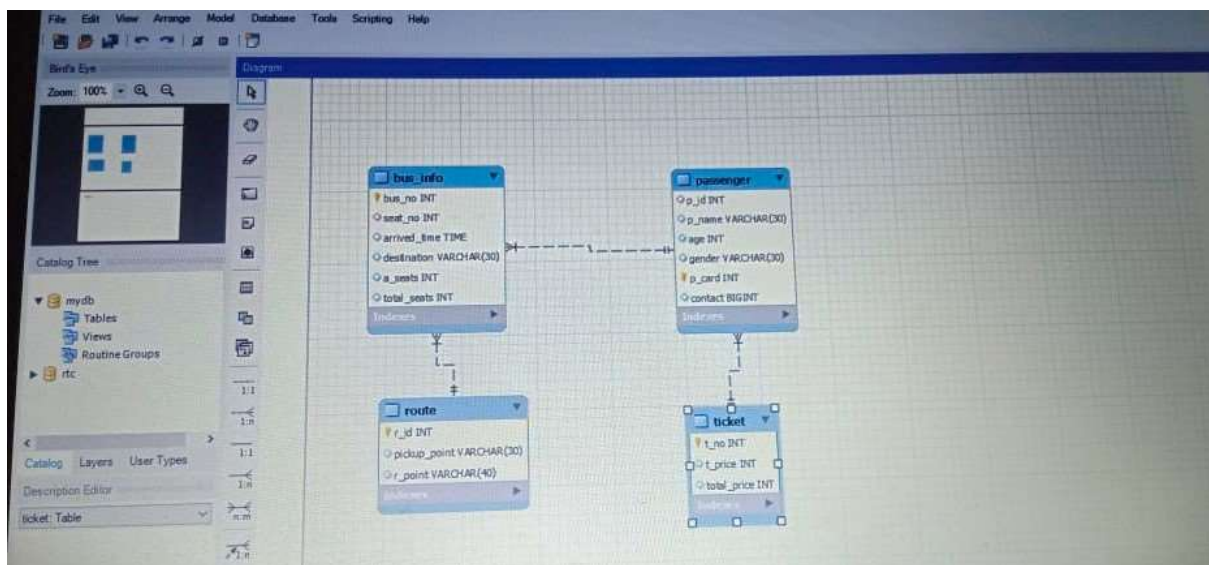# (------**ENTITY RELATIONSHIP DIAGRAM **----------)

Name :C.Anil

CONTENT:

Entity Relationship diagram(ERD), Also known As An Entity Relationship Model ,Is a Graphical Representation That Depicts Relationships Among People,Objects,Places,Concepts or Events Within An Information Technology (IT)System.An ERD Uses Data Modeling Techniques That Can Help Defined Business Processes And Serve As The Foundation For a Relational Database.

ENTITY
RELATIONSHIP
DIAGRAM

- create database rtc;

use rtc;

create table passenger(p_id int,p_name varchar(30),age int,gender varchar(30),p_card int primary key,contact int,foreign key(p_id) references ticket(t_no));

set foreign_key_checks=0;

insert into passenger

values(1,"uday",21,"male",21,9390017446),(2,"anil",22,"male",22,7989927612),(3,"kiran",23,"male" ,23,9390017449),(4,"uday lover",24,"female",24,9390017445),

(5,"tiru",23,"female",25,9390017478);

alter table passenger modify contact bigint;

create table ticket(t_no int primary key,t_price int,total_price int);

set foreign_key_checks=0;

insert into ticket values(1,200,500),(2,300,400),(3,200,500),(4,100,900),(5,300,700);

create table route(r_id int primary key,pickup_point varchar(30),r_point varchar(40));

set foreign_key_checks=0;

insert into route values(110,"rtc stand","highway"),(111,"rtc busstand","chik highway"),(112,"hulva stand","chillmama"),(113,"klm","hey mamu"),(114,"kalamandir","aruku");

create table bus_info(bus_no int primary key,seat_no int,arrived_time time,destination varchar(30),a_seats int,total_seats int,foreign key(seat_no)

references route(r_id),foreign key(seat_no) references passenger (p_card));

set foreign_key_checks=0;

insert into bus_info values(2231,1,"12:12 ","klm",4,67),(2232,2,"1:23 ","marthahalli",2,69),(2212,3,"2:12 ","araku",8,62),(1234,4,"3:56 ","hebbal",4,67),(2345,5,"1:23","kadapa",4,69);

desc passenger;

desc ticket;

desc bus_info;

　　　　　　(OPERATOR)

select * from passenger where p_name="tiru" or p_id=2;

select* from passenger where p_id=2 and p_name="uday";

select* from passenger where p_id=2 and p_name="anil";

select * from passenger where not P_name="tiru";

select * from passenger where p_name like "u__%";

select* from passenger where p_id between 3 and 9;

select * from passenger where age in(21,22,23,24,25);

select min(p_id) from passenger;

```
select min(p_name) from passenger;

select count(age) from passenger;

select avg(p_id) from passenger;

select bin(p_id) from passenger;

select abs(-21) ;

select mod(2342,52);

select power(25,5);

select round(39.99);

select sqrt(99);

select char_length(p_name) from passenger;

select ucase(p_name) from passenger;

select ucase("uday");

select lcase(p_name) from passenger;

select ltrim(p_name) from passenger;

select rtrim("          apasyam kirikiri.......");

select trim("uday");

select replace("apasyam" ,"p", 8);

select lpad("uday",8,"#");

select rpad("uday",8,"#");

select repeat("uday",8);

select left("kiran",2);

select right("anil",2);

select concat("kiran","anil","*lovely");

select concat_ws(1,"kiran","anil","*lovely");

                          (CLAUSS);




select p_name from passenger where p_id=2;

 select *from passenger where p_id=2;

 select* from passenger;

update passenger set p_name="luckey" where p_id=1;
```

```sql
delete from passenger p_name where p_id=1;

select p_id from passenger order by p_name ;

select p_id from passenger order by p_name desc ;

select * from passenger group by p_name;

select  age from passenger limit 24 offset 2 ;

select p_name ,sum(age) from passenger group by p_name having p_name="tiru";

select age from passenger inner join ticket on passenger.p_id=ticket.t_no;

select * from passenger left join ticket on passenger.p_id=ticket.t_no union

select * from passenger right join ticket on passenger.p_id=ticket.t_no;

select * from passenger cross join ticket;

select * from passenger as pass,ticket as tic where pass.p_id=tic.t_no;

create index bhanu on ticket(t_no);

select * from ticket use index(bhanu);

show indexes in ticket;

drop index cos on passenger;

create unique index sonu on ticket (t_no);

drop index sonu on ticket;

create index cos on passenger (p_id,p_name);

show indexes in passenger;

create view anil as select * from passenger;

show tables;

create or replace view uday as select * from passenger ;

drop view anil;

update passenger set p_name="anil" where p_id in

(select t_no from ticket where t_price in("500"));

select * from passenger where

exists(select t_price from ticket where passenger.p_name=ticket.t_price);

delete from ticket where t_no in

(select p_name from passenger where age="21" );
```

```sql
select* from ticket;

select * from ticket where t_no="tiru" or t_no=2;

select* from ticket where t_no=1 and total_price="500";

select* from ticket where t_no=1 and t_price="200";

select * from ticket where not t_no="anil";

select * from ticket where t_no like "__%";

select* from ticket where t_no between 2 and 4;

select * from ticket where t_no in(1,2,3);

select min(t_no) from ticket;

select min(t_no) from ticket;

select count(t_no) from ticket;

select avg(t_no) from ticket;

select bin(t_no) from ticket;

select abs(-21) ;

select mod(2342,52);

select power(25,5);

select round(39.99);

select sqrt(99);

select char_length(t_no) from ticket;

select ucase(t_no) from ticket;

select ucase("uday");

select lcase(t_no) from ticket;

select ltrim(t_no) from ticket;

select rtrim("        apasyam kirikiri.......");

select trim("uday");

select replace("apasyam" ,"p", 8);

select lpad("uday",8,"#");

select rpad("uday",8,"#");

select repeat("uday",8);

select left("kiran",2);

select right("anil",2);
```

```sql
select concat("kiran","anil","*lovely");

select concat_ws(1,"kiran","anil","*lovely");
```

