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PROBLEM STATEMENT

To develop an android mobile application in order to calculate SGPA and CGPA for all semesters of VTU subjects under 2018 scheme computer science department. Where in the user is going to select whether to calculate the CGPA or SGPA. In case of SGPA calculation, the user has to select the semester to which he/she wants to know the SGPA, then user has to enter the marks in order of the subject code and when a submit button is clicked the result should appear, and if the user wants to change the entry then he can press clear button and he has to enter the marks from beginning. Then when a user wants to calculate the CGPA, he/she has to enter the SGPA's of respective semesters and then click on submit, the result should appear.

JAVA CODE

MainActivity.java

```java
package com.example.mainpage;

import android.content.Intent;

import android.support.v7.app.AppCompatActivity;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

public class MainActivity extends AppCompatActivity implements View.OnClickListener{

Button btn_cgpa,btn_sgpa;

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);

        btn_cgpa=(Button)findViewById(R.id.btn_cgpa);

        btn_cgpa.setOnClickListener(this);

        btn_sgpa=(Button)findViewById(R.id.btn_sgpa);

        btn_sgpa.setOnClickListener(this);

    }

    public void onClick(View v)

    {

        if(v.equals(btn_cgpa))
```

```java
        {
        Intent it=new Intent(this,CGPA.class);

        startActivity(it);

        }

            else

            {

                Intent it=new Intent(this,SGPA.class);

                startActivity(it);

            }

        }

}
```

Cgpa.java

```java
package com.example.mainpage;


import android.support.v7.app.AppCompatActivity;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;


import java.text.DecimalFormat;


public class CGPA extends AppCompatActivity implements View.OnClickListener{

    EditText et1,et2,et3,et4,et5,et6,et7,et8,et9,et10;

    Button btn_cal,btn_clear;

    int count;

    float cgpa= (float) 0.0,sum= (float) 0.0,percentage= (float) 0.0;

    private static DecimalFormat df2 = new DecimalFormat("#.##");

    @Override
```

```java
protected void onCreate(Bundle savedInstanceState) {

    super.onCreate(savedInstanceState);

    setContentView(R.layout.activity_c_g_p);

    et1 = (EditText)findViewById(R.id.et1);

    et1.setText("0.0");

    et2 = (EditText)findViewById(R.id.et2);

    et2.setText("0.0");

    et3 = (EditText)findViewById(R.id.et3);

    et3.setText("0.0");

    et4 = (EditText)findViewById(R.id.et4);

    et4.setText("0.0");

    et5 = (EditText)findViewById(R.id.et5);

    et5.setText("0.0");

    et6 = (EditText)findViewById(R.id.et6);

    et6.setText("0.0");

    et7 = (EditText)findViewById(R.id.et7);

    et7.setText("0.0");

    et8 = (EditText)findViewById(R.id.et8);

    et8.setText("0.0");

    et9 = (EditText)findViewById(R.id.et9);

    et9.setText("0.0");

    et10 = (EditText)findViewById(R.id.et10);

    et10.setText("0.0");

    btn_cal = (Button)findViewById(R.id.btn_cal);

    btn_cal.setOnClickListener(this);

    btn_clear = (Button)findViewById(R.id.btn_clear);

    btn_clear.setOnClickListener(this);

}

public void onClick(View v)
```

```java
{
//CLEAR THE DISPLAY WHEN CLEAR BUTTON IS PRESSED
  if(v.equals(btn_clear)) {
  et1.setText("0.0");
  et2.setText("0.0");
  et3.setText("0.0");
  et4.setText("0.0");
  et5.setText("0.0");
  et6.setText("0.0");
  et7.setText("0.0");
  et8.setText("0.0");
  et9.setText("0.0");
  et10.setText("0.0");
}
  /*if(v.equals(btn_back))
  {
    Intent it=new Intent(this,MainActivity.class);
    it.putExtra("mode",1);
    startActivity(it);
  }*/
  if(v.equals(btn_cal))
{
  float sem1 = Float.parseFloat(String.valueOf(et1.getText()));
  float sem2 = Float.parseFloat(String.valueOf(et2.getText()));
  float sem3 = Float.parseFloat(String.valueOf(et3.getText()));
  float sem4 = Float.parseFloat(String.valueOf(et4.getText()));
  float sem5 = Float.parseFloat(String.valueOf(et5.getText()));
  float sem6 = Float.parseFloat(String.valueOf(et6.getText()));
  float sem7 = Float.parseFloat(String.valueOf(et7.getText()));
```

```java
        float sem8 = Float.parseFloat(String.valueOf(et8.getText()));
        NotNull(sem1);
        NotNull(sem2);
        NotNull(sem3);
        NotNull(sem4);
        NotNull(sem5);
        NotNull(sem6);
        NotNull(sem7);
        NotNull(sem8);
        sum =(sem1+sem2+sem3+sem4+sem5+sem6+sem7+sem8);
        cgpa = sum/count;
        percentage = (float) ((cgpa-0.75)*10);
        et9.setText(String.valueOf(df2.format(cgpa)));
        et10.setText(String.valueOf(df2.format(percentage)));
        sum = (float)0.0;
        cgpa = (float)0.0;
        percentage=(float)0.0;
        count = 0;
    }
}
    private void NotNull(float sgpa) {
        if(sgpa!=0.0)
        {
            count=count+1;
        }
    }
}
```

