Dharmsinh Desai University, Nadiad

Faculty of Technology, Department of Computer Engineering

B.Tech. CE Semester – V

Subject: (CE-515) Advanced Technologies

Project Title:

CarPooling System

By:

Harsh Moradiya (Roll No: CE073 Id:17CEUOG056)

Guided By:

Prof. Prashant M. Jadav

Prof. Parth R. Dave

Dharmsinh Desai University, Nadiad

Faculty of Technology, Department of Computer Engineering

CERTIFICATE

This is to certify that Advanced Technologies project entitled "Carpooling System" is the bonafied report of work carried out by

1) Harsh Moradiya (17CEUOG056)

Of Department of Computer Engineering, Semester V, academic year 2019-20, under our supervision and guidance.

Guide	Guide	HOD
Prof. Prashant M. Jadav Associate Professor of Department of Computer Engineering, Dharmsinh Desai University, Nadiad.	**Prof. Parth R. Dave** Assistant Professor of Department of Computer Engineering, Dharmsinh Desai University, Nadiad.	**Dr. C. K. Bhensdadia** Head of the Department of Department of Computer Engineering, Dharmsinh Desai University, Nadiad.

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1. Abstract

Carpooling (also known as car-sharing, ride-sharing and lift sharing), is the sharing of car journeys so that more than one person travels in a car. Carpooling reduces each person's travels costs such as fuel costs, tolls, and the stress of driving. Carpooling is one method that can be easily instituted and can help resolve a variety of problems that continue to plague urban areas, ranging from energy demands and traffic congestion to environmental pollution. Authorities often encourage carpooling, especially during high pollution periods and high fuel prices. We intent on making an angular,node and mongoDB based web application that will enable to let people know if vehicles are available for carpool in their desired path they can sign in for it. This will enable people using this application to share expense, not worry about hiring a cab and making new connections. People having this application on their cell phone with advance facilities can easily carpool with unacquainted people without worrying about security. It will show the date to reach at particular location. It gives a better way for pooling a car with a very efficient environment that is easy to use. This is a Web-based collaboration, communications, and content delivery framework.

2.Introduction

2.1 Brief Introduction

Car Pooling is shared use of a car in particular for commuting to work, often by people who each have a car but travel together to save costs and in the interest of other social-environmental benefits.The objective of the project is to present a web based application which provides a communication platform between car owners and passengers. Car owners will be able to post a notice announcing that (s)he has been traveling between some particular locations regularly or just once, to search a travel-mate in order to reduce the ride costs.Traveller can find list of all live ride and can confirm ride by just clicking button.It also shows a list of your past ride and your offered ride.

2.2 Tools/Technologies used

Technologies:

1) HTML 5
2) Cascading Style Sheets (CSS 3)
3) Bootstrap 4
4) Angular CLI
5) Typescript
6) Node Js
7) Express Js
8) Mongo Db

Tools:

Visual Studio Code

Postman

Platform:

Localhost:4200 For Angular (ClientSide)

Localhost:7762 For NodeJs (ServerSide)

Localhost:27017 for MongoDB (Database)

3.Software Requirement Specifications

3.1 Types of User

1. Admin
2. End-User

3.2 System Function Requirement

R.1 Admin Functionality

R.1.1 Delete User Account

Description:Using this functionality admin is able to delete user by user id

Input:User Id of user whose account will be deleted

R.1.2 View User Account

Description:Using this functionality admin is able to view user

Input:User Id of user whose account will be displayed

Output:Display user information

R.1.2 Update User Account

Description:Using this functionality admin can update the user detail

Input:User Id of user whose account will be displayed

Output:Display user information

R.1.3 Check History of booking

Description: The admin will be able to check the history of booking .

Input: Admin Selection

Output:Admin can view history of whole booking system

R.2 End-User Functionality

R.2.1 Login

Description:Login operation. Check the user id and Password whether it is true or not if it is right then success message otherwise alert will be display with error message.

Input:User credential of user whose account will be verify

Output:Display user account with welcome message

R.2.2.Register

Description :User can register if he want to find ride

Input: User details

Output:Display message if wrong detail is entered by user

R.2.3 Offer Ride

Description :User can offer ride by selecting source and destination from map or manually entering on textbox.

Input: Ride details

Output:Ride details will be entering in database

R.2.4 Find Ride

Description :User can find ride from list of all live ride

Input: Ride selection by user

Output:Ride details will be entering in database

R.2.9.Past Booked Ride

Description: User can view his past journey with details of source,destination,date and fare

Input: User selection

Output:All the past ride which is booked by current user will be display

R.2.9.Past offered Ride

Description: User can view his offered ride with details of source,destination,date and fare

Input: User selection

Output:All the past offered ride which is offered by current user will be display

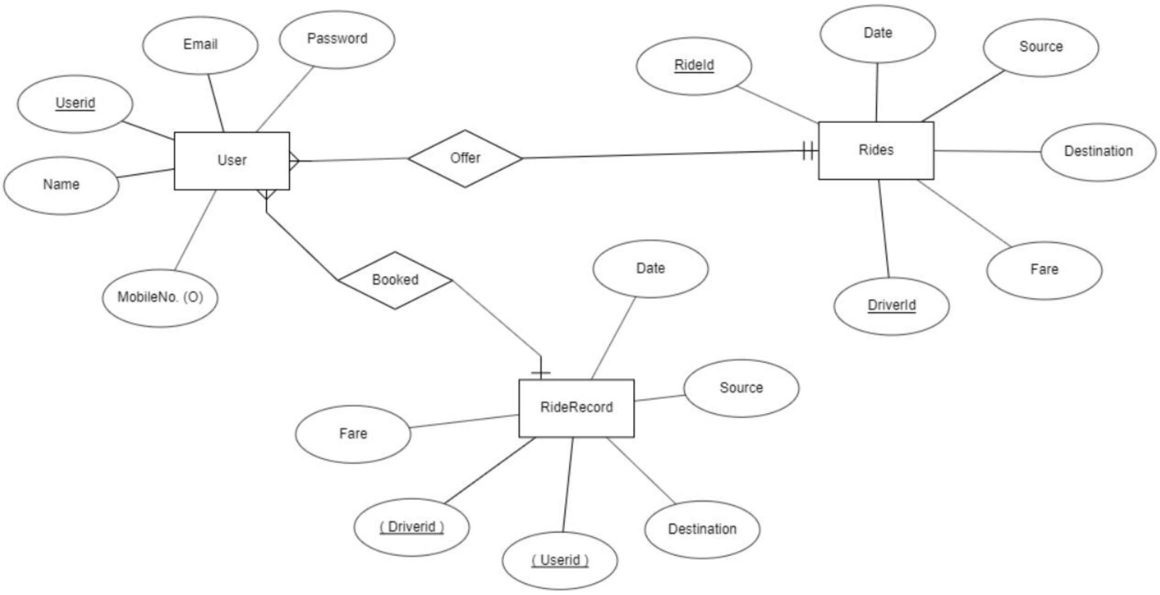
R.2.9 About Us

Description :User can see details about website and other info

Input: User selection

Output:Details will be display

4.ER-Diagram


Email
Password
Userid
User
Name
MobileNo. (O)
Offer
Booked
RideId
Date
Source
Rides
Destination
Fare
DriverId
Date
Source
RideRecord
Fare
(Driverid)
(Userid)
Destination

5.Data Dictionary Format

User

Sr. No	**Field No.**	**Data Type**	**Size**	**Required**	**Unique**	**Pk/Fk**	**Referenced Table**
1	Uid	Varchar	10	Yes	Yes	Pk	
2	Name	Varchar	20	Yes	Yes		
3	Email	Varchar	10	Yes	Yes		
4	Password	Varchar	20	Yes	Yes		
5	Mobile No	String			No		

Ride Record (History of booking)

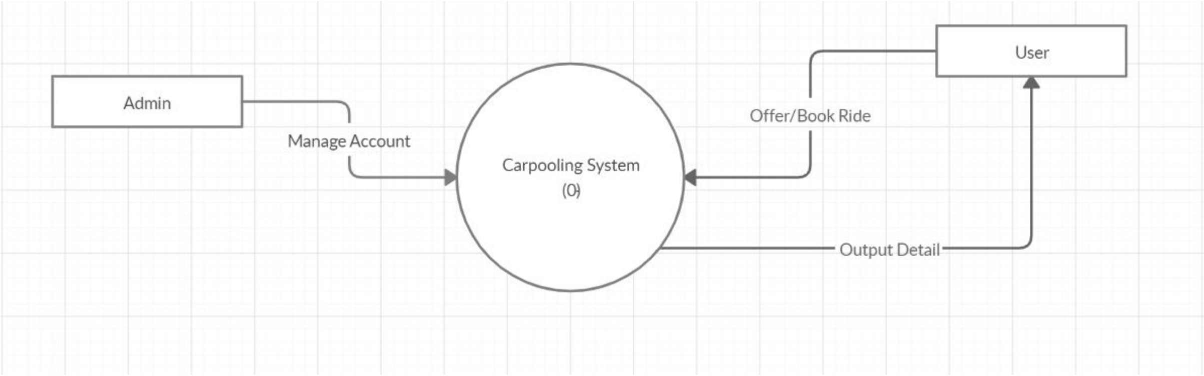
Sr. No	**Field No.**	**Data Type**	**Size**	**Required**	**Unique**	**Pk/Fk**	**Referenced Table**
1	Rid	varchar	10	Yes	Yes	Pk	
2	Userid	varchar	20	Yes	No	Fk	User
3	Driverid	varchar	20	Yes	No	Fk	User
3	Source	varchar	10	Yes	No		
4	Destination	varchar	1	Yes	No		
5	Date of journey	Date	-	Yes	No		

Live Ride

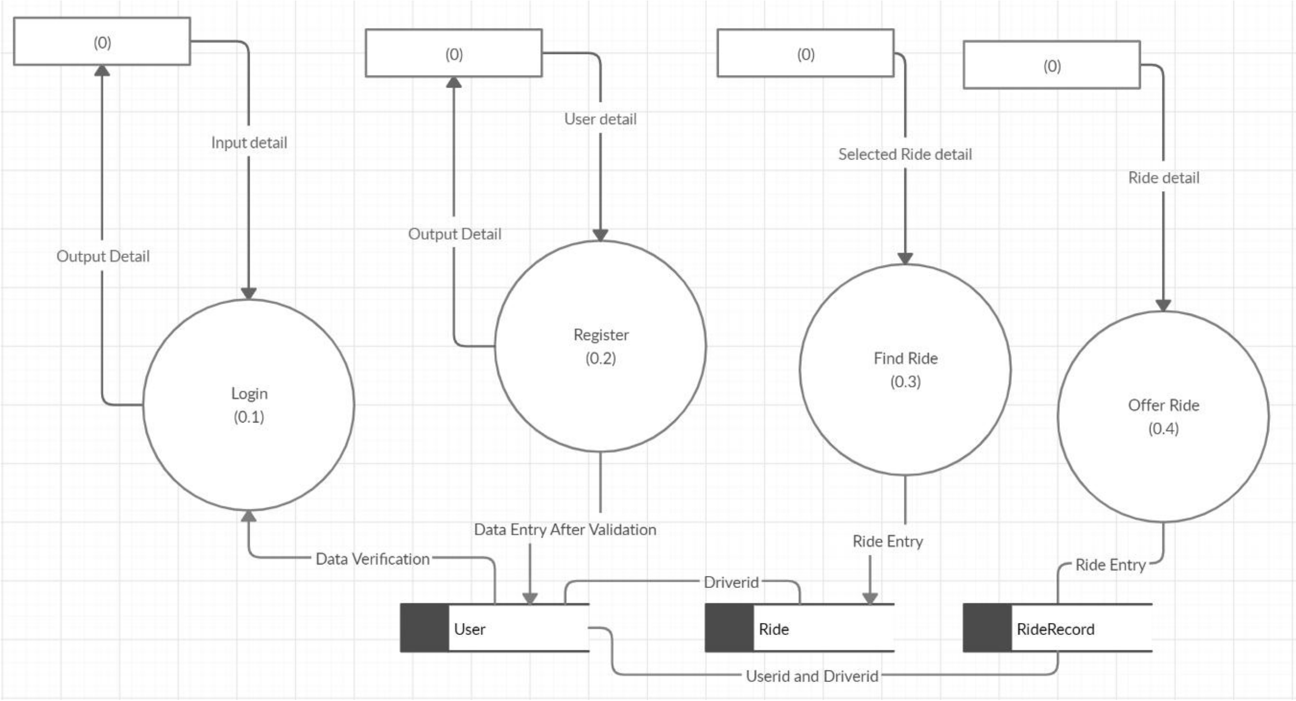
Sr. No	**Field No.**	**Data Type**	**Size**	**Required**	**Unique**	**Pk/Fk**	**Referenced Table**
1	Id	Varchar	20	Yes	Yes	Pk	
2	Source	Varchar	10	Yes	No		
3	Destination	Varchar	1	Yes	No		
4	Date of journey	Date	-	Yes	No		
5	Fare	Number	10	Yes	No		
6	Driverid	Varchar	20	Yes	No	Fk	User

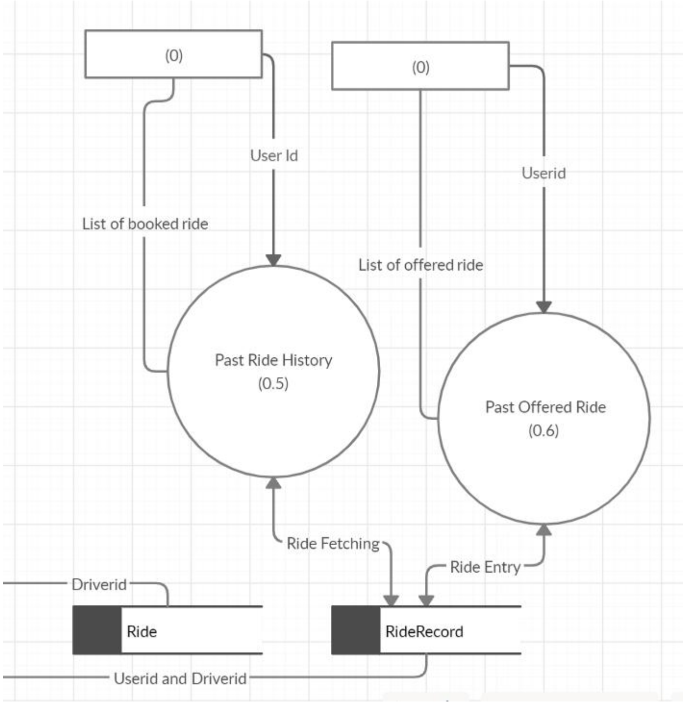
6.Data Flow-Diagram

Zero Level Diagram

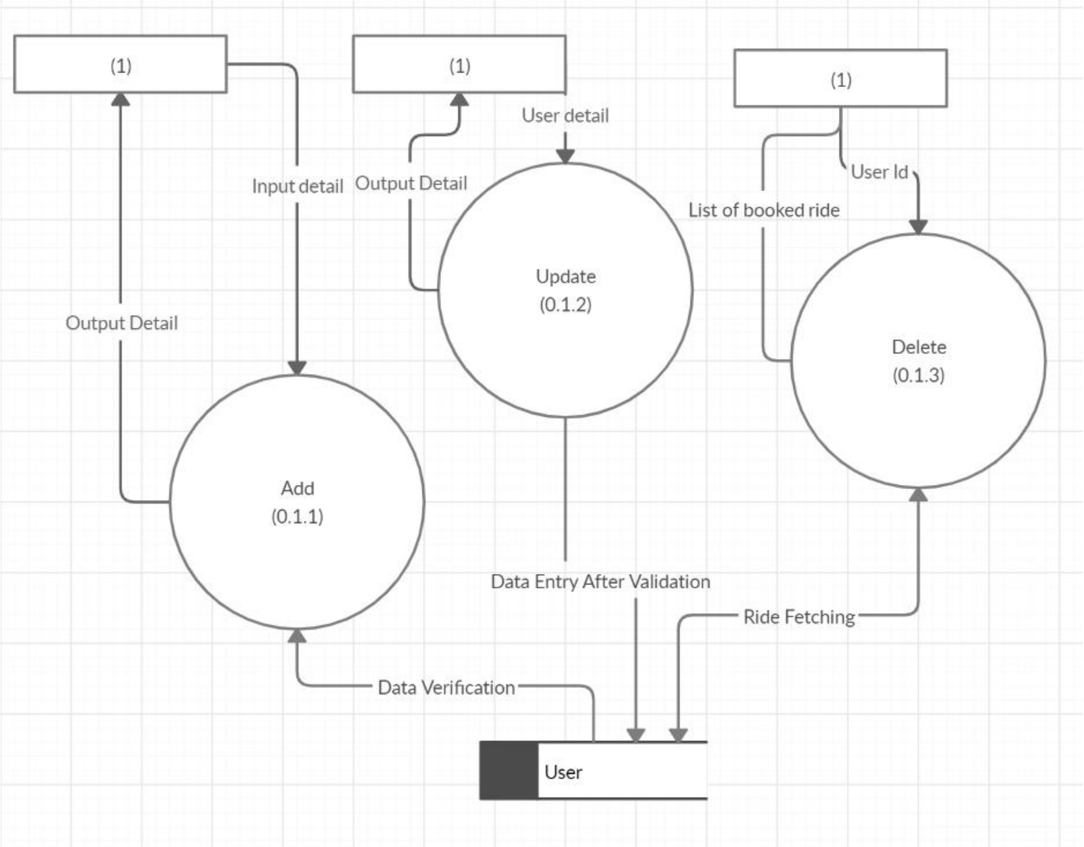


First Level Diagram

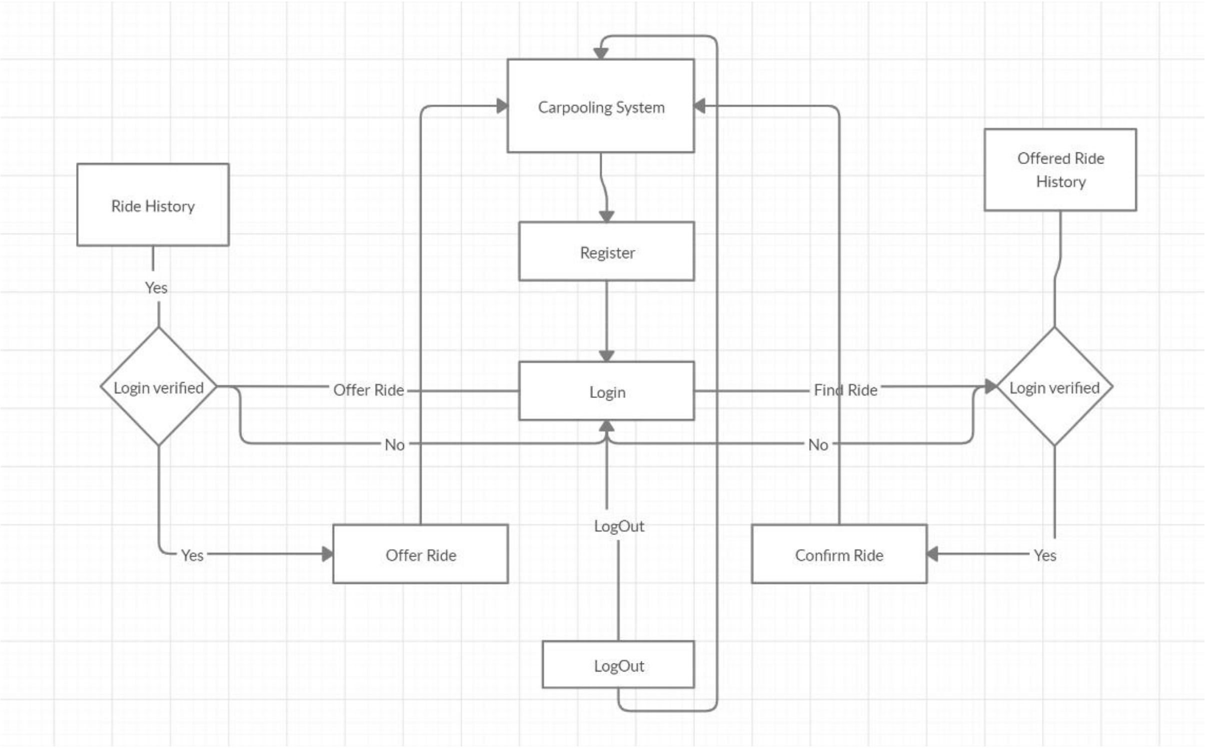


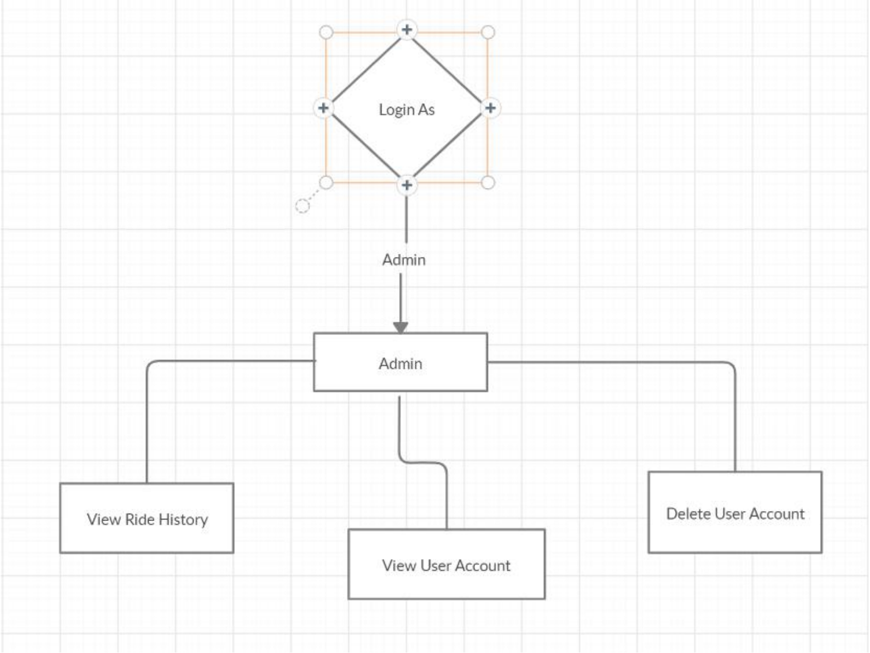


Second Level Diagram

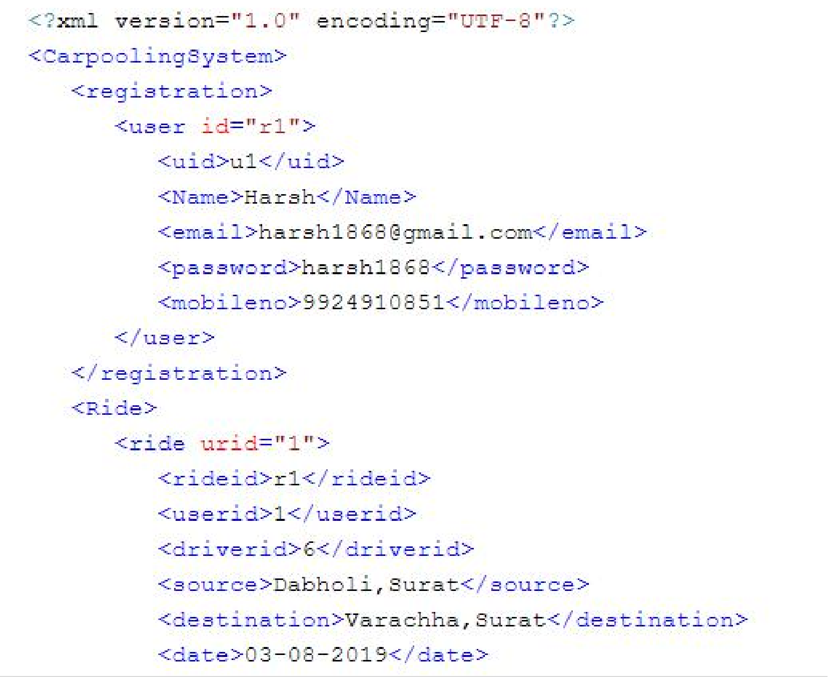


7.Flowchart

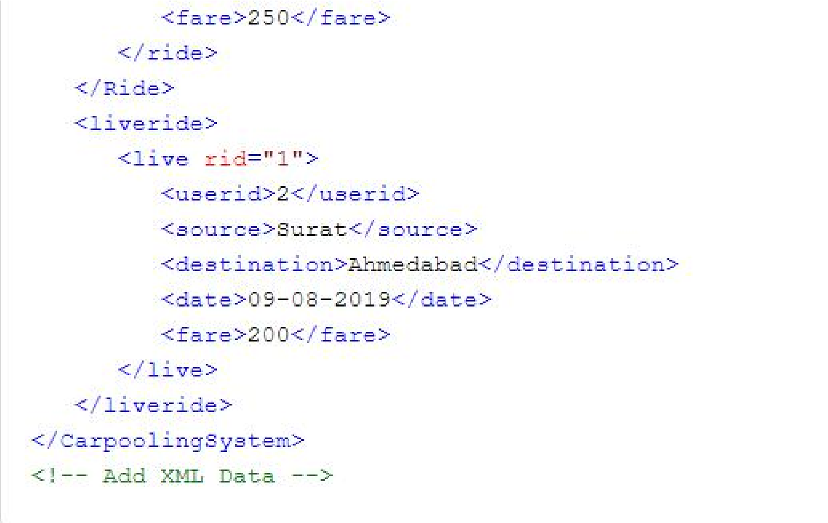

Carpooling System
Offered Ride History
Ride History
Register
Yes
Login verified
Offer Ride
Login
Find Ride
Login verified
No
No
LogOut
Yes
Offer Ride
Confirm Ride
Yes
LogOut


Login As
Admin
Admin
View Ride History
View User Account
Delete User Account

8.XML

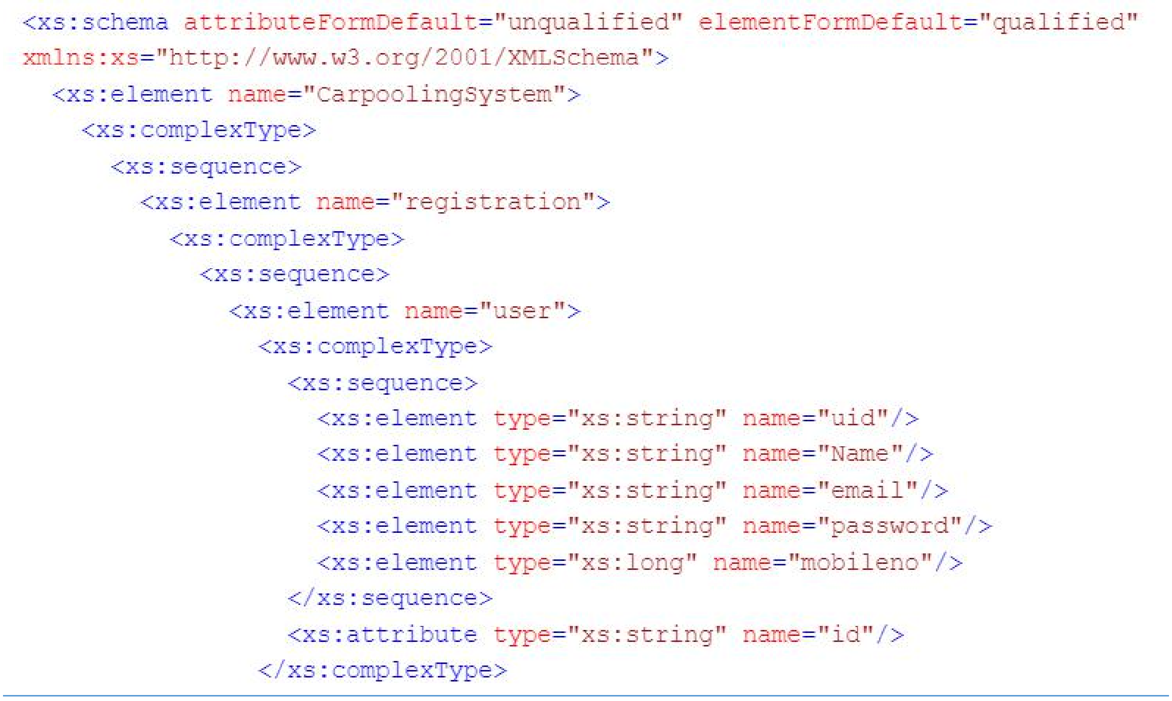


```xml
<?xml version="1.0" encoding="UTF-8"?>
<CarpoolingSystem>
   <registration>
      <user id="r1">
         <uid>u1</uid>
         <Name>Harsh</Name>
         <email>harsh1868@gmail.com</email>
         <password>harsh1868</password>
         <mobileno>9924910851</mobileno>
      </user>
   </registration>
   <Ride>
      <ride urid="1">
         <rideid>r1</rideid>
         <userid>1</userid>
         <driverid>6</driverid>
         <source>Dabholi,Surat</source>
         <destination>Varachha,Surat</destination>
         <date>03-08-2019</date>
```

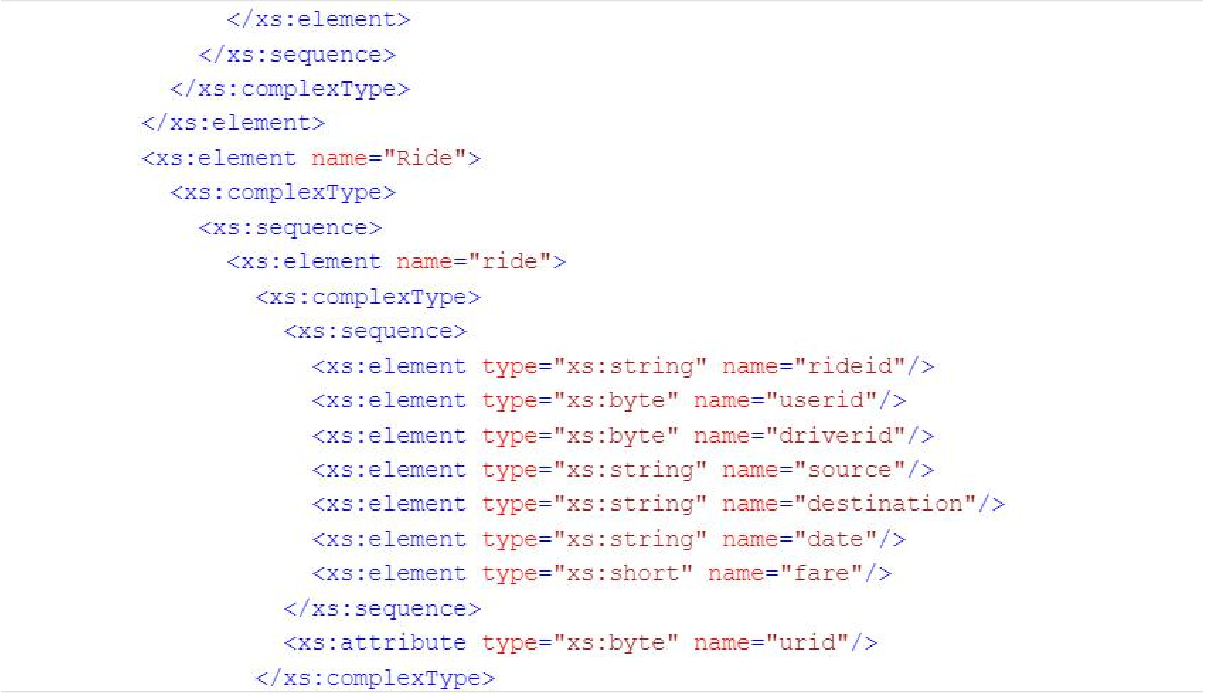


```xml
         <fare>250</fare>
      </ride>
   </Ride>
   <liveride>
      <live rid="1">
         <userid>2</userid>
         <source>Surat</source>
         <destination>Ahmedabad</destination>
         <date>09-08-2019</date>
         <fare>200</fare>
      </live>
   </liveride>
</CarpoolingSystem>
<!-- Add XML Data -->
```

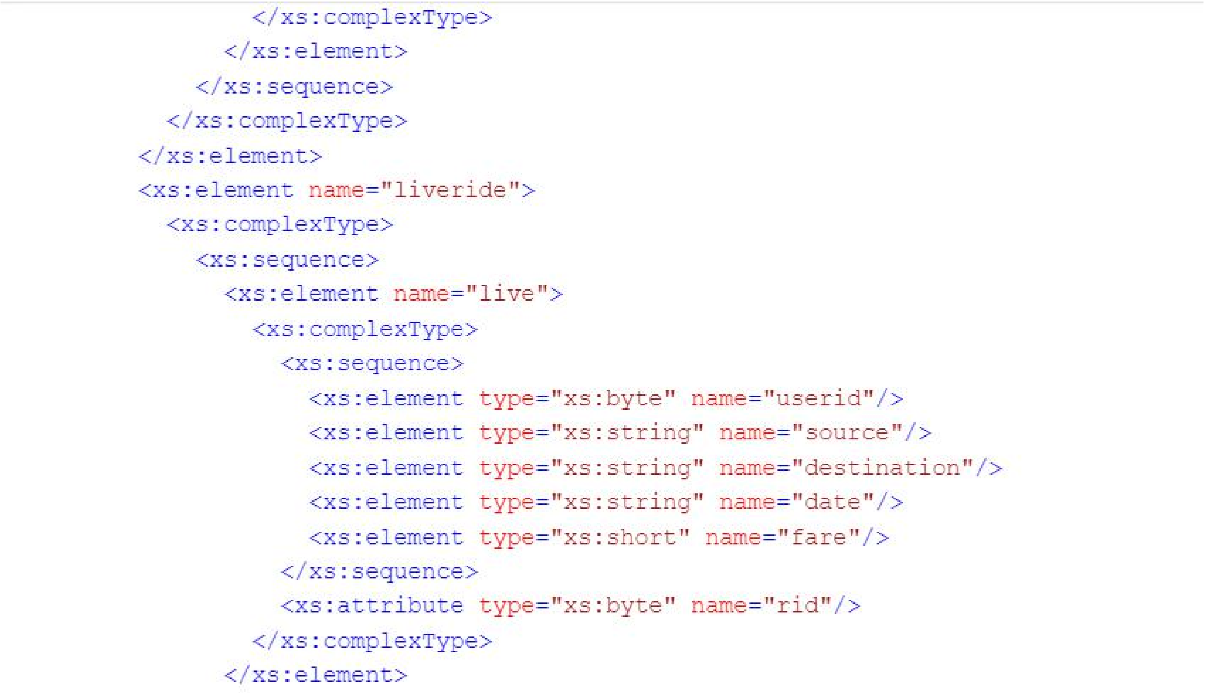
9.XSD



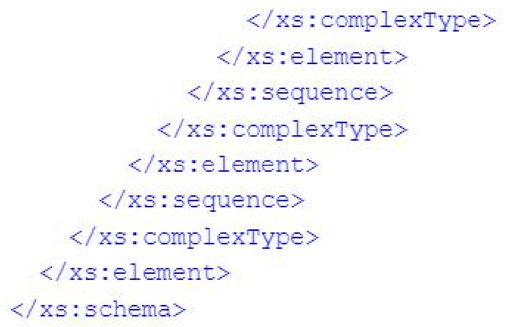
```
<xs:schema attributeFormDefault="unqualified" elementFormDefault="qualified"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="CarpoolingSystem">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="registration">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="user">
                <xs:complexType>
                  <xs:sequence>
                    <xs:element type="xs:string" name="uid"/>
                    <xs:element type="xs:string" name="Name"/>
                    <xs:element type="xs:string" name="email"/>
                    <xs:element type="xs:string" name="password"/>
                    <xs:element type="xs:long" name="mobileno"/>
                  </xs:sequence>
                  <xs:attribute type="xs:string" name="id"/>
                </xs:complexType>
```



```
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="Ride">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="ride">
                <xs:complexType>
                  <xs:sequence>
                    <xs:element type="xs:string" name="rideid"/>
                    <xs:element type="xs:byte" name="userid"/>
                    <xs:element type="xs:byte" name="driverid"/>
                    <xs:element type="xs:string" name="source"/>
                    <xs:element type="xs:string" name="destination"/>
                    <xs:element type="xs:string" name="date"/>
                    <xs:element type="xs:short" name="fare"/>
                  </xs:sequence>
                  <xs:attribute type="xs:byte" name="urid"/>
                </xs:complexType>
```

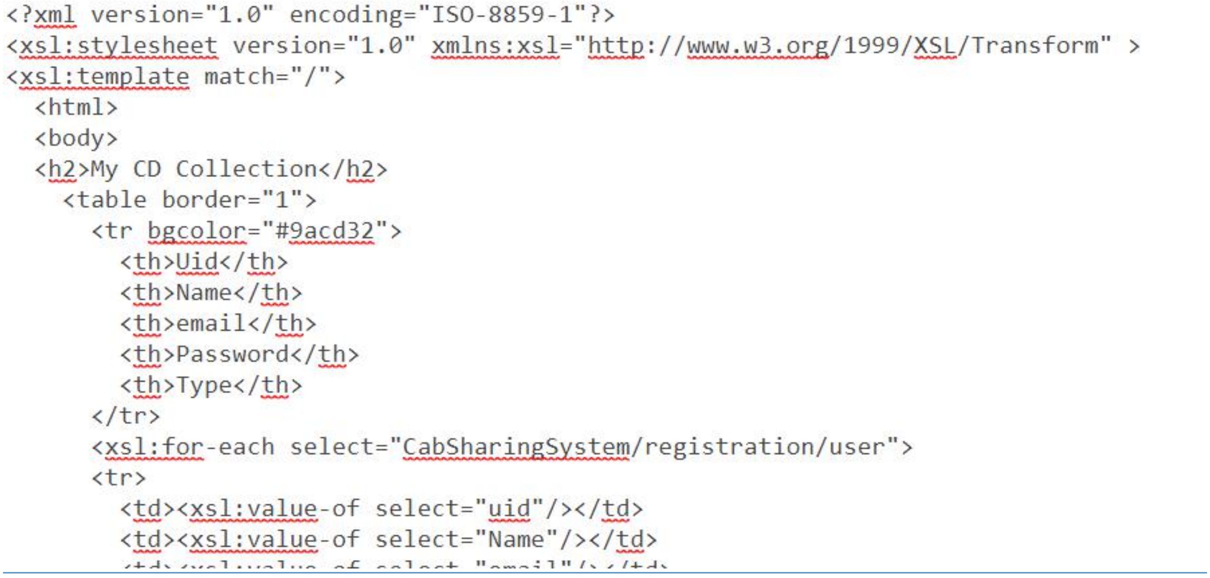


```
                </xs:complexType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="liveride">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="live">
                <xs:complexType>
                  <xs:sequence>
                    <xs:element type="xs:byte" name="userid"/>
                    <xs:element type="xs:string" name="source"/>
                    <xs:element type="xs:string" name="destination"/>
                    <xs:element type="xs:string" name="date"/>
                    <xs:element type="xs:short" name="fare"/>
                  </xs:sequence>
                  <xs:attribute type="xs:byte" name="rid"/>
                </xs:complexType>
              </xs:element>
```

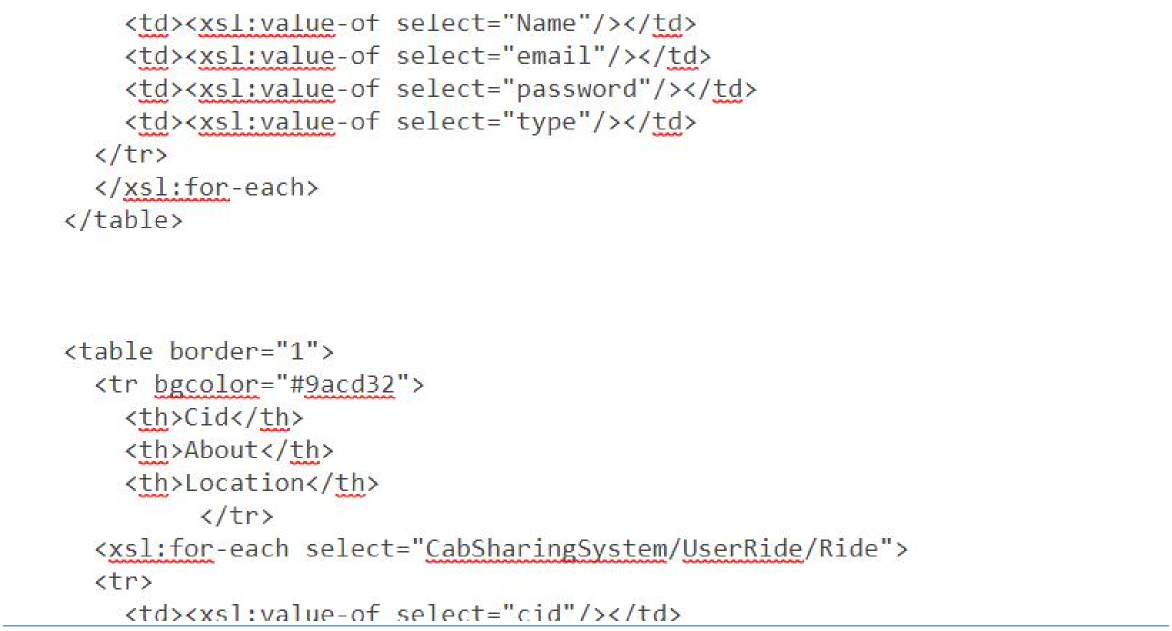


```
                </xs:complexType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

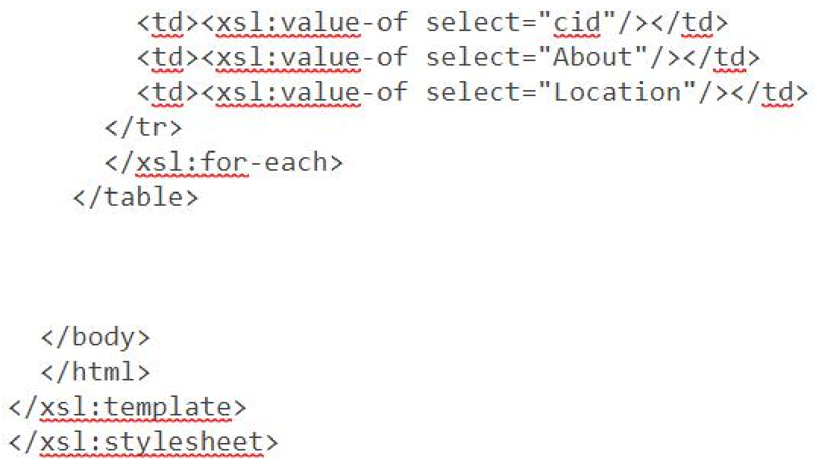
10.XSLT



```
<?xml version="1.0" encoding="ISO-8859-1"?>
<xsl:stylesheet version="1.0" xmlns:xsl="http://www.w3.org/1999/XSL/Transform" >
<xsl:template match="/">
  <html>
  <body>
  <h2>My CD Collection</h2>
    <table border="1">
      <tr bgcolor="#9acd32">
        <th>Uid</th>
        <th>Name</th>
        <th>email</th>
        <th>Password</th>
        <th>Type</th>
      </tr>
      <xsl:for-each select="CabSharingSystem/registration/user">
      <tr>
        <td><xsl:value-of select="uid"/></td>
        <td><xsl:value-of select="Name"/></td>
        <td><xsl:value-of select="email"/></td>
```



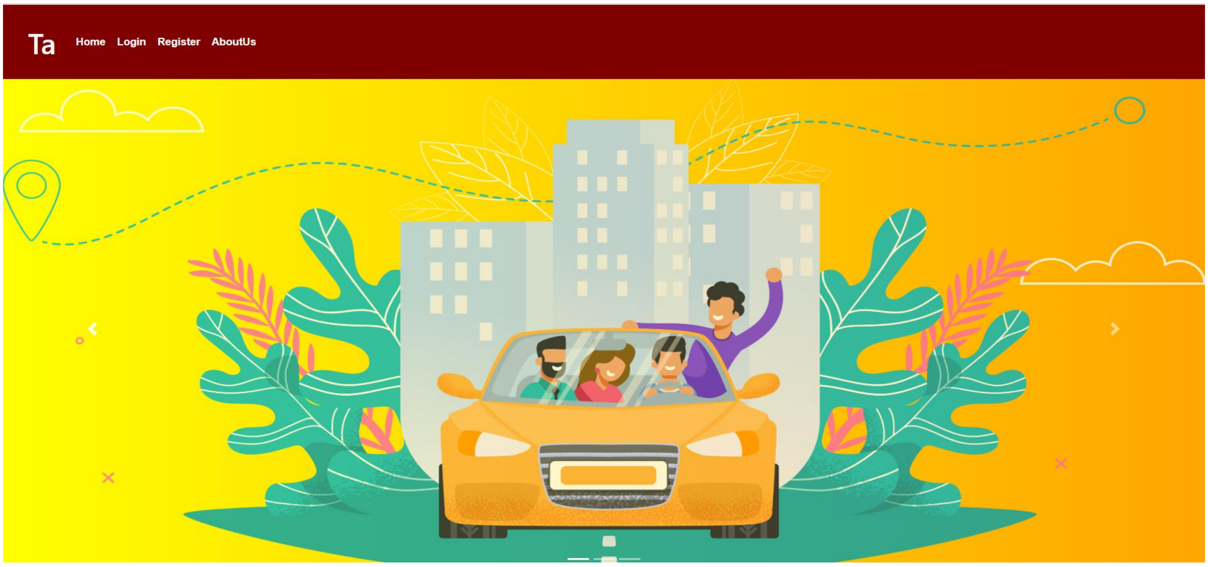
```
    <td><xsl:value-of select="Name"/></td>
    <td><xsl:value-of select="email"/></td>
    <td><xsl:value-of select="password"/></td>
    <td><xsl:value-of select="type"/></td>
  </tr>
  </xsl:for-each>
</table>



<table border="1">
  <tr bgcolor="#9acd32">
    <th>Cid</th>
    <th>About</th>
    <th>Location</th>
         </tr>
  <xsl:for-each select="CabSharingSystem/UserRide/Ride">
  <tr>
    <td><xsl:value-of select="cid"/></td>
```



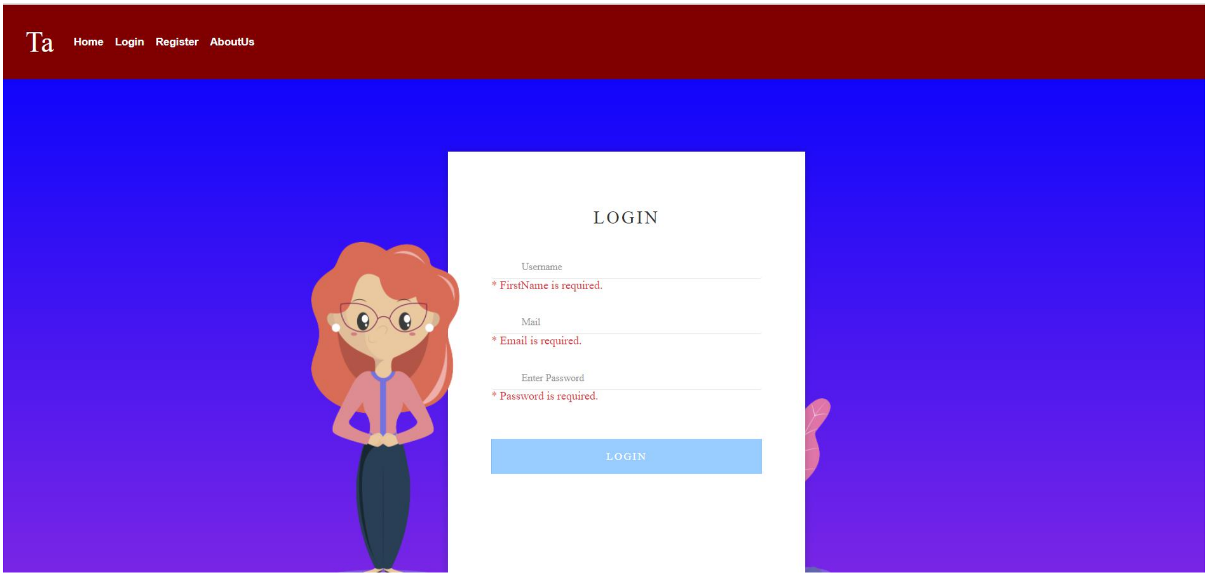
```
        <td><xsl:value-of select="cid"/></td>
        <td><xsl:value-of select="About"/></td>
        <td><xsl:value-of select="Location"/></td>
      </tr>
      </xsl:for-each>
    </table>



  </body>
  </html>
</xsl:template>
</xsl:stylesheet>
```

11.Screenshot

1. Homepage



2. Register/Login page



LOGIN

Username

* FirstName is required.

Mail

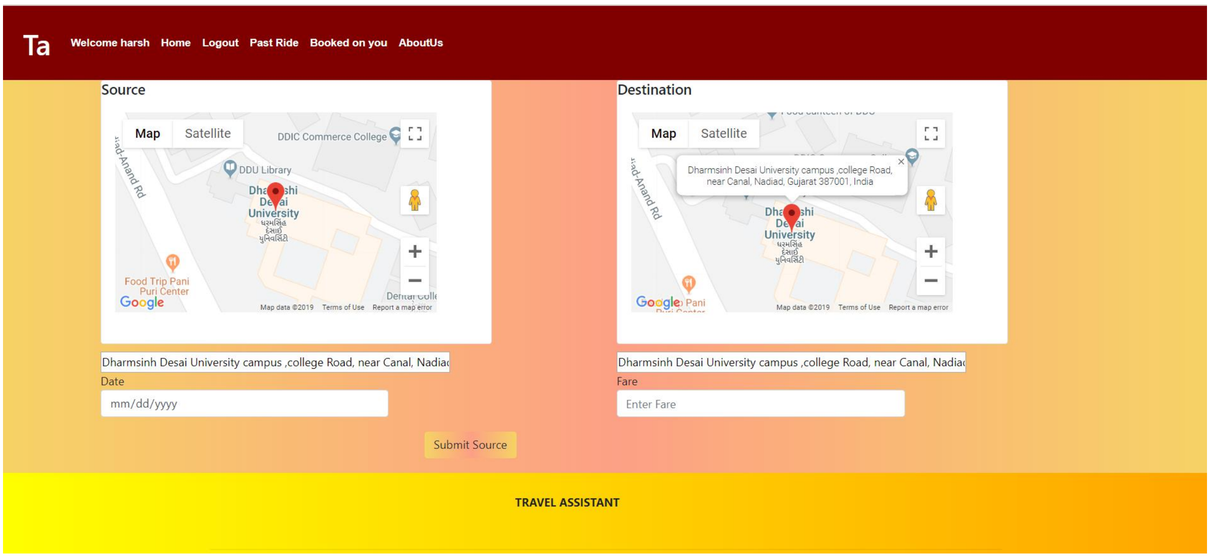
* Email is required.

Enter Password

* Password is required.

LOGIN

3. Offer Ride



Source

Dharmsinh Desai University campus ,college Road, near Canal, Nadiac

Date: mm/dd/yyyy

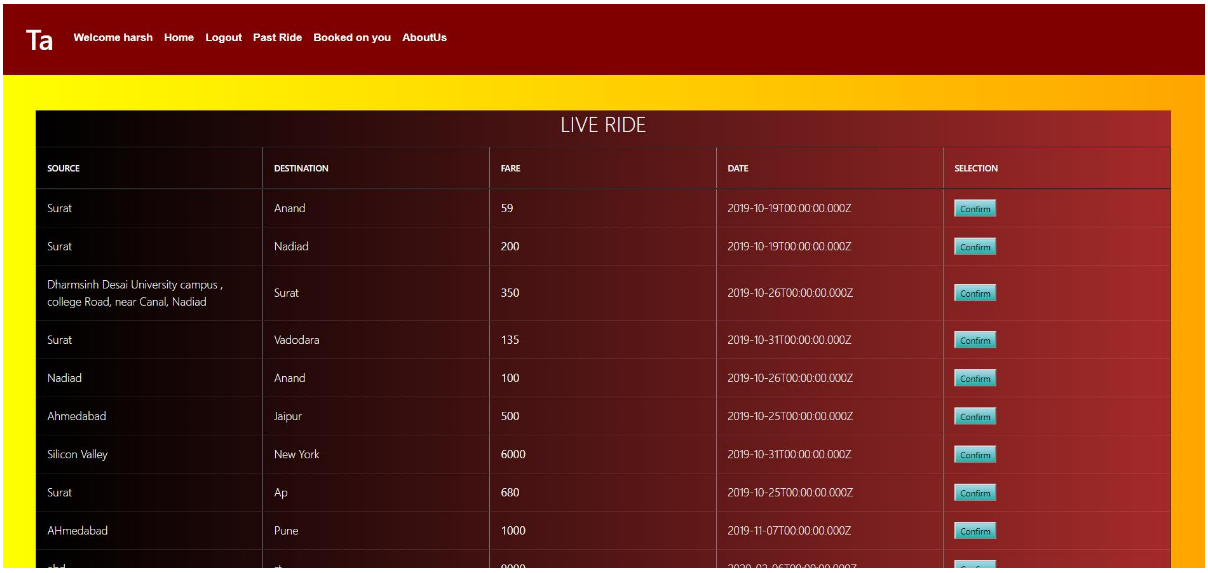
Destination

Dharmsinh Desai University campus ,college Road, near Canal, Nadiad, Gujarat 387001, India

Dharmsinh Desai University campus ,college Road, near Canal, Nadiac

Fare: Enter Fare

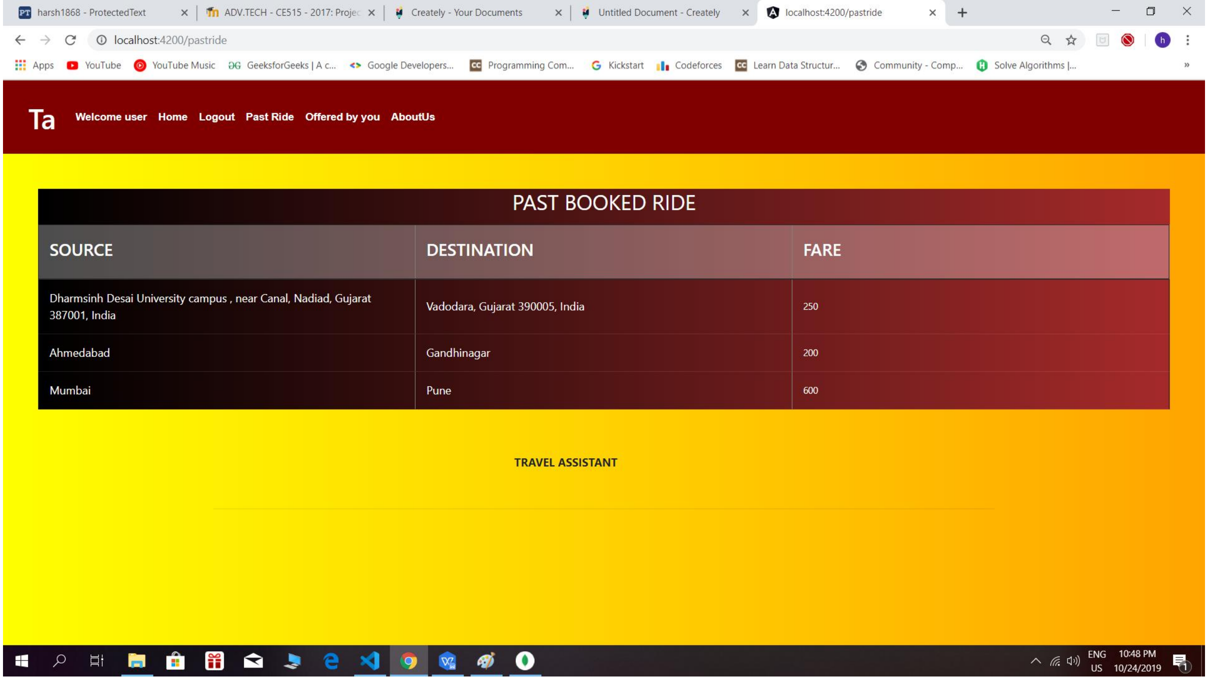
4. Find Ride and Confirm



LIVE RIDE

SOURCE	DESTINATION	FARE	DATE	SELECTION
Surat	Anand	59	2019-10-19T00:00:00.000Z	Confirm
Surat	Nadiad	200	2019-10-19T00:00:00.000Z	Confirm
Dharmsinh Desai University campus , college Road, near Canal, Nadiad	Surat	350	2019-10-26T00:00:00.000Z	Confirm
Surat	Vadodara	135	2019-10-31T00:00:00.000Z	Confirm
Nadiad	Anand	100	2019-10-26T00:00:00.000Z	Confirm
Ahmedabad	Jaipur	500	2019-10-25T00:00:00.000Z	Confirm
Silicon Valley	New York	6000	2019-10-31T00:00:00.000Z	Confirm
Surat	Ap	680	2019-10-25T00:00:00.000Z	Confirm
AHmedabad	Pune	1000	2019-11-07T00:00:00.000Z	Confirm
ahd	st	9000	2020-02-06T00:00:00.000Z	Confirm

5. Past Booked Ride

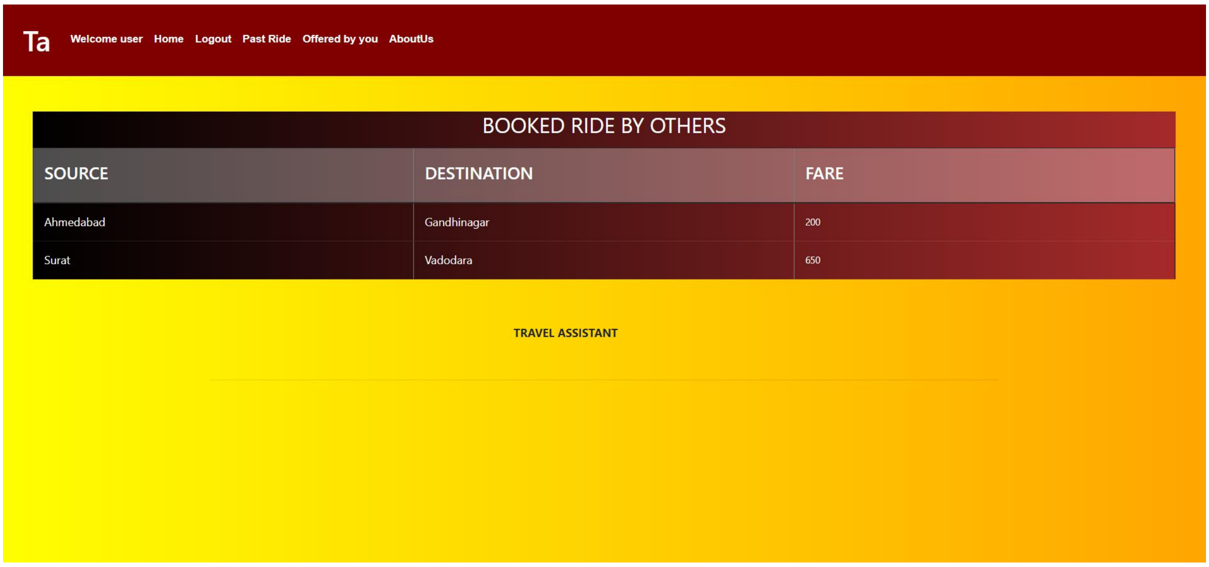


PAST BOOKED RIDE

SOURCE	DESTINATION	FARE
Dharmsinh Desai University campus , near Canal, Nadiad, Gujarat 387001, India	Vadodara, Gujarat 390005, India	250
Ahmedabad	Gandhinagar	200
Mumbai	Pune	600

TRAVEL ASSISTANT

6. Ride Offered by you

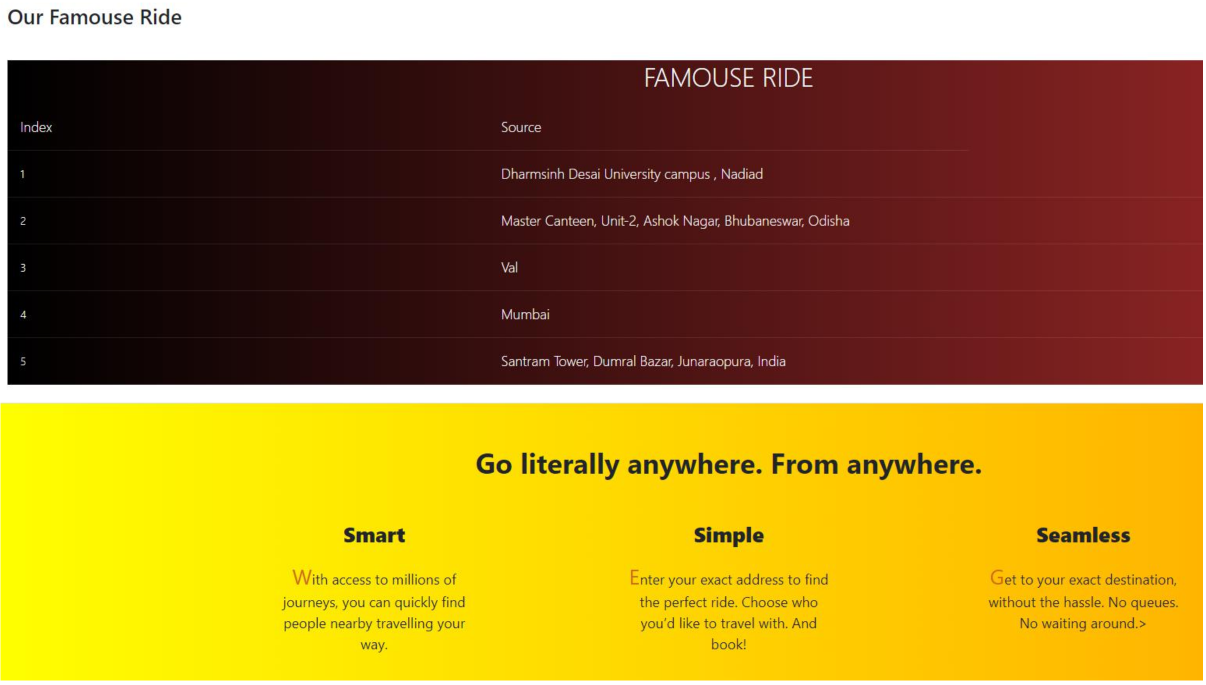


BOOKED RIDE BY OTHERS

SOURCE	DESTINATION	FARE
Ahmedabad	Gandhinagar	200
Surat	Vadodara	650

TRAVEL ASSISTANT

7. Famouse Ride



Our Famouse Ride

FAMOUSE RIDE

Index	Source
1	Dharmsinh Desai University campus , Nadiad
2	Master Canteen, Unit-2, Ashok Nagar, Bhubaneswar, Odisha
3	Val
4	Mumbai
5	Santram Tower, Dumral Bazar, Junaraopura, India

Go literally anywhere. From anywhere.

Smart

With access to millions of journeys, you can quickly find people nearby travelling your way.

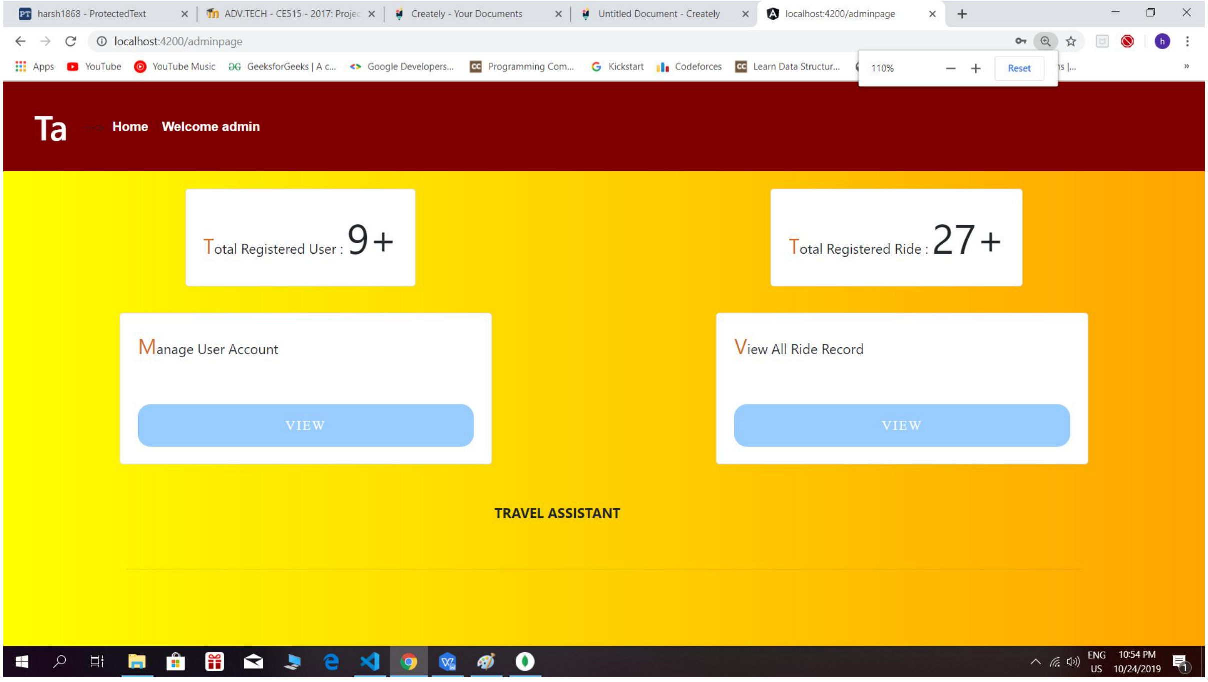
Simple

Enter your exact address to find the perfect ride. Choose who you'd like to travel with. And book!

Seamless

Get to your exact destination, without the hassle. No queues. No waiting around.>

8. Admin page



Ta Home Welcome admin

Total Registered User : 9+

Total Registered Ride : 27+

Manage User Account

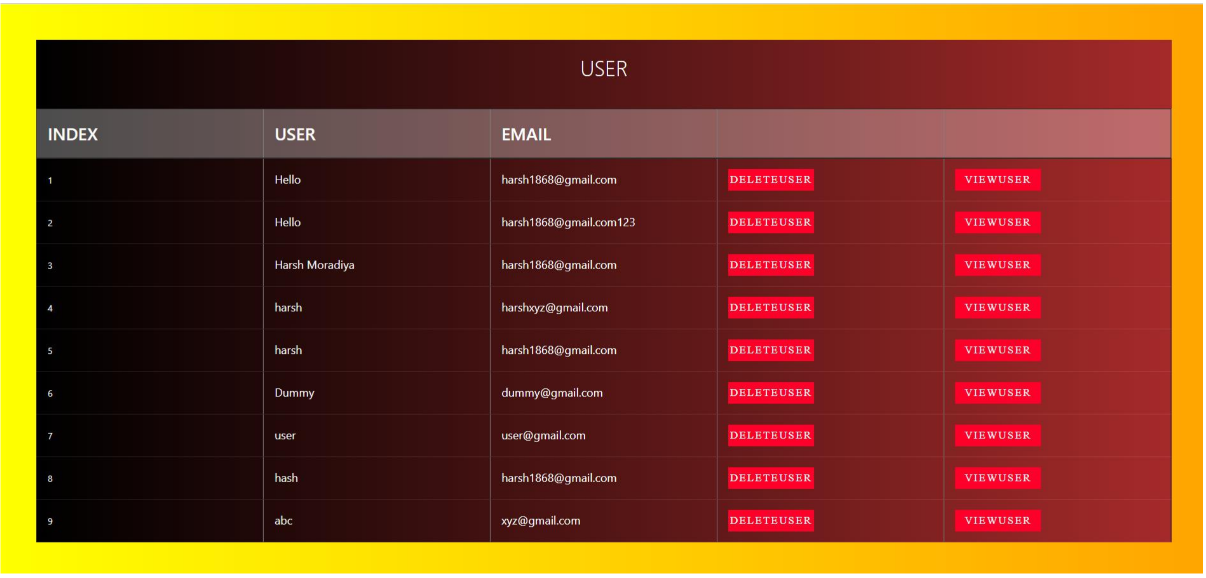
VIEW

View All Ride Record

VIEW

TRAVEL ASSISTANT

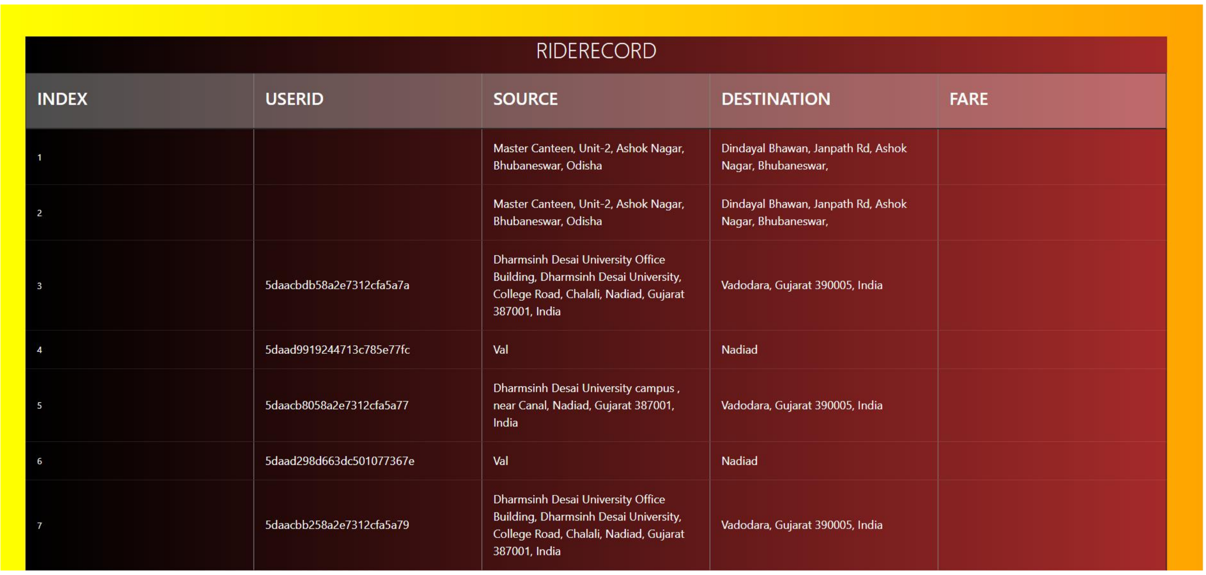
9. Manage User



USER

INDEX	USER	EMAIL		
1	Hello	harsh1868@gmail.com	DELETEUSER	VIEWUSER
2	Hello	harsh1868@gmail.com123	DELETEUSER	VIEWUSER
3	Harsh Moradiya	harsh1868@gmail.com	DELETEUSER	VIEWUSER
4	harsh	harshxyz@gmail.com	DELETEUSER	VIEWUSER
5	harsh	harsh1868@gmail.com	DELETEUSER	VIEWUSER
6	Dummy	dummy@gmail.com	DELETEUSER	VIEWUSER
7	user	user@gmail.com	DELETEUSER	VIEWUSER
8	hash	harsh1868@gmail.com	DELETEUSER	VIEWUSER
9	abc	xyz@gmail.com	DELETEUSER	VIEWUSER

10. 10.View all ride history



RIDERECORD

INDEX	USERID	SOURCE	DESTINATION	FARE
1		Master Canteen, Unit-2, Ashok Nagar, Bhubaneswar, Odisha	Dindayal Bhawan, Janpath Rd, Ashok Nagar, Bhubaneswar,	
2		Master Canteen, Unit-2, Ashok Nagar, Bhubaneswar, Odisha	Dindayal Bhawan, Janpath Rd, Ashok Nagar, Bhubaneswar,	
3	5daacbdb58a2e7312cfa5a7a	Dharmsinh Desai University Office Building, Dharmsinh Desai University, College Road, Chalali, Nadiad, Gujarat 387001, India	Vadodara, Gujarat 390005, India	
4	5daad9919244713c785e77fc	Val	Nadiad	
5	5daacb8058a2e7312cfa5a77	Dharmsinh Desai University campus , near Canal, Nadiad, Gujarat 387001, India	Vadodara, Gujarat 390005, India	
6	5daad298d663dc501077367e	Val	Nadiad	
7	5daacbb258a2e7312cfa5a79	Dharmsinh Desai University Office Building, Dharmsinh Desai University, College Road, Chalali, Nadiad, Gujarat 387001, India	Vadodara, Gujarat 390005, India	

12.Limitation and Future Extension

Limitations

1. User can not filter Ride by distance of their location or specific source to destination.So user need to check all the records
2. Once the request is made to the driver by the user,driver needs to communicate with customer by contact number which will be provided by help team. They can not further communicate via application.
3. At time of offering ride,it is possible that you can not get exact label by marker on map so some time we need to type manually Source and destination
4. No options available in application for the online payment.

Future Extension

1. Filter operation will be improved to provide best GUI to user
2. Map facility will be created accurately and using distance matrix we will provide distance between source and destination
3. Provide functionality that allows user to track booked car based on gps and for online payment.
4. Provide Platform for communication between customer and workers.
5. Allow user to cancel or update request even after it has been confirmed and notify respective driver about changes
6. 6.Implement Rating And Review mechanism to allow user to add reviews and ratings to respective driver and ride.

13.Testing

After the implementation and coding of system,comprehensive testing was performed on the system to determine possible flaws in system and loopholes of system. The testing was performed using postman as Tool,Through which we can directly pass data in JSON format as Request Data in URL.Post request can not be directly send to server but using postman we can also send a POST request.

14.Conclusion

The functionality of this system is developed after understanding whole system flow and all module and it is as per requirement.

The functionality which were successfully implemented :

1. Registration/Login
2. Offer Ride : based on google map or manually entering source and destination
3. Find Ride : Confirm ride by confirming from display list
4. View past booked ride
5. View Offered ride
6. Manage user account
7. View full profile in admin site

15.Bibliography

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