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Vellore Institute of Technology

(Deemed to be University under section 3 of UGC Act, 1956)

A project report on

BIKE RENTAL WEB AND ANDROID APP

Submitted towards jth component of the course

Mobile Application Development – ITE1016

handled by

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submitted by

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ABSTRACT

Bike sharing systems offer a low cost and environmentally friendly mean of transportation for short travels. It can also be used as a complementary mode to other public transit such as buses, local trains. Bike sharing systems combine the advantages of public and private transportation to better exploit the given transportation infrastructure. This will be an android application which will provide both sharing and rental service. A key aspect of this system is that it does not involve intermediaries between users and bike: reserving, acquiring and releasing a bike are all done automatically through software running on the system of user's smartphone. It will provide bikes for short-term trips on sharing basis and bike on rent. A typical bike-sharing system includes a communal stock of sturdy, low-maintenance bikes distributed over a network of parking stations. From an individual person's point of view, bike-share systems eliminates the inconvenience of bike ownership, the need to find parking places, and the fear of theft. It helps in reducing traffic congestion as number of vehicles on road can be reduced significantly.

KEYWORDS : *transportation infrastructure, android application, short-term trips, stock of sturdy, traffic congestion*

INTRODUCTION

Bike sharing systems are the key to sustainable mobility. They need to possess adaptation features to answer the different user needs, and must be automated to avoid intermediaries between users and system. It can also be used as a complementary mode to other public transit such as buses, local trains. Each station is a different product, the distance to a station and the bike-availability are main characteristics, and the set of stations with available bikes is the consumer's choice set. This choice is made by the traveller, according to his distance from the different station. The stations that are geographically close and that are likely to be visited successively within the same route in such cases sharing system will be used. Bike-share systems eliminates the inconvenience of bike ownership, the need to find parking places, and the fear of theft. A key aspect of this system is that it does not involve intermediaries between users and bike: reserving, acquiring and releasing a bike are all done automatically through software running on the system of user's smartphones. The paper is organized as follows: Section II is about literature survey. Section III discusses the experimental results. Section IV is about the architecture of an android application and security in this bike sharing and rental system. Section V contains future scope and conclusion.

LITERATURE SURVEY

A. First Generation

The bike sharing began in Amsterdam with the first generation of White Bikes (Witte Fietsen). These were ordinary bikes, painted in white and provided free of charge for public use. The principle was that anybody could find a bike, use it and leave it to the next user. But things did not go as expected: bikes were stolen and kept for private use.

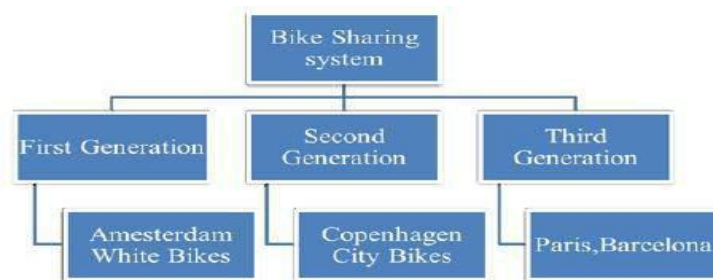


Fig. 1 Bike sharing programs adopted in the countries

B. Second Generation

The second generation of bike-sharing program was born in Farsø and Grenå, and Nakskov, Denmark, respectively. Although these programs were small, as Nakskov had 26 bikes at 4 stations, the first large scale example of the second generation of bike sharing program was developed in Copenhagen. It was named as city bikes.

C. Third Generation

The third generation of bike-sharing program was born at Portsmouth University, England, by the name of Bikeabout. This third generation became smarter due to technological improvements including electronically-locking racks or bike locks, telecommunication systems, smartcards and fobs, mobile phone access. Fig.1 shows Bike Sharing programs adopted in the countries. In April 2013 there were 535 programs with an estimated fleet of 517.000 bikes and 750 stations, which expanded to 23.600 bikes in a few years. The success of these last programs brought the bike sharing concept to a whole new level. Starting in 2008, bike sharing systems started diffusing also outside Europe, reaching Brazil, Chile, China, New Zealand, South Korea, Taiwan and the U.S. Wuhan and Hangzhou of China are the two largest in the world, with respectively 90000 and 20000 bikes. While outside of China the largest program is Vélib in Paris with around 20000 bicycles and Citi Bike in New York is the largest bike sharing program in the United States with 5000 bikes.