SGPA.java

package com.example.mainpage;

import android.support.v7.app.AppCompatActivity;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.content.Intent;

public class SGPA extends AppCompatActivity implements View.OnClickListener{

   Button button_first;

   Button button_five;

   Button button_seventh;

   Button button2,button3,button4,button6;

   Button button_eight;

   @Override

   protected void onCreate(Bundle savedInstanceState) {

      super.onCreate(savedInstanceState);

      setContentView(R.layout.activity_s_g_p);

      button_first=(Button)findViewById(R.id.button_first);

      button_first.setOnClickListener(this);

      button_seventh=(Button)findViewById(R.id.button_seventh);

      button_seventh.setOnClickListener(this);

      button_eight=(Button)findViewById(R.id.button_eight);

      button_eight.setOnClickListener(this);

      button_five=(Button)findViewById(R.id.button_five);

      button_five.setOnClickListener(this);

      button2=(Button)findViewById(R.id.button2);

      button2.setOnClickListener(this);

      button3=(Button)findViewById(R.id.button3);

```java
        button3.setOnClickListener(this);

        button4=(Button)findViewById(R.id.button4);

        button4.setOnClickListener(this);

        button6=(Button)findViewById(R.id.button6);

        button6.setOnClickListener(this);

    }

    public void onClick(View v) {

        if(v.equals(button_first))

        {

            Intent it = new Intent(this,First.class);

            startActivity(it);

        }

        else if(v.equals(button2))

        {

            Intent it = new Intent(this,Second.class);

            startActivity(it);

        }

        else if(v.equals(button3))

        {

            Intent it = new Intent(this,Third.class);

            startActivity(it);

        }

        else if(v.equals(button4))

        {

            Intent it = new Intent(this,Fourth.class);

            startActivity(it);

        }

        else if(v.equals(button_five))

        {

            Intent it = new Intent(this,sem5.class);
```

```java
        startActivity(it);
    }
    else if(v.equals(button6))
    {
        Intent it = new Intent(this,Sixth.class);
        startActivity(it);
    }
    else if(v.equals(button_seventh))
    {
        Intent it = new Intent(this, Seventh.class);
        startActivity(it);
    }
    else
    {
        Intent it;
        it = new Intent(this,Eigth.class);
        startActivity(it);
    }
  }
}
```

Firstsem.java

```java
package com.example.mainpage;


import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.content.Intent;
```

```java
public class SGPA extends AppCompatActivity implements View.OnClickListener{
    Button button_first;
    Button button_five;
    Button button_seventh;
    Button button2,button3,button4,button6;
    Button button_eight;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_s_g_p);
        button_first=(Button)findViewById(R.id.button_first);
        button_first.setOnClickListener(this);
        button_seventh=(Button)findViewById(R.id.button_seventh);
        button_seventh.setOnClickListener(this);
        button_eight=(Button)findViewById(R.id.button_eight);
        button_eight.setOnClickListener(this);
        button_five=(Button)findViewById(R.id.button_five);
        button_five.setOnClickListener(this);
        button2=(Button)findViewById(R.id.button2);
        button2.setOnClickListener(this);
        button3=(Button)findViewById(R.id.button3);
        button3.setOnClickListener(this);
        button4=(Button)findViewById(R.id.button4);
        button4.setOnClickListener(this);
        button6=(Button)findViewById(R.id.button6);
        button6.setOnClickListener(this);
    }
    public void onClick(View v) {
        if(v.equals(button_first))
```

```java
{
    Intent it = new Intent(this,First.class);
    startActivity(it);
}
else if(v.equals(button2))
{
    Intent it = new Intent(this,Second.class);
    startActivity(it);
}
else if(v.equals(button3))
{
    Intent it = new Intent(this,Third.class);
    startActivity(it);
}
else if(v.equals(button4))
{
    Intent it = new Intent(this,Fourth.class);
    startActivity(it);
}
else if(v.equals(button_five))
{
    Intent it = new Intent(this,sem5.class);
    startActivity(it);
}
else if(v.equals(button6))
{
    Intent it = new Intent(this,Sixth.class);
    startActivity(it);
}
else if(v.equals(button_seventh))
```

```
        {

          Intent it = new Intent(this, Seventh.class);

          startActivity(it);

        }

        else

        {

          Intent it;

          it = new Intent(this,Eigth.class);

          startActivity(it);

        }

    }

}
```