(INDEX,CLAUSES,JOINS)

```sql
select t_no from ticket where t_no=2;

 select *from ticket where t_no=1;

 select* from ticket;

update ticket set t_no="21" where t_price=500;

delete from ticket t_no where t_price=500;

select t_no from ticket order by t_price ;

select t_no from ticket order by t_price desc ;

select * from ticket group by t_no;

select  t_no from ticket limit 4 offset 2 ;

select t_no ,sum(t_price) from ticket group by t_no having t_no="1";

select t_no from ticket inner join passenger on ticket.t_no=passenger.p_name;

select * from ticket left join passenger on ticket.t_price=passenger.p_name union

select * from ticket right join passenger on ticket.t_no=passenger.p_name;

select * from ticket cross join passenger;

select * from ticket as tic,passenger as pass where tic.t_no=pass.p_name;

create index bhanu on ticket(t_no);

select * from ticket use index(bhanu);

show indexes in ticket;

drop index sum on ticket;

create unique index sonu on ticket (t_no);

drop index sonu on ticket;

create index cos on ticket (t_no,t_price);

show indexes in ticket;

create view anil as select * from ticket;

show tables;

create or replace view uday as select * from ticket;

drop view anil;
```

```sql
select t_no from ticket where t_no in

(select p_name from passenger where p_name="anil");


 select * from route;

select * from route where r_id="110" ;

select* from route where r_id=110 and r_point="highway";

select* from route where r_id=110 and pickup_point="rtc stand";

select * from route where not r_id="110";

select * from route where r_id like "h__%";

select* from route where r_id between 110 and 111 ;

select * from route where r_id in (110,111,112);

select min(r_id) from route;

select min(r_id) from route;

select count(r_point) from route;

select avg(r_id) from route;

select bin(r_id) from route;

select abs(-21) ;

select mod(2342,52);

select power(25,5);

select round(39.99);

select sqrt(99);

select char_length(r_point) from route;

select ucase(r_id) from route;

select ucase("anil");

select lcase(r_id) from route;

select ltrim(r_point) from route;

select rtrim("        highway.......");

select trim("aruku");

select replace("apasyam" ,"p", 8);

select lpad("anil",8,"#");

select rpad("uday",8,"#");
```

```sql
select repeat("anil",8);

select left("kiran",2);

select right("anil",2);

select concat("kiran","anil","*lovely");

select concat_ws(1,"kiran","anil","*lovely");
```

(INDEX,CLAUSES,JOINS)

```sql
select * from route where r_id=110;

 select *from route where r_id=112;

 select* from route;

update route set r_id="113" where pickup_point="klm";

delete from route r_id where pickup_point="klm";

select r_id from route order by r_point;

select r_id from route order by r_point desc ;

select r_id from route group by r_id;

select  r_id from route limit 3 offset 2 ;

select r_point ,sum(r_id) from route group by r_id having r_point="highway";

select * from route inner join passenger on route.r_id=passenger.p_id;

select * from route left join ticket on route.r_id=ticket.t_no union

select * from route right join ticket on route.r_id=ticket.t_no;

select * from route cross join ticket;

select * from route as rou,ticket as tic where rou.r_id=tic.t_no;

create index bhanu on route(r_id);

select * from route use index(bhanu);

show indexes in route;

drop index bhanu on route;

create unique index sonu on route (r_id);

drop index sonu on route;

create index cos on route (r_id,r_point);

show indexes in route;

create view anil as select * from route;
```

show tables;

create or replace view uday as select * from route ;

drop view anil;

select r_id,r_point from route where r_id in

 (select t_no from ticket where t_price="500");

 update route set r_id="1" where r_point in

(select p_name from passenger where age in("21","22"));

select * from route where

exists(select p_name from passenger where route.r_id=passenger.p_name);

delete from route where r_id in

(select t_no from ticket where t_price="500");

     (OPERATOR,FUNCTIONS)

select * from passenger where p_name="tiru" or p_id=2;

select* from passenger where p_id=2 and p_name="uday";

select* from passenger where p_id=2 and p_name="anil";

select * from passenger where not P_name="tiru";

select * from passenger where p_name like "u__%";

select* from passenger where p_id between 3 and 9;

select * from passenger where age in(21,22,23,24,25);

select min(p_id) from passenger;

select min(p_name) from passenger;

select count(age) from passenger;

select avg(p_id) from passenger;

select bin(p_id) from passenger;

select abs(-21) ;

select mod(2342,52);

select power(25,5);

select round(39.99);

select sqrt(99);

select char_length(p_name) from passenger;

```sql
select ucase(p_name) from passenger;

select ucase("uday");

select lcase(p_name) from passenger;

select ltrim(p_name) from passenger;

select rtrim("        apasyam kirikiri.......");

select trim("uday");

select replace("apasyam" ,"p", 8);

select lpad("uday",8,"#");

select rpad("uday",8,"#");

select repeat("uday",8);

select left("kiran",2);

select right("anil",2);

select concat("kiran","anil","*lovely");

select concat_ws(1,"kiran","anil","*lovely");




create table bus_info(bus_no int primary key,seat_no int,arrived_time time,destination
varchar(30),a_seats int,total_seats int,foreign key(seat_no)

references route(r_id),foreign key(seat_no) references passenger (p_card));

insert into bus_info values(2231,1,"12:12 ","klm",4,67),(2232,2,"1:23
","marthahalli",2,69),(2212,3,"2:12 ","araku",8,62),(1234,4,"3:56
","hebbal",4,67),(2345,5,"1:23","kadapa",4,69);




 select distinct bus_no from bus_info;



                          (OPERATOR);



select * from bus_info where bus_no=1 or destination="araku";

select * from bus_info where bus_no=1 and destination="araku";

select * from bus_info where not destination="klm";

select * from bus_info where destination like"%a%";
```

```sql
select * from bus_info where destination like"%m";

select * from bus_info where bus_no between 2230 and 2250;

select * from bus_info where seat_no in(1,2,3,4,5);
```

(functions);

```sql
select  max(seat_no) from bus_info;

select  min(seat_no) from bus_info;

select  avg(seat_no) from bus_info;

select  sum(seat_no) from bus_info;

select  count(seat_no) from bus_info;

select bin(seat_no) from bus_info;

select abs(-2212);

select mod(1,5);

select power(12,2);

select sqrt(100);
```

("string functions");

```sql
select length(destination) from bus_info;

select upper(destination) from bus_info;

select lower(destination) from bus_info;

select trim("uday      ");

select rtrim("      uday") ;

select lpad("uda",4,"#");

select rpad("kiran",7,"2");

select left("udaykiran",9);

select replace("udaykiran","y",9);

select substring("uday kiran",5,5);

select concat("uday","kiran",'anil');

select concat_ws("-","uday","kiran","tiru");
```

(

<div align="center">(date-functions);</div>

select now();

select current_date();

select curtime();

select year("2023-4-21");

select date_add("2023-9-23",interval 7 day);

select datediff("2023-10-31","2002-06-21");

select subdate("2023-09-01",interval 3 month);

<div align="center">(clauses);</div>

select seat_no from bus_info where destination="klm";

update bus_info set seat_no=1 where destination ="tirumala";

delete from bus_info where seat_no=1;

select seat_no from bus_info order by destination desc ;

select * from bus_info group by destination;

select seat_no from bus_info group by destination;

select destination,sum(seat_no) from bus_info group by destination;

select destination ,max(seat_no) from bus_info group by arrived_time having destination="araku" ;

select * from bus_info where seat_no limit 5;

select seat_no from bus_info limit 1;

<div align="center">(joins);</div>

select * from bus_info left join passenger on bus_info.seat_no=passenger.p_card;

select * from bus_info right join passenger on bus_info.seat_no=passenger.p_card;

select p_id from bus_info inner join passenger on bus_info.seat_no=passenger.p_card;

select * from bus_info left join passenger on bus_info.seat_no=passenger.p_card union all

```sql
select * from  bus_info right join passenger on bus_info.seat_no=passenger.p_card;

select * from bus_info cross join passenger;
```

(index);

```sql
create index uday on bus_info(seat_no);

show index in uday;

select * from bus_info use index(uday);

drop index uday on bus_info;

show index in bus_info;

drop index uday on bus_info;

drop index cos on passenger
```

(view);

```sql
create view rrr as select * from bus_info;

show tables;

create or replace view rtcs   as select seat_no from bus_info where bus_no="2212";

drop view rrr,rtcs;

select * from bus_info;
```

(sub queries);

```sql
select bus_no,seat_no from bus_info where bus_no in

 (select t_no from ticket where t_price="500");

 update bus_info set bus_no="1234" where seat_no in

(select p_name from passenger where p_card );

select * from route where

exists(select bus_info from bus_info where route.r_id=bus_info.seat_no);

delete from route where r_id in

(select t_no from ticket where t_price="500" );
```

------ *** THANK YOU*** ------

--------- * INDU MAM * -------