EXPERIMENTAL RESULTS

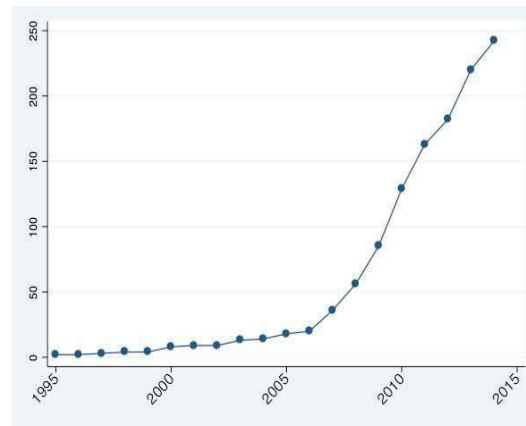


Fig. 3 Number of Bike sharing program

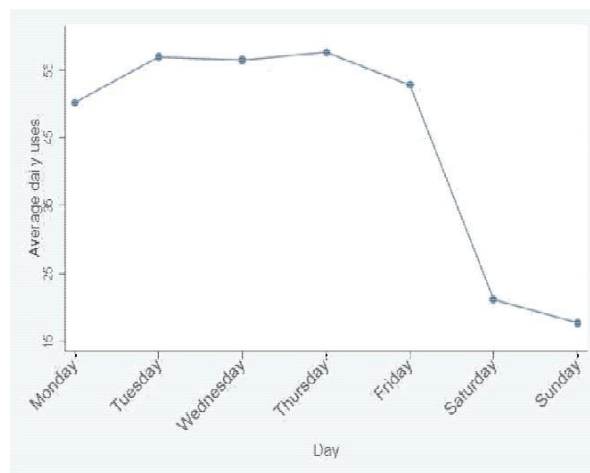


Fig.4 Average daily uses per day of the week

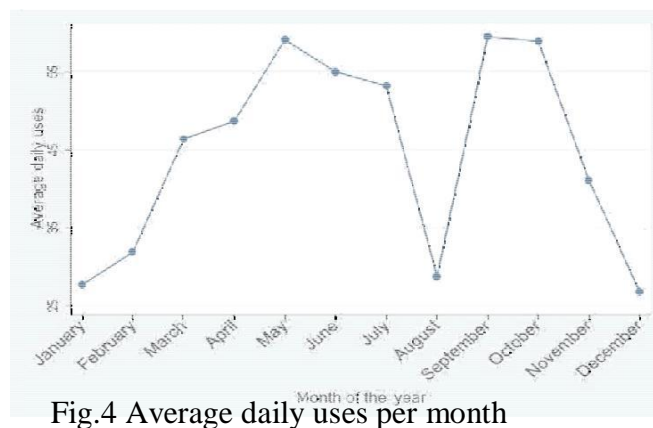
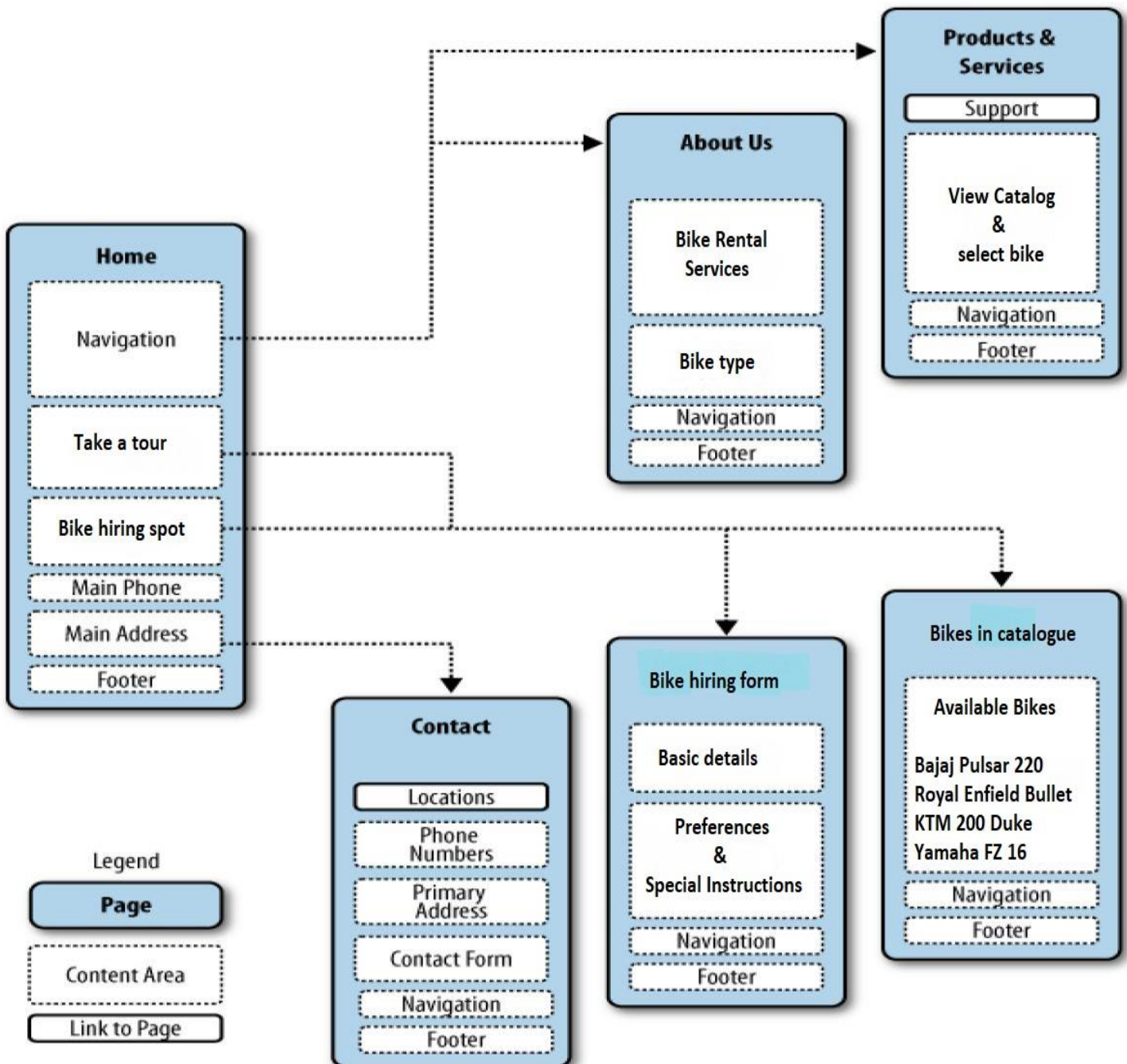


Fig.4 Average daily uses per month

SITE MAP



RELATED WORK :

The rise of bike rental startups in India has brought an excellent opportunity for all the bike enthusiasts to travel across the country comfortably, conveniently and affordably. Now people can explore a new city on a rented bike of their choice, which allows them to enjoy a joyful ride experience without worrying about the bike maintenance hassles.

The companies offering bike rental services enable people to choose a fully serviced bike from a varied range in a few simple taps.

The market for online bike rental business is growing at an encouraging pace. An increasing number of startups are taking interest in building successful bike rental platforms with unique offerings.

The bike enthusiasts and travelers are the main target audience of such bike rental startups. The adventure enthusiasts love riding bikes and exploring new places. Owning a premium bike like Royal Enfield, Duke KTM or Harley Davidson can cost a lot. Such people like the concept of renting a bike and taking the ride whenever needed. To stand out from their competitors, the companies have started providing related rental services for products such as biker jackets, gloves, cameras, gears etc. Not only for traveling purposes, people are opting for bike rental services for personal and work commute as well. The market for two-wheeler rental startups in India has abundant opportunities.

Let's have a look at some of the popular bike rental appplatforms/marketplaces in India currently.

- Wheelstreet. Wheelstreet is one of the most popular bike rental startups in India and works on an aggregated fleet business model.
- RentOnGo
- ZipHop
- Wicked Ride
- RenTrip
- Snapbikes
- Drive On Rent
- RentoMojo.

PROPOSED SYSTEM :

1) Documents Verification: Documents of both user and provider will be verified such as pan card, driving licence, mobile number by sending OTP on mobile.