XML CODE

activity_main.xml

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

<android.support.constraint.ConstraintLayout
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"

  tools:context=".MainActivity"

  android:background="@drawable/back1" >

  <TextView

    android:id="@+id/textView8"

    android:layout_width="253dp"

    android:layout_height="46dp"

    android:layout_marginStart="40dp"

    android:layout_marginTop="40dp"

    android:layout_marginEnd="20dp"

```xml
        android:text="CGPA/SGPA CALCULATOR"

        android:textColor="#121111"

        android:textSize="20dp"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent" />

    <Button

        android:id="@+id/btn_cgpa"

        android:layout_width="154dp"

        android:layout_height="64dp"

        android:layout_marginTop="175dp"

        android:text="CGPA"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/textView8" />

    <Button

        android:id="@+id/btn_sgpa"

        android:layout_width="144dp"

        android:layout_height="60dp"

        android:layout_marginTop="40dp"

        android:text="SGPA"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/btn_cgpa" />

    <TextView

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginStart="35dp"

        android:layout_marginTop="20dp"

        android:layout_marginEnd="25dp"
```

```
        android:text="For CSE 18-Scheme"

        android:textColor="#121111"

        android:textSize="18dp"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/textView8" />

</android.support.constraint.ConstraintLayout>
```

acivity_c_g_p.xml

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

<android.support.constraint.ConstraintLayout
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"

    tools:context=".CGPA"

    android:background="@drawable/cgpa">

    <TextView

        android:id="@+id/textView1"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginStart="30dp"

        android:layout_marginTop="30dp"

        android:layout_marginEnd="30dp"

        android:background="#FDF6F6"

        android:text="CGPA CALCULATOR"

        android:textColor="#090909"

        android:textSize="20dp"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent" />
```

