_stat;

TRAIN_ID	TOTAL_SEATS
-----	-----
HWDLJNS10	3000
AGVKDU11	3000
HWBMBE45	2400
CHDLRD14	2040
HWDLRD10	3044
BMDLRD74	2120
BMDLRD84	2640
HWDLJNS12	2280

21. Average number of seats in Rajdhani:

A. SQL> select avg(wait_seat+avail_seat+booked_seat) AVG_seats from
train_stat natural join train where t_name = 'Rajdhani';

AVG_SEATS

2461

22. Available seats on trains going from Kolkata to Delhi:

A. SQL> select train_id,t_name, avail_seat from route natural join train
natural join train_stat where from_st = (select station_id from station
where station_name = 'Kolkata') and to_st = (select station_id from
station where station_name = 'Delhi');

TRAIN_ID	T_NAME	AVAIL_SEAT
-----	-----	-----
HWDLJNS10	Janashatabdi	1000
HWDLRD10	Rajdhani	0
HWDLJNS12	Janashatabdi	200

23. Ticket Id and train_id of passengers whose name starts with P:

A. SQL> select Train_id, Ticket_id, P_name from passenger, ticket
where passenger.pnr = ticket.pnr and P_name like 'P%';

TRAIN_ID	TICKET_ID	P_NAME
-----	-----	-----
HWDLRD10	T101	Prithviraj
HWDLRD10	T102	Prasad

24. Departure time of trains that leave from Kolkata:

A. SQL> select train_id,depart_time from train natural join route where from_st = (select station_id from station where station_name = 'Kolkata');

TRAIN_ID	DEPAR
-----	-----
HWDLJNS10	00:45
HWDLRD10	21:45
HWDLJNS12	17:45
HWBMBE45	15:10

25. Arrival time of trains that reach Delhi:

A. SQL> select train_id,arr_time from train natural join route where to_st = (select station_id from station where station_name = 'Delhi');

TRAIN_ID	ARR_T
-----	-----
HWDLJNS10	14:50
HWDLRD10	06:50
HWDLJNS12	08:15
CHDLRD14	21:15
BMDLRD74	04:50
BMDLRD84	08:45

26. Departure dates and times of trains leaving for Delhi from Kolkata:

A. SQL> select train_id,dept_date, depart_time from train natural join route where from_st = (select station_id from station where station_name = 'Kolkata') and to_st = (select station_id from station where station_name = 'Delhi');

TRAIN_ID	DEPT_DATE	DEPAR
-----	-----	-----
HWDLJNS10	30-OCT-19	00:45
HWDLRD10	02-NOV-19	21:45
HWDLJNS12	27-OCT-19	17:45

27. Arrival time of trains in Delhi order by dates:

A. SQL> select train_id, arr_date, arr_time from route natural join train where to_st = (select station_id from station where station_name = 'Delhi') order by arr_date, arr_time;

TRAIN_ID	ARR_DATE	ARR_T
CHDLRD14	27-OCT-19	21:15
HWDLJNS12	28-OCT-19	08:15
BMDLRD74	30-OCT-19	04:50
HWDLJNS10	01-NOV-19	14:50
BMDLRD84	02-NOV-19	08:45
HWDLRD10	03-NOV-19	06:50

28. Time and date of the ticket booked by a particular passenger:

A. SQL> select ticket_id, pnr, p_name, train_id, dept_date, depart_time from (passenger natural join ticket) natural join (train natural join route) where p_name = 'Prithviraj';