2) During Travelling

Gender Problem

In sharing, only male with male & female with female will be allowed.

B. Accident Problem

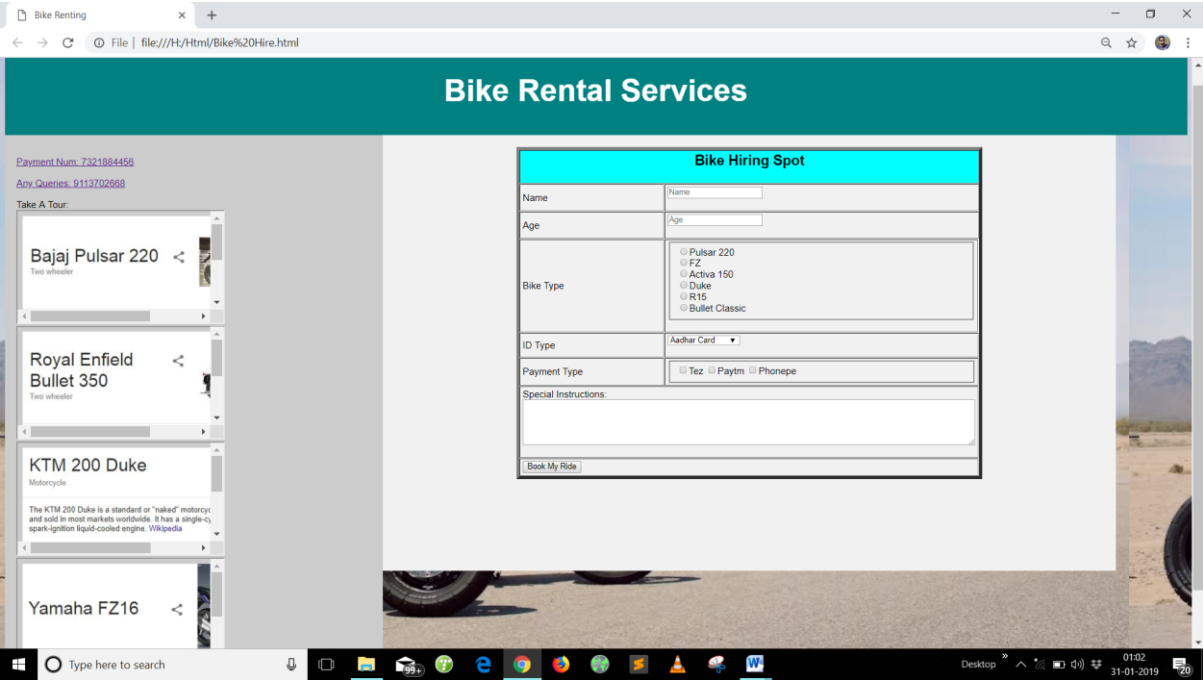
There will be an emergency button provided in an application, by pressing that button, Customer/Driver will send message to Admin, Relative, Ambulance, Police, Bike Provider for help system. The location will be tracked with the help of gps.

1) External Attacks. When max time limit expires, then admin will message to user and driver if he doesn't get response, then he will wait for some time, after crossing time limit he will message to police for mishappening.

2) Journey Completion: After completion of ride, both driver and customer will click on "Submit" button at the same time, and that notification will go to admin.

3) Max Time Limit: There will be time limit for every journey. If any journey does not conclude within specified time limit. Then admin will call to driver and user to know about the situation.

WEBSITE SCREENSHOT



| Bike Hiring Spot | |
|--------------------------------------|---|
| Name | <input type="text" value="Name"/> |
| Age | <input type="text" value="Age"/> |
| Bike Type | <div><input type="radio"/> Pulsar 220 <input type="radio"/> FZ <input type="radio"/> Activa 150 <input type="radio"/> Duke <input type="radio"/> R15 <input type="radio"/> Bullet Classic</div> |
| ID Type | <div>Aadhar Card ▾</div> |
| Payment Type | <div><input type="checkbox"/> Tez <input type="checkbox"/> Paytm <input type="checkbox"/> Phonepe</div> |
| Special Instructions: <div></div> | |
| <div>Book My Ride</div> | |

Royal Enfield Bullet 350

Two wheeler



Displacement (cc): 346
Fuel tank capacity (litre): 13.5
Engine type: Single cylinder, 4 stroke, twin spark
Starting method: Kick start
Kerb weight (kg): 180
Dimensions (mm): 2140 x 800 x 1030

Bajaj Pulsar 220

Two wheeler



Ex-showroom price in Rs. (subject to change): From 90,083 to 97,651
Displacement (cc): 220
Fuel tank capacity (litre): 15
Engine type: 4-stroke, DTS-i, oil cooled, single cylinder
Kerb weight (kg): 150
Dimensions (mm): 2035 x 750 x 1165

Yamaha FZ16



The Yamaha FZ16 is a standard motorcycle made by Yamaha since 2008. The FZ16 is modeled after the larger FZ1 with a scaled down engine capacity. The FZ16 is primarily sold in India, and other markets such as Indonesia, Colombia and Argentina. [Wikipedia](#)

Yamaha YZF-R15

Motorcycle



The Yamaha YZF-R15 is a single cylinder sport bike made by Yamaha Motor Company since 2008. In September 2011, the second iteration, called v2.0, was released in India, and in April 2014 it was released in Indonesia. [Wikipedia](#)

Ex-showroom price in Rs. (subject to change): From 1,18,838 to 1,20,343
Displacement (cc): 149
Fuel tank capacity (litre): 12
Engine type: Liquid-cooled, 4-stroke, SOHC, 4-valve
Starting method: Electric start
Kerb weight (kg): 136

KTM 200 Duke

Motorcycle



The KTM 200 Duke is a standard or "naked" motorcycle made by KTM and sold in most markets worldwide. It has a single-cylinder, four-stroke, spark-ignition liquid-cooled engine. [Wikipedia](#)

Displacement (cc): 199.5
Fuel tank capacity (litre): 11
Engine type: 1-cylinder, 4-stroke engine
Starting method: Electric start
Kerb weight (kg): 129.5 (Without fuel)
Seat height: 81 cm

Activa 150

Aprilia SR 150 vs Honda Activa 125. ... The claimed mileage for the Aprilia SR 150 is 37.9 kmpl and for the Honda Activa 125 is 60 kmpl.
Engine Displacement (CC): 154.8 CC
Torque (Nm@rpm): 11.4 Nm @ 5000 rpm
Drive Type: Belt Drive

CODE :

```
<html>

<Head></head>

<title > Bike Renting</title>

<Body background=01.jpg>

<style>

{

    box-sizing: border-box;

}

body {

    font-family: Arial, Helvetica, sans-serif;

}

header {

    background-color: #008080;

    padding: 2px;

    text-align: center;

    font-size: 35px;

    color: white;

}

nav {

    float: left;

    width: 30%;

    height: 920px;

    background: #ccc;

    padding: 20px;

}
```

```
nav ul {  
    list-style-type: none;  
    padding: 0;  
}  
article {  
    float: left;  
    padding: 20px;  
    width: 60%;  
    background-color: #f1f1f1;  
    height: 700px;  
}  
section:after {  
    content: "";  
    display: table;  
    clear: both;  
}  
}  
@media (max-width: 600px) {  
    nav, article {  
        width: 100%;  
        height: auto;  
    }  
}  
</style>  
</head>
```

<header>

<h2>Bike Rental Services</h2>

</header>

<section>

<nav>

Payment Num: 7321884456

Any Queries: 9113702668

Take A Tour:

<iframe src="pulsar.html" height="190" width="350">kjjjjkj</iframe>

<iframe src="bullet.html" height="190" width="350">kjjjjkj</iframe>

<iframe src="duke.html" height="190" width="350">kjjjjkj</iframe>

<iframe src="fz.html" height="190" width="350">kjjjjkj</iframe>

</nav>

<article>

<table border="5" cellpadding="4" align=center>

<tr>

<th colspan="4" style="background-color: #00FFFF"><h2>Bike Hiring Spot</h2></th> </tr>

<tr>

<td>Name</td>

<td colspan="3">

<form >

<input type="maxlength" name="username" placeholder="Name">

</form>

</td>

</tr>

<tr>

<td>Age</td>

<td colspan="3">

<form >

<input type="text" name="username" placeholder="Age">

</form> </td></tr>

<tr>

<td >Bike Type</td>

<td >

<form>

<fieldset>

<input type="radio" name="Bike Type" value="Pulsar 220">Pulsar 220</br>

<input type="radio" name="Bike Type" value="FZ">FZ</br>

<input type="radio" name="Bike Type" value="Activa 150">Activa 150</br>

<input type="radio" name="Bike Type" value="Duke">Duke</br>

<input type="radio" name="Bike Type" value="R15">R15</br>

<input type="radio" name="Bike Type" value="Bullet Classic">Bullet Classic</br>

</fieldset>

</form> </td></tr><tr>

<td>ID Type</td>

<td colspan="2">

<form>

<select name="ID Type">

<option value="Aadhar Card">Aadhar Card</option>

<option value="College ID Card">College ID Card</option>

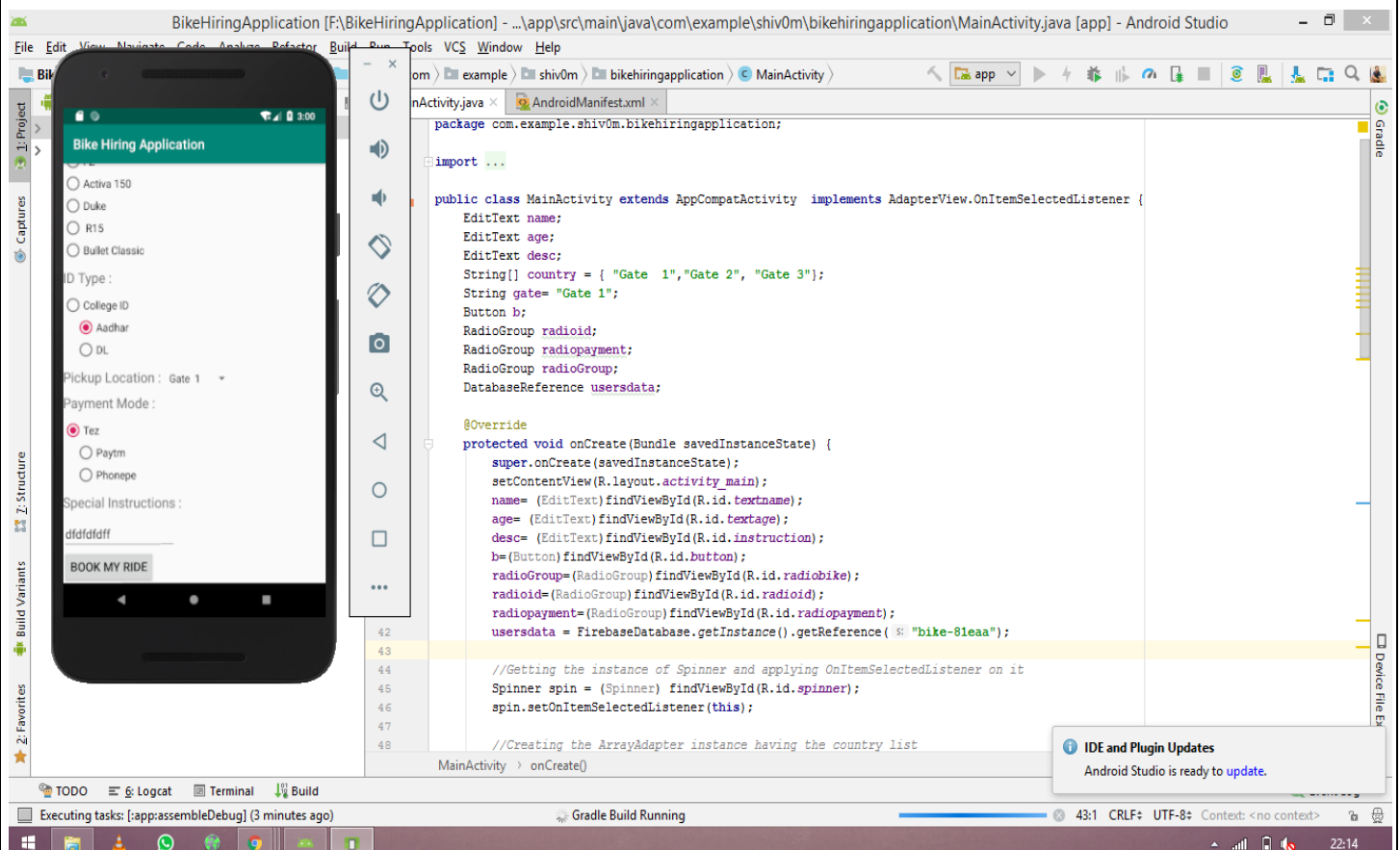
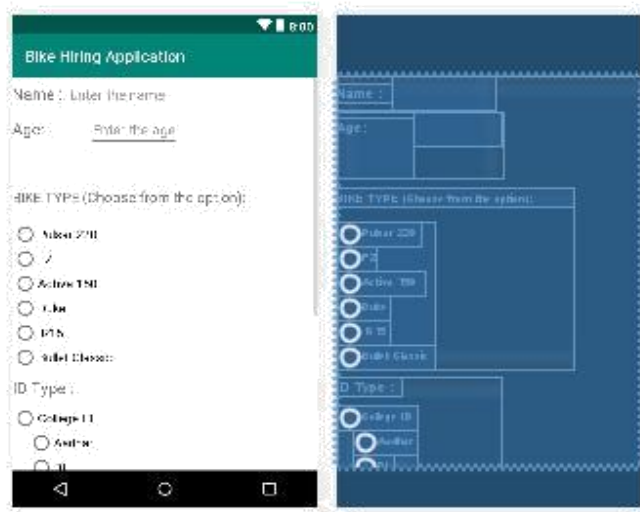
<option value="Driving License">Driving License</option>

```

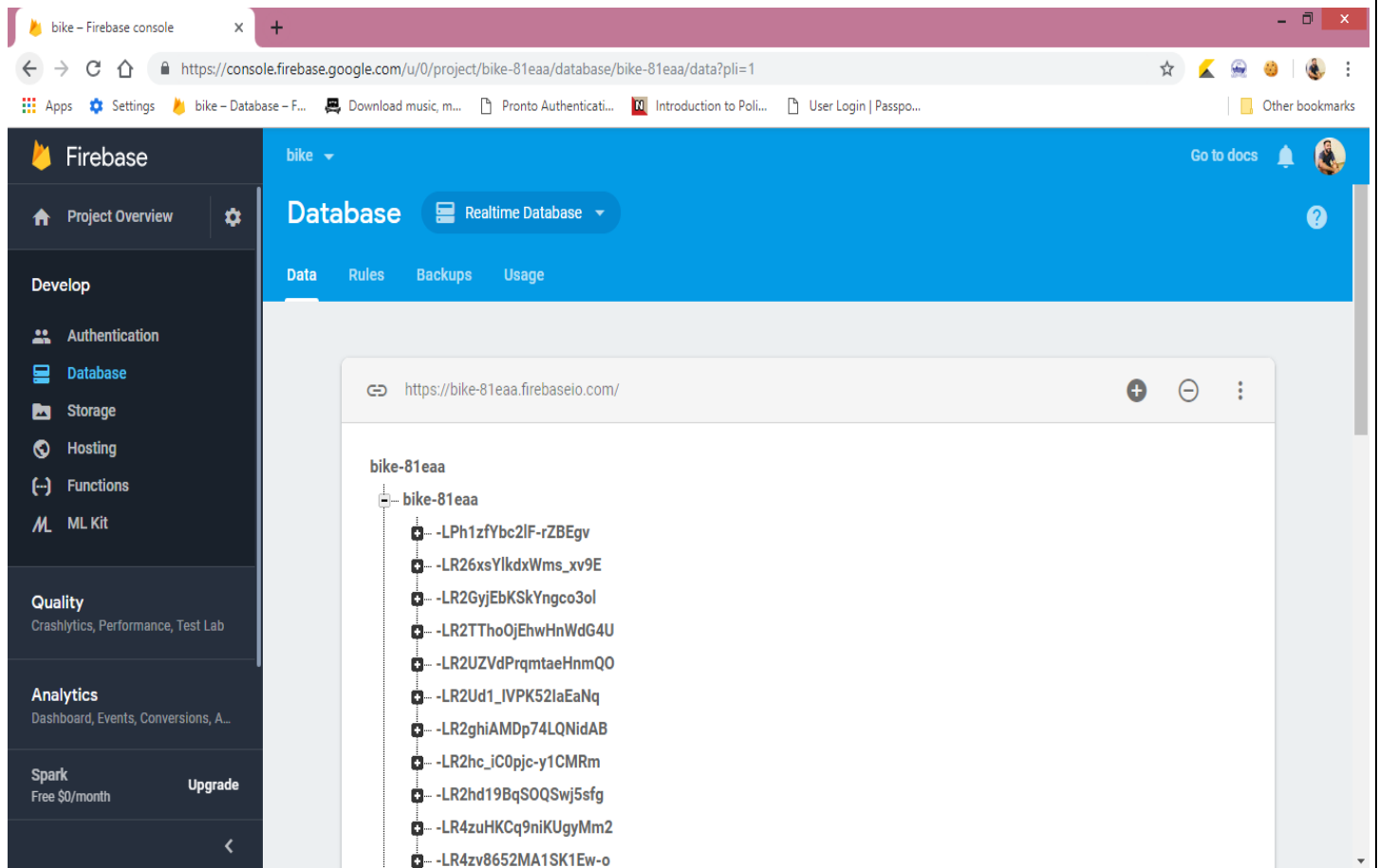
</form> </td></tr><tr>
<td>Payment Type</td>
<td colspan="2">
<form>
<fieldset>
<input type="checkbox" name="Tez" value="Tez">Tez
<input type="checkbox" name="Paytm" value="Paytm">Paytm
<input type="checkbox" name="Phonepay" value="Phonepe">Phonepe </fieldset>
</form>
</td> </tr><tr>
<td colspan=3>Special Instructions:
<form>
<textarea cols=100 rows=5 placeholder="Please provide any kind of special requirements!">
</textarea>
</form>
</td> </tr><tr>
<td colspan=3><button onclick="myFunction()">Book My Ride</button>
<script>
function myFunction() {
    alert("Ride Booked !!");
}
</script></td></tr>
</table>
</article>
</section>
</body>
</html>

```

APP SCREENSHOTS :



DATABASE SCREENSHOTS : Firebase

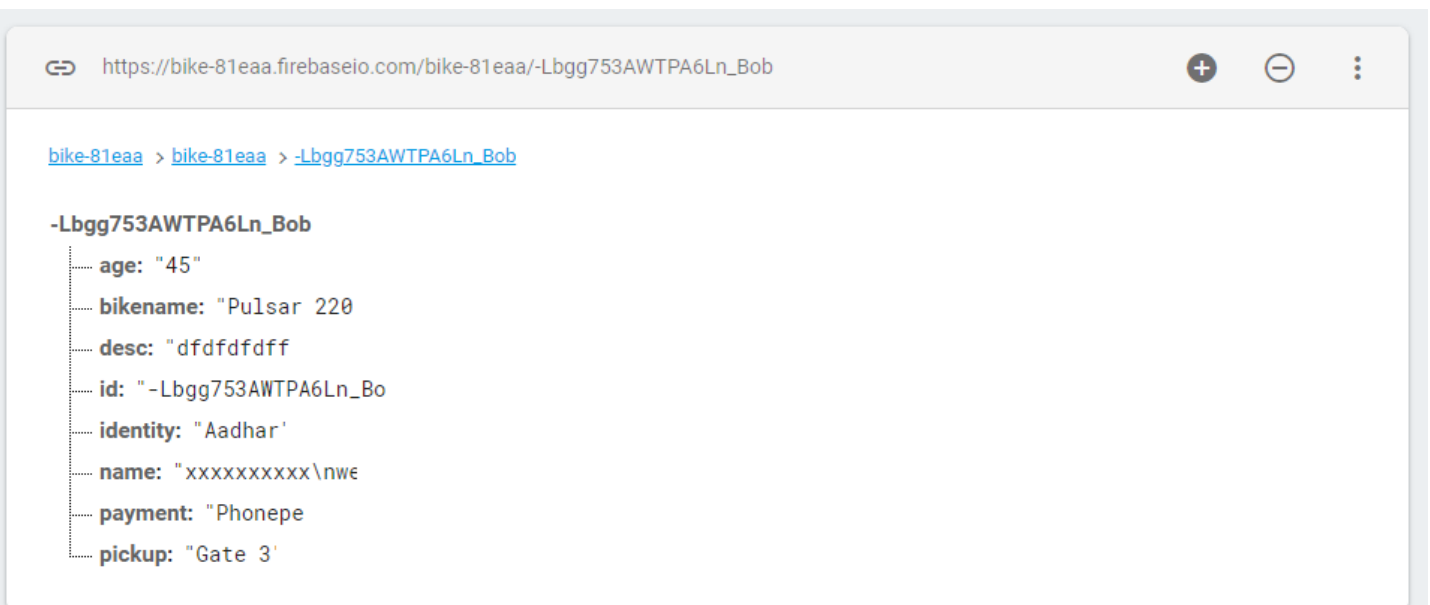


The screenshot shows the Firebase console interface for a project named 'bike'. The left sidebar contains navigation links for Project Overview, Develop (Authentication, Database, Storage, Hosting, Functions, ML Kit), Quality, Analytics, and Spark. The main content area is titled 'Database' and shows the 'Realtime Database' structure. The database is named 'bike-81 eaa' and contains a single node with the same name, which is expanded to show a list of 15 child nodes, each with a unique key and a value.

URL: <https://console.firebase.google.com/u/0/project/bike-81 eaa/database/bike-81 eaa/data?pli=1>

Database Structure:

- bike-81 eaa
 - LPh1zfYbc2lF-rZBEgv
 - LR26xsYlkdxWms_xv9E
 - LR2GyjEbKSkYngco3ol
 - LR2TThoOjEhwHnWdG4U
 - LR2UZVdPrqmtaeHnmQO
 - LR2Ud1_IVPK52laEaNq
 - LR2ghiAMDp74LQnIdAB
 - LR2hc_iC0pjc-y1CMRm
 - LR2hd19BqSOQSwj5sfg
 - LR4zuHKCq9niKUgyMm2
 - LR4zv8652MA1SK1Ew-o



The screenshot shows the Firebase console interface for a specific database entry. The URL bar shows the path to the entry: https://bike-81 eaa.firebaseio.com/bike-81 eaa/-Lbgg753AWTPA6Ln_Bob. The entry is expanded to show its JSON structure, which includes fields for age, bikename, desc, id, identity, name, payment, and pickup.

URL: https://bike-81 eaa.firebaseio.com/bike-81 eaa/-Lbgg753AWTPA6Ln_Bob

Database Entry:

```
-Lbgg753AWTPA6Ln_Bob
  age: "45"
  bikename: "Pulsar 220"
  desc: "dfdfdfdf"
  id: "-Lbgg753AWTPA6Ln_Bo"
  identity: "Aadhar"
  name: "xxxxxxxxxx\nwe"
  payment: "Phonepe"
  pickup: "Gate 3"
```


Code :

Main Activity.XML

```
<?xml version="1.0" encoding="utf-8"?>

<ScrollView xmlns:android="http://schemas.android.com/apk/res/android"

    xmlns:tools="http://schemas.android.com/tools"

    android:id="@+id/ScrollView01"

    android:layout_width="fill_parent"

    android:layout_height="fill_parent">

    <LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"

        xmlns:app="http://schemas.android.com/apk/res-auto"

        xmlns:tools="http://schemas.android.com/tools"

        android:layout_width="match_parent"

        android:layout_height="match_parent"

        android:orientation="vertical"

        android:scrollbarAlwaysDrawVerticalTrack="true"

        android:scrollbars="vertical"

        tools:context=".MainActivity" >

        <LinearLayout

            android:layout_width="wrap_content"

            android:layout_height="wrap_content"

            android:orientation="horizontal">

            <TextView

                android:id="@+id/name"

                android:layout_width="wrap_content"

                android:layout_height="wrap_content"
```

```
        android:text="Name : "  
        android:textSize="20dp" />
```

```
<EditText
```

```
    android:id="@+id/textname"  
    android:layout_width="wrap_content"  
  
    android:layout_height="wrap_content"  
    android:hint="Enter the name "  
  
    android:textSize="18dp" />
```

```
</LinearLayout>
```

```
<LinearLayout
```

```
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
  
    android:orientation="horizontal">
```

```
<TextView
```

```
    android:id="@+id/age"  
  
    android:layout_width="97dp"  
    android:layout_height="88dp"  
  
    android:text="Age:  "  
  
    android:textSize="20dp" />
```

```
<EditText
```

```
    android:id="@+id/textage"  
  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
  
    android:hint="Enter the age"
```

```
        android:textSize="18dp" />
```

```
</LinearLayout>
```

```
<LinearLayout
```

```
    android:layout_width="wrap_content"
```

```
    android:layout_height="wrap_content"
```

```
    android:layout_marginTop="10dp"
```

```
    android:orientation="vertical">
```

```
<TextView
```

```
    android:layout_width="wrap_content"
```

```
    android:layout_height="wrap_content"
```

```
    android:layout_marginBottom="20dp"
```

```
    android:text="BIKE TYPE (Choose from the option): "
```

```
    android:textSize="18dp" />
```

```
<RadioGroup
```

```
    android:layout_width="wrap_content"
```

```
    android:layout_height="wrap_content"
```

```
    android:id="@+id/radiobike">
```

```
<RadioButton
```

```
    android:layout_width="wrap_content"
```

```
    android:layout_height="wrap_content"
```

```
    android:text="Pulsar 220"
```

```
    android:textSize="16dp" />
```

```
<RadioButton
```

```
    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:text="FZ"

    android:textSize="16dp" />
```

<RadioButton

```
    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:text="Activa 150 "

    android:textSize="16dp" />
```

<RadioButton

```
    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:text="Duke"

    android:textSize="16dp" />
```

<RadioButton

```
    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:text=" R15 "

    android:textSize="16dp" />
```

<RadioButton

```
    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:text="Bullet Classic"

    android:textSize="16dp" />
```

```
</RadioGroup>
```

```
</LinearLayout>
```

```
<LinearLayout
```

```
    android:layout_width="wrap_content"
```

```
    android:layout_height="wrap_content"
```

```
    android:layout_marginTop="10dp"
```

```
    android:orientation="vertical">
```

```
    <TextView
```

```
        android:layout_width="wrap_content"
```

```
        android:layout_height="wrap_content"
```

```
        android:text="ID Type : "
```

```
        android:textSize="20dp" />
```

```
    <LinearLayout
```

```
        android:layout_width="wrap_content"
```

```
        android:layout_height="wrap_content"
```

```
        android:layout_marginTop="10dp">
```

```
        <RadioGroup
```

```
            android:layout_width="wrap_content"
```

```
            android:layout_height="wrap_content"
```

```
            android:id="@+id/radioid">
```

```
        <RadioButton
```

```
            android:layout_width="wrap_content"
```

```
            android:layout_height="wrap_content"
```

```
android:text="College ID"
```

```
android:textSize="16dp" />
```

```
<RadioButton
```

```
android:layout_width="wrap_content"
```

```
android:layout_height="wrap_content"
```

```
android:layout_marginLeft="20dp"
```

```
android:text="Aadhar"
```

```
android:textSize="16dp" />
```

```
<RadioButton
```

```
android:layout_width="wrap_content"
```

```
android:layout_height="wrap_content"
```

```
android:layout_marginLeft="20dp"
```

```
android:text="DL"
```

```
android:textSize="16dp" />
```

```
</RadioGroup>
```

```
</LinearLayout>
```

```
<LinearLayout
```

```
android:layout_width="wrap_content"
```

```
android:layout_height="wrap_content"
```

```
android:layout_marginTop="10dp"
```

```
android:orientation="horizontal">
```

```
<TextView
```

```
android:layout_width="wrap_content"
```

```
android:layout_height="wrap_content"
```

```
android:text="Pickup Location : "
```

```
android:textSize="20dp" />
```

```
<Spinner
```

```
android:id="@+id/spinner"
```

```
android:layout_width="wrap_content"
```

```
android:layout_height="wrap_content"
```

```
android:textAlignment="center"></Spinner>
```

```
</LinearLayout>
```

```
</LinearLayout>
```

```
<LinearLayout
```

```
android:layout_width="wrap_content"
```

```
android:layout_height="wrap_content"
```

```
android:layout_marginTop="10dp"
```

```
android:orientation="vertical">
```

```
<TextView
```

```
android:layout_width="wrap_content"
```

```
android:layout_height="wrap_content"
```

```
android:text="Payment Mode : "
```

```
android:textSize="20dp" />
```

```
<LinearLayout
```

```
android:layout_width="wrap_content"
```

```
    android:layout_height="wrap_content"
    android:layout_marginTop="10dp">
```

```
<RadioGroup
```

```
    android:layout_width="wrap_content"

    android:layout_height="wrap_content"
    android:id="@+id/radiopayment">
```

```
<RadioButton
```

```
    android:layout_width="wrap_content"

    android:layout_height="wrap_content"
    android:text="Tez"

    android:textSize="16dp" />
```

```
<RadioButton
```

```
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"

    android:layout_marginLeft="20dp"
    android:text="Paytm"

    android:textSize="16dp" />
```

```
<RadioButton
```

```
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"

    android:layout_marginLeft="20dp"
    android:text="Phonepe"

    android:textSize="16dp" />
```

```
</RadioGroup>
```



```
</LinearLayout>
```

```
<TextView
```

```
    android:layout_width="wrap_content"
```

```
    android:layout_height="wrap_content"
```

```
    android:layout_marginTop="10dp"
```

```
    android:text="Special Instructions : "
```

```
    android:textSize="20dp" />
```

```
<EditText
```

```
    android:layout_width="wrap_content"
```

```
    android:layout_height="wrap_content"
```

```
    android:layout_marginTop="10dp"
```

```
    android:hint="Enter the instructions"
```

```
    android:textSize="18dp"
```

```
    android:id="@+id/instruction"/>
```

```
<Button
```

```
    android:layout_width="wrap_content"
```

```
    android:layout_height="wrap_content"
```

```
    android:text="@string/book_my_ride"
```

```
    android:textSize="18sp"
```

```
    android:id="@+id/button"></Button>
```

```
</LinearLayout>
```

```
</LinearLayout>
```

```
</ScrollView>
```



Main Activity.Java

```
package com.example.shiv0m.bikehiringapplication;

import android.support.v7.app.AppCompatActivity;
import android.os.Bundle; import
android.text.TextUtils;

import android.view.View;

import android.widget.AdapterView;

import android.widget.AdapterView.OnItemClickListener;
import android.widget.ArrayAdapter;
import android.widget.Button;
import android.widget.EditText;
import android.widget.RadioButton;
import android.widget.RadioGroup;
import android.widget.Spinner;
import android.widget.Toast;

import com.google.firebase.database.DatabaseReference;
import com.google.firebase.database.FirebaseDatabase;

public class MainActivity extends AppCompatActivity implements
AdapterView.OnItemClickListener {

    EditText name;

    EditText age;

    EditText desc;

    String[] country = { "Gate 1","Gate 2", "Gate 3"};
    String gate= "Gate 1";

    Button b;

    RadioGroup radioid;

    RadioGroup radiopayment;

    RadioGroup radioGroup;

    DatabaseReference usersdata;

    @Override
```

```

protected void onCreate(Bundle savedInstanceState)
{
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);

    name= (EditText) findViewById(R.id.textname);

    age= (EditText) findViewById(R.id.textage);

    desc= (EditText) findViewById(R.id.instruction);

    b= (Button) findViewById(R.id.button);

    radioGroup= (RadioGroup) findViewById(R.id.radiobike);

    radioid= (RadioGroup) findViewById(R.id.radioid);

    radiopayment= (RadioGroup) findViewById(R.id.radiopayment);

    usersdata = FirebaseDatabase.getInstance().getReference("bike-81eaa");

    //Getting the instance of Spinner and applying OnItemSelectedListener on it
    Spinner spin = (Spinner) findViewById(R.id.spinner);
    spin.setOnItemSelectedListener(this);

    //Creating the ArrayAdapter instance having the country list
    ArrayAdapter aa = new

ArrayAdapter(this, android.R.layout.simple_spinner_item, country);
    aa.setDropDownViewResource(android.R.layout.simple_spinner_dropdown_item);
    //Setting the ArrayAdapter data on the Spinner

    spin.setAdapter(aa);

    b.setOnClickListener(new View.OnClickListener()
    {
        @Override

        public void onClick(View v) {

            adduser();

        }

    });
}

//Performing action onItemSelected and onNothing
selected @Override

public void onItemSelected(AdapterView<?> arg0, View arg1, int position, long
id) {

    gate= country[position];

```

```

        //Toast.makeText(getApplicationContext(),country[position] ,
Toast.LENGTH_LONG).show();

    }

    @Override

    public void onNothingSelected(AdapterView<?> arg0) {

        // TODO Auto-generated method stub
    }


    public void adduser(){

        int selectedId = radioButtonGroup.getCheckedRadioButtonId();

        Button genderradioButton = (RadioButton) findViewById(selectedId);
        String bikename= genderradioButton.getText().toString().trim();

        Button identityb = (RadioButton)

findViewById(radioid.getCheckedRadioButtonId());

        String identity = identityb.getText().toString().trim();

        Button paymentb = (RadioButton)

findViewById(radiopayment.getCheckedRadioButtonId());

        String payment = paymentb.getText().toString().trim();

        String name1= name.getText().toString().trim(); String age1=
age.getText().toString().trim();

        String desc1= desc.getText().toString().trim();

        String key="";

        if(!TextUtils.isEmpty(name1)){

            key = usersdata.push().getKey();

            users newuser= new users(name1,age1, key, bikename,payment,desc1, identity,
gate);

            usersdata.child(key).setValue(newuser);

            Toast.makeText(this,"inserted", Toast.LENGTH_LONG).show();}
        else{

```

```

        Toast.makeText(this, "enter data", Toast.LENGTH_LONG).show();

    }

}

}

```



User.Java

```

package com.example.shiv0m.bikehiringapplication;

public class users {

    String name;

    String age;

    String id;

    String bikename;

    String payment;

    String desc;

    String identity;

    String pickup;

    public users() {

    }

    public users(String name, String age, String id, String bikename,
String payment, String desc, String identity, String pickup) {

        this.name = name;

        this.age = age;

        this.id = id;

```

```
        this.bikename = bikename;

        this.payment = payment;

        this.desc = desc;

        this.identity = identity;

        this.pickup= pickup;

    }

    public String getPickup() {

        return pickup;

    }

    public String getName() {

        return name;

    }

    public String getAge() {

        return age;

    }

    public String getId() {
return id;

    }

    public String getBikename() {

        return bikename;

    }

    public String getPayment() {

        return payment;

    }

    public String getDesc() {
```

```

        return desc;
    }

    public String getIdentity() {
        return identity;
    }
}

```

CONCLUSION & FUTURE SCOPE :

A. Conclusion

The optimal distribution of bike sharing stations should first of all cover the stops of medium/long range transportation modes.

We can say that most of the station is visible, the more effective is the location. Indeed visibility from five of the included attractors have positive influence (i.e. tram and bus, metro and train stops, theatre). It will be better to place bike sharing stations where their visibility is maximized.

B. Future Scope

If we want to maximize the use of bike sharing system, the lead agency needs to have the support of stakeholders and

partners. These stakeholders may be including:

Local municipality (funding and space).

Public transit operators.

User association, other groups (e.g. vehicle sharing companies).

REFERENCES:

- [1] Bruno A. Neumann-Saavedra a,*, Patrick Vogel a, Dirk C. Mattfeld a- Anticipatory service network design of bike sharing systems- 18th Euro Working Group on Transportation, EWGT 2015, 14-16 July 2015.
- [2] Maurizio Bruglieria, Alberto Colornia,b, Alessandro Luèa,b- The vehicle relocation problem for the one-way electric vehicle sharing’: an application to the Milan case Procedia - Social and Behavioral Sciences 111 (2014) 18 – 27.
- [3] INSEAD, The business school for the world-Working Paper Series- “Bike-Share Systems: Accessibility and Availability”- January 26, 2015
- [4] Maria Bordagaraya*, Achille Fonzoneb, Luigi dell’Olio, Angel Ibeasa-’ Considerations about the analysis of ITS data of bicycle sharing systems’. XVIII Congreso Panamericano de Ingeniería de Tránsito, Transporte y Logística (PANAM 20104).
- [5] Florian Paul a*, Klaus Bogenberger a-’ Evaluation-Method for a station based Urban-Pedelec Sharing System’ Mobil. TUM 2014 “Sustainable Mobility in Metropolitan Regions”, May 19-20, 2014.