```xml
<TextView
    android:id="@+id/textView2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="40dp"
    android:layout_marginTop="40dp"
    android:text="SEM-1:"
    android:textColor="#121111"
    android:textSize="18dp"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/textView1" />
<TextView
    android:id="@+id/textView3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="40dp"
    android:layout_marginTop="90dp"
    android:text="SEM-2:"
    android:textColor="#121111"
    android:textSize="18dp"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/textView1" />
<TextView
    android:id="@+id/textView4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="40dp"
    android:layout_marginTop="140dp"
    android:text="SEM-3:"
    android:textColor="#121111"
```

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

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/textView1" />

    <TextView

        android:id="@+id/textView5"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginStart="40dp"

        android:layout_marginTop="190dp"

        android:text="SEM-4:"

        android:textColor="#121111"

        android:textSize="18dp"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/textView1" />

    <TextView

        android:id="@+id/textView6"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginStart="40dp"

        android:layout_marginTop="250dp"

        android:text="SEM-5:"

        android:textColor="#121111"

        android:textSize="18dp"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/textView1" />

    <TextView

        android:id="@+id/textView7"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginStart="40dp"
```

```xml
        android:layout_marginTop="300dp"

        android:text="SEM-6:"

        android:textColor="#121111"

        android:textSize="18dp"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/textView1" />

    <TextView

        android:id="@+id/textView8"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginStart="40dp"

        android:layout_marginTop="360dp"

        android:text="SEM-7:"

        android:textColor="#121111"

        android:textSize="18dp"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/textView1" />

    <TextView

        android:id="@+id/textView9"

        android:layout_width="66dp"

        android:layout_height="26dp"

        android:layout_marginStart="40dp"

        android:layout_marginTop="420dp"

        android:text="SEM-8:"

        android:textColor="#121111"

        android:textSize="18dp"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/textView1" />

    <EditText

        android:id="@+id/et1"
```

```
    android:layout_width="199dp"

    android:layout_height="44dp"

    android:layout_marginStart="150dp"

    android:layout_marginTop="25dp"

    android:ems="10"

    android:inputType="number|numberDecimal"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintTop_toBottomOf="@+id/textView1" />

<EditText

    android:id="@+id/et2"

    android:layout_width="196dp"

    android:layout_height="42dp"

    android:layout_marginStart="150dp"

    android:layout_marginTop="80dp"

    android:ems="10"

    android:inputType="number|numberDecimal"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintTop_toBottomOf="@+id/textView1" />


<EditText

    android:id="@+id/et3"

    android:layout_width="195dp"

    android:layout_height="47dp"

    android:layout_marginStart="150dp"

    android:layout_marginTop="125dp"

    android:ems="10"

    android:inputType="number|numberDecimal"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintTop_toBottomOf="@+id/textView1" />

<EditText
```

```
        android:id="@+id/et4"

        android:layout_width="194dp"

        android:layout_height="44dp"

        android:layout_marginStart="150dp"

        android:layout_marginTop="180dp"

        android:ems="10"

        android:inputType="number|numberDecimal"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/textView1" />

    <EditText

        android:id="@+id/et6"

        android:layout_width="191dp"

        android:layout_height="52dp"

        android:layout_marginStart="150dp"

        android:layout_marginTop="280dp"

        android:ems="10"

        android:inputType="number|numberDecimal"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/textView1" />

    <EditText

        android:id="@+id/et7"

        android:layout_width="202dp"

        android:layout_height="41dp"

        android:layout_marginStart="150dp"

        android:layout_marginTop="340dp"

        android:ems="10"

        android:inputType="number|numberDecimal"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/textView1" />

    <EditText
```

```
        android:id="@+id/et8"

        android:layout_width="203dp"

        android:layout_height="44dp"

        android:layout_marginStart="150dp"

        android:layout_marginTop="400dp"

        android:ems="10"

        android:inputType="number|numberDecimal"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/textView1" />

    <Button

        android:id="@+id/btn_cal"

        android:layout_width="116dp"

        android:layout_height="36dp"

        android:layout_marginStart="40dp"

        android:layout_marginTop="530dp"

        android:text="Calculate"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/textView1" />

    <TextView

        android:id="@+id/textView10"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginStart="20dp"

        android:layout_marginTop="480dp"

        android:text="CGPA:"

        android:textColor="#121111"

        android:textSize="16dp"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/textView1" />

    <Button
```

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

        android:layout_width="71dp"

        android:layout_height="37dp"

        android:layout_marginStart="272dp"

        android:layout_marginTop="530dp"

        android:text="Clear"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/textView1"

        app:layout_constraintVertical_bias="0.0" />


    <EditText

        android:id="@+id/et9"

        android:layout_width="73dp"

        android:layout_height="43dp"

        android:layout_marginStart="80dp"

        android:layout_marginTop="465dp"

        android:ems="10"

        android:inputType="numberDecimal"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/textView1" />

    <TextView

        android:id="@+id/textView"

        android:layout_width="94dp"

        android:layout_height="26dp"

        android:layout_marginStart="168dp"

        android:layout_marginTop="480dp"

        android:text="Percentage:"

        android:textColor="#0E0E0E"

        android:textSize="16dp"
```

```xml
        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/textView1" />

    <EditText

        android:id="@+id/et10"

        android:layout_width="87dp"

        android:layout_height="49dp"

        android:layout_marginStart="260dp"

        android:layout_marginTop="465dp"

        android:ems="10"

        android:inputType="numberDecimal"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/textView1" />

    <EditText

        android:id="@+id/et5"

        android:layout_width="200dp"

        android:layout_height="45dp"

        android:layout_marginStart="150dp"

        android:layout_marginTop="230dp"

        android:ems="10"

        android:inputType="numberSigned"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/textView1" />

</android.support.constraint.ConstraintLayout>
```

activity_s_c_g.xml

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

<android.support.constraint.ConstraintLayout
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"
```

```xml
    tools:context=".SGPA"

    android:background="@drawable/sgpa" >

    <TextView

        android:id="@+id/textView"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginLeft="100dp"

        android:layout_marginTop="50dp"

        android:text="SEM SELECTION"

        android:textAppearance="@style/TextAppearance.AppCompat.Large"

        app:layout_constraintLeft_toLeftOf="parent"

        app:layout_constraintTop_toTopOf="parent" />

    <Button

        android:id="@+id/button_first"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginStart="60dp"

        android:layout_marginTop="112dp"

        android:text="Sem1"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/textView" />

    <Button

        android:id="@+id/button2"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginStart="75dp"

        android:layout_marginTop="112dp"

        android:text="Sem2"

        app:layout_constraintStart_toEndOf="@+id/button_first"

        app:layout_constraintTop_toBottomOf="@+id/textView" />
```

```xml
<Button
    android:id="@+id/button3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="60dp"
    android:layout_marginTop="48dp"
    android:text="Sem3"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/button_first" />
<Button
    android:id="@+id/button4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="75dp"
    android:layout_marginTop="48dp"
    android:text="Sem4"
    app:layout_constraintStart_toEndOf="@+id/button3"
    app:layout_constraintTop_toBottomOf="@+id/button2" />
<Button
    android:id="@+id/button_five"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="60dp"
    android:layout_marginTop="40dp"
    android:text="Sem5"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/button3" />
<Button
    android:id="@+id/button6"
    android:layout_width="wrap_content"
```

```xml
        android:layout_height="wrap_content"

        android:layout_marginStart="75dp"

        android:layout_marginTop="48dp"

        android:text="Sem6"

        app:layout_constraintStart_toEndOf="@+id/button_five"

        app:layout_constraintTop_toBottomOf="@+id/button4" />

    <Button

        android:id="@+id/button_eight"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginStart="75dp"

        android:layout_marginTop="40dp"

        android:text="Sem8"

        app:layout_constraintStart_toEndOf="@+id/button_seventh"

        app:layout_constraintTop_toBottomOf="@+id/button6" />

    <Button

        android:id="@+id/button_nine"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginStart="148dp"

        android:layout_marginTop="572dp"

        android:text="Back"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent" />

    <Button

        android:id="@+id/button_seventh"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginStart="60dp"

        android:layout_marginTop="40dp"
```

```
        android:text="Sem7"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/button_five" />

</android.support.constraint.ConstraintLayout>
```

activity_firstsem.xml

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

<android.support.constraint.ConstraintLayout
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"

    tools:context=".First"

    android:background="@drawable/blue">

    <TextView

        android:id="@+id/textView"

        android:layout_width="160dp"

        android:layout_height="34dp"

        android:layout_marginTop="20dp"

        android:text="FIRST SEMESTER"

        android:textSize="20dp"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent" />

    <TextView

        android:id="@+id/textView1"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginStart="36dp"

        android:layout_marginTop="55dp"

        android:text="SUB-1: "
```

```xml
        android:textSize="20dp"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/textView" />

    <EditText

        android:id="@+id/et1"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginTop="50dp"

        android:layout_marginEnd="20dp"

        android:ems="10"

        android:inputType="text"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/textView"/>

    <TextView

        android:id="@+id/textView2"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginStart="38dp"

        android:layout_marginTop="30dp"

        android:text="SUB-2: "

        android:textSize="20dp"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/textView1" />

    <EditText

        android:id="@+id/et2"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginTop="10dp"

        android:layout_marginEnd="20dp"

        android:ems="10"
```

```xml
        android:inputType="text"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/et1"/>

    <TextView

        android:id="@+id/textView3"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginStart="36dp"

        android:layout_marginTop="30dp"

        android:text="SUB-3: "

        android:textSize="20dp"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/textView2" />

    <EditText

        android:id="@+id/et3"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginTop="10dp"

        android:layout_marginEnd="20dp"

        android:ems="10"

        android:inputType="text"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/et2"/>


    <TextView

        android:id="@+id/textView4"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginStart="36dp"

        android:layout_marginTop="30dp"
```

```xml
        android:text="SUB-4: "

        android:textSize="20dp"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/textView3" />

    <EditText

        android:id="@+id/et4"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginTop="10dp"

        android:layout_marginEnd="20dp"

        android:ems="10"

        android:inputType="text"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/et3"/>

    <TextView

        android:id="@+id/textView5"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginStart="36dp"

        android:layout_marginTop="30dp"

        android:text="SUB-5: "

        android:textSize="20dp"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/textView4" />

    <EditText

        android:id="@+id/et5"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginTop="10dp"

        android:layout_marginEnd="20dp"
```

```xml
        android:ems="10"

        android:inputType="text"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/et4"/>

    <TextView

        android:id="@+id/textView6"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginStart="36dp"

        android:layout_marginTop="30dp"

        android:text="SUB-6: "

        android:textSize="20dp"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/textView5" />

    <EditText

        android:id="@+id/et6"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginTop="10dