Indian Institue Of Technology Jodhpur

Software Engineering
Project Report
Assignment-1

Cab Service

Project Group

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ProjectGuide

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Problem Statement

Implement a Cab Service System with following Features:

Cab Manager Should be able to Load the details of cab, like:
1.1 Type
1.2 Seating Capacity
1.3 Car No.
1.4 Driver Name etc

There should be a map (City), in which
2.1 we can update locations,
2.2 connect two locations with an edge.
2.3 Set the speed limit for a particular road

Set initial Position of cabs in map

A User interface for Custmor
4.1 Custmor should enter the details for location
4.2 Custmor's personal Information

Our Program should Calculate the optimum path for reaching the destination and check the availibilty of cabs
and if cab is availible, Program should tell about how much time it will take and cost of serice.

1 Implementation and Features

1.1 Cab Management

we have implemented a GUI, which has following options for adding new Service, like :
Type of car
Driver Name
Seating Capacity
Car No.

We have implemented this $jFrame$ GUI with the help of Netbeans IDE.
we are using DataBase for Data Handling
Following Class and Methods are used :

- public class RegisterCar extends javax.swing.JFrame
  - ButonActionPerformer
  - AddService
  - ShowService
  - ResetServicce
- class Car
  - type of service, car no., Driver name, seating capacity

And then we are creating an object of Car Class

1.2 Design City

A UserFreindly *GUI* for Creating The Map
on clicking the frame, you can create the city,
and can give it a name
2 Combo boxes for connecting the Cities
select two cities and there is an edge.
Following Class and Methods are used :

- public class Map extends javax.swing.JFrame implements MouseListener
  - ButonActionPerformer
  - MouseClicked(evt e)
- Graphics
  - drawLine(int,int,int,int)
  - paint()
  - drawImage(Image img,int,int,ImageObserver)
- Set Initial Position for cabs
  - image(int,int,int,int)
  - paint()
  - ComboBox For showing the cities, choose and click on the button

1.3 User Interface

This *GUI* is for creating the account
and for entering the booking details

- jPanel SignUP
  - textField
  - personal Details
- jPanel BookJourney
  - Source Location
  - Destination Location

2 Algorithm and Logic

we are using Dijkstra's algorithm for calculating the shortest path
for users Source location, we are calculating shortest path from all other vertices and sort them.
then we check if the cab is availible or not.
if yes then set the cab's status busy
and then we are checking the distance of destination from source
calculate the total time for reaching the destination
save the time entry in database
and continuosly checking if the real time is equal to booking time
if true change the status as availible
and cab's location as destination

3 Database

we are using database for saving the data.
we have created some tables for handling the data

- carRegistration
- city
- cityroads
- bookingdetail
- custmor registration

on each new entry data get updated.

4 Used images

Figure 1: landmark icon

Figure 2: cab