TICKET_ID	PNR	P_NAME	TRAIN_ID	DEPT_DATE	DEPART
T101	ADM101	Prithviraj	HWDLRD10	02-NOV-19	21:45

29. Departure and arrival dates and times of all trains registered in the database:

A. SQL> select train_id, dept_date, depart_time, arr_date, arr_time from train natural join route order by dept_date;

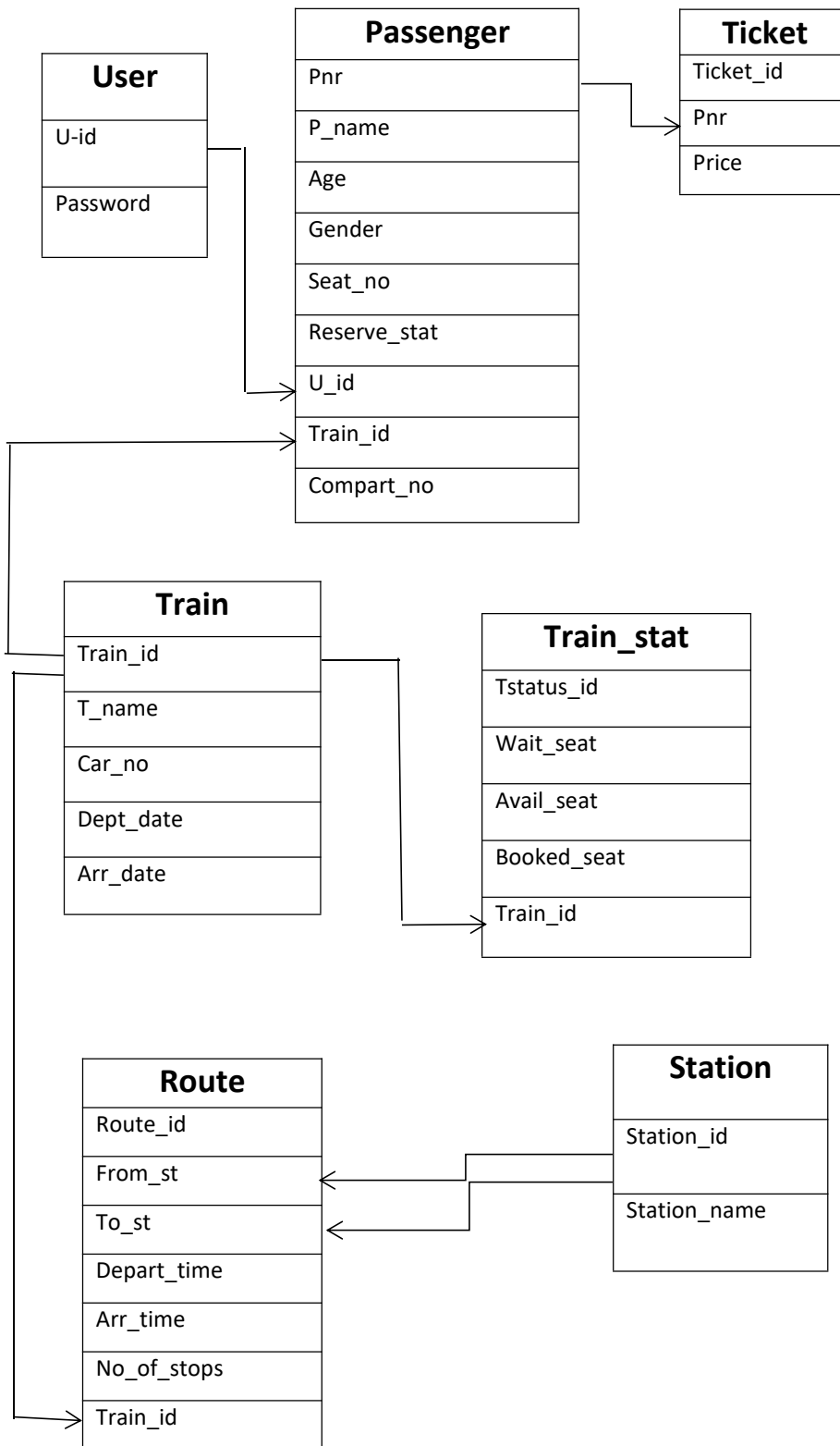
TRAIN_ID	DEPT_DATE	DEPART	ARR_DATE	ARR_T
CHDLRD14	26-OCT-19	02:25	27-OCT-19	21:15
HWBMBE45	26-OCT-19	15:10	27-OCT-19	16:50
HWDLJNS12	27-OCT-19	17:45	28-OCT-19	08:15
BMDLRD74	29-OCT-19	17:15	30-OCT-19	04:50
AGVKDU11	29-OCT-19	17:45	30-OCT-19	10:15
HWDLJNS10	30-OCT-19	00:45	01-NOV-19	14:50
BMDLRD84	01-NOV-19	23:45	02-NOV-19	08:45
HWDLRD10	02-NOV-19	21:45	03-NOV-19	06:50

30. Generate a ticket with necessary details:

A. SQL> select ticket_id, pnr, p_name, age, gender, train_id, compart_no, seat_no, to_st, from_st, dept_date, depart_time, price from (passenger natural join ticket) natural join (train natural join route) where p_name = 'Prithviraj';

TICKET_ID	PNR	P_NAME				
T101	ADM101	Prithviraj				
AGE	GENDER	TRAIN_ID	COMPART_NO	SEAT_NO		
20	Male	HWDLRD10	A09	140		
TO_ST	FROM_ST	DEPT_DATE	DEPAR	PRICE		
DEL012	KOL001	02-NOV-19	21:45	600		

Relational Model:



Future scope of the Project :

Railway system is a huge implementation of databases and as time advances new procedures of implementing reservation of railway seats are coming up. Thus, new GUI's are being developed making it more and more user friendly. If this database is used in making a GUI with or online application using Java Server Pages, this can be devised to be a succesful implementation.

Conclusion:

Database Management and Data Handling is a big part of the IT industry. Thus proper knowledge of SQL is important while working on databases in order to avoid data redundancy and conflicts. Through this project, we learned to avoid such data conflicts and implement the queries properly.

REMARKS: