CITY BUS MANAGEMENT SYSTEM

TITLE:

City bus management system

AIM:

The aim of this project is to develop a database for City Bus Corporation. An efficient vehicle tracking system will be designed and implemented for tracking the movement of any equipped vehicle from any location at any time.

ABSTRACT:

In this project, we have to develop a database for City Bus Corporation. An efficient vehicle tracking system is designed and implemented for tracking the movement of any equipped vehicle from any location at any time. The designed in-vehicle device works using Global Positioning System (GPS) technology that is one of the most common ways for vehicle tracking.

The device is embedded inside a vehicle whose position is to be determined and tracked in real-time. The vehicle tracking system uses the GPS module to get geographic coordinates at regular time intervals. A Smartphone application is also developed for continuously monitoring the vehicle location.

The Google Maps API is used to display the vehicle on the map in the Smartphone application. Thus, users will be able to continuously monitor a moving vehicle on demand using the Smartphone application and determine the estimated distance and time for the vehicle to arrive at a given destination.

ALGORITHM:

Step 1: Start

Step 2: Requirement collection
Step 3:
(i) The group is divided into two where one collects the requirements from the passenger customer point of view.
(ii) The other group which works on db design collects the basic information required for city bus corporation and the requirement presented by the consumer group.
Step 3: conceptual data model
(iii) various relations are drawn between the data and those inter-relations are stored.
(iv) These inter-relations are presented and developed a conceptual data model i.e E-R model.
(v) Among those relations various functional dependencies are presented.
Step 4:
Relational model implementation
(vi) The filtered schema is implemented using a relational data model.
(vii) various data collected from sources is inserted into the db.
Step 5:
(viii) The GPS module gives the co-ord to the google maps API where each vehicle is identified by the “g-id”

CODE:

```
create database citybusmanagement;
use citybusmanagement;
create table if not exists gps_tracker(
g_id int primary key,
bus_position varchar(30),
time time,
route_no int
);

create table if not exists destination(
dest_id int primary key,
dest_name char(20)
);

create table if not exists customer(
c_id int primary key,
name varchar(30),
city varchar(30),
```

```
street varchar(30),
pincode decimal(6,0),
g_id int
);

create table if not exists manager(
m_id int primary key,
name varchar(30),
city varchar(30),
street varchar(30),
pincode decimal(6,0)
);

create table if not exists driver(
dri_id int primary key,
dri_name char(20),
street varchar(20),
city varchar(20),
pin int
);

create table if not exists bus(
bus_no int primary key,
dri_id int
);

create table if not exists selection(
c_id int,
ser_id int,
dest_id int,
dri_id int
);

create table if not exists selection(
c_id int,
ser_id int,
dest_id int
);

create table if not exists service(
```

```
ser_id int primary key,
ser_name char(20) not null,
m_id int,
route_no int
);

create table if not exists time(
bus_no int,
ser_id int,
dest_id int,
time time,
primary key(bus_no,ser_id,dest_id)
);
```

INSERTIONS:

```
insert into gps_tracker
values (854,'Eluru','11:30:00',11),
(700,'Vijayawada','12:30:00',12),
(1450,'Guntur','1:30:00',13),
(249,'Hyderabad','5:00:00',14),
(2538,'Khammam','7:30:00',15),
(1370,'Tenali','2:30:00',16);

insert into destination
(dest_id,dest_name)
values
(1,'Guntur'),
(2,'Vijayawada'),
(3,'Vizag'),
(4,'Rajahmundry'),
(5,'Chitoor'),
(6,'Hyderabad');

insert into selection
(c_id,ser_id,dest_id)
```

```
values
(999,1,1),
(222,3,2),
(245,2,6),
(325,4,3),
(274,2,1),
(546,5,2);

insert into bus
(bus_no,dri_id)
values
(1,1),
(2,2),
(3,3),
(4,4),
(5,5),
(6,6);

insert into time
(bus_no,ser_id,dest_id,time)
values
(1,1,1,'11:30:00'),
(2,3,2,'12:00:00'),
(3,3,3,'12:30:00'),
(1,3,4,'10:00:00'),
(4,2,1,'09:00:00'),
(5,2,4,'07:30:00');

insert into customer
values(999,'Gayathri','Tirupathi','Tirumala street',522007,854),
(222,'Sravanthi','vijayawada','Autonagar7th lane',433007,700),
(245,'Bhanu','Guntur','Lakshmipuram 4th lane',522006,1450),
(325,'Padmini','Hyderabad','Banjara hills road 11',534007,249),
(274,'Veronica','Vizag','Rushikonda 8th lane',563200,2538),
(546,'Betty','Vijayawada','Mgroad',547999,1370);


insert into service
(ser_id,ser_name,m_id,route_no)
values
```

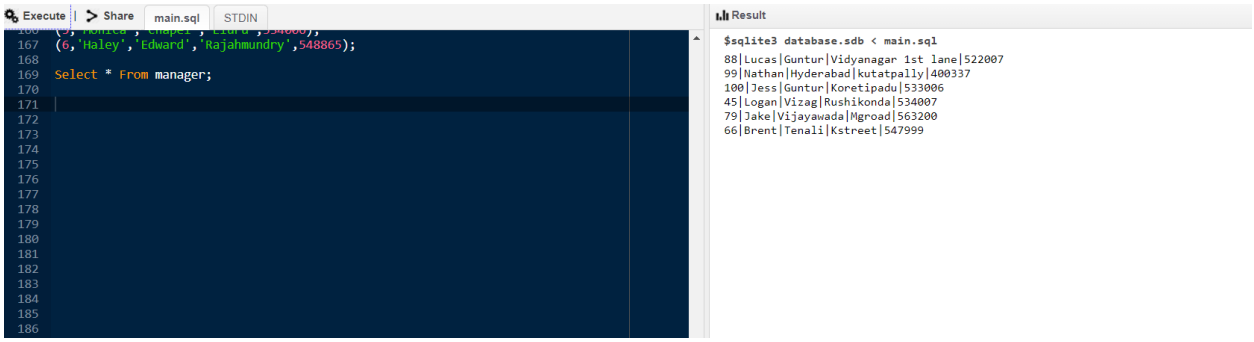
(1,'Jughead',88,11),
(2,'Archie',99,12),
(3,'Jacob',100,13),
(4,'Devdutt',45,14),
(5,'Rohit',79,15),
(6,'Sanket',66,16);

insert into manager(m_id,name,city,street,pincode)
values(88,'Lucas','Guntur','Vidyanagar 1st lane',522007),
(99,'Nathan','Hyderabad','kutatpally',400337),
(100,'Jess','Guntur','Koretipadu',533006),
(45,'Logan','Vizag','Rushikonda',534007),
(79,'Jake','Vijayawada','Mgroad', 563200),
(66,'Brent','Tenali', 'Kstreet', 547999);

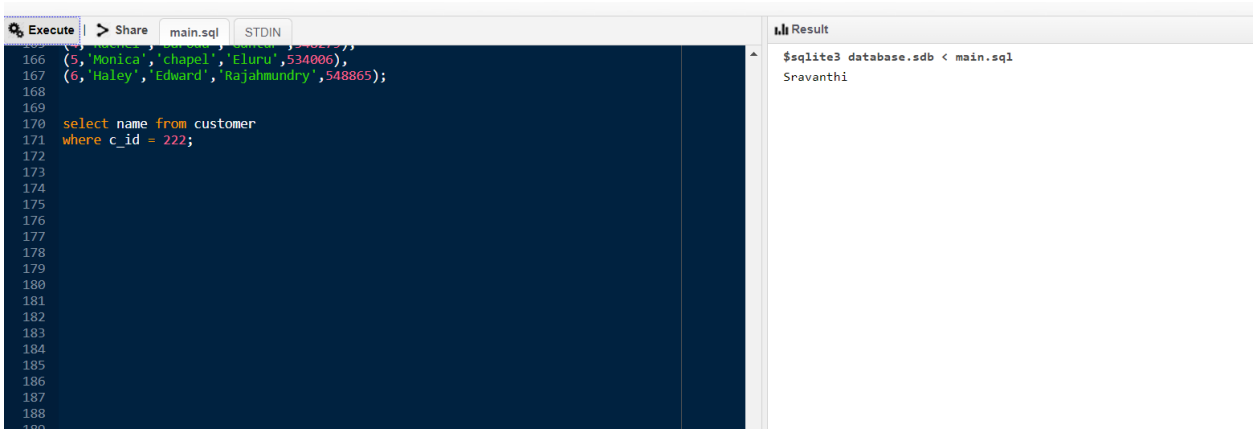
insert into driver(dri_id,dri_name,street,city,pin)values
(1,'Amy','Adams','Eluru',522010),
(2,'Rosa','Nakkal','Vijayawada',522201),
(3,'Peyton','Ferri','Eluru',420001),
(4,'Rachel','Baroda','Guntur',548279),
(5,'Monica','chapel','Eluru',534006),
(6,'Haley','Edward','Rajahmundry',548865);

QUERIES:

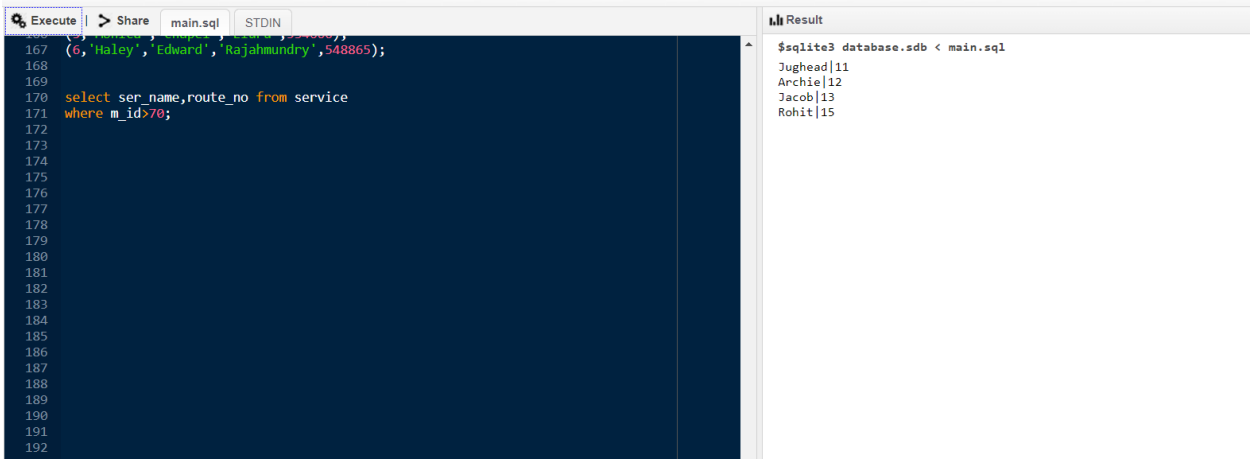
1)Select * From manager;



2) select name from customer
where c_id = 222;

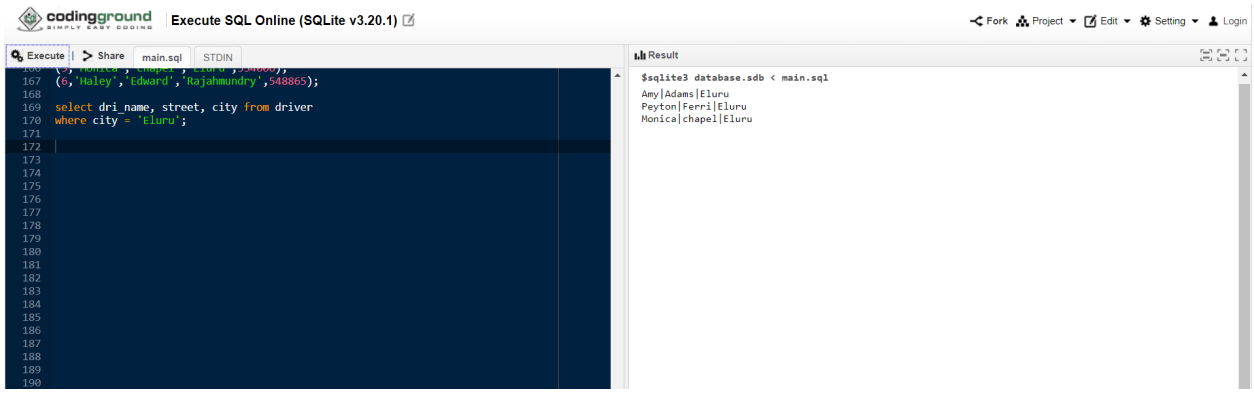


3)select ser_name,route_no from service
where m_id>70;

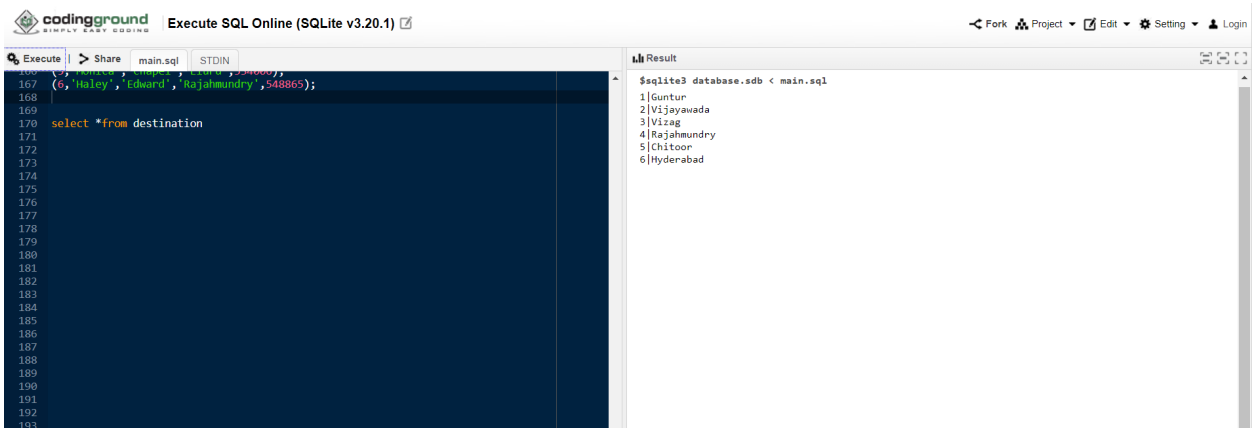


4)select dri_name, street, city from driver

where city = 'Eluru';



5)select *from destination



CONCLUSION:

The city bus corporation database overcomes the problem of manually maintaining the details of various things. It helps the customers to find their bus and reach their destination easily.

It saves the customers time. The customers can easily know the details of the buses anywhere. On the other hand, the depo managers can easily maintain the details of the buses and services provided by the bus corporation. The depo managers can easily update the details of the buses and services provided by them.

The customers can know the expected time of the bus reaching the destination which helps them to have an accurate plan without wasting any time. This project satisfies all

the project requirements. This can be extended upon new requirements and the latest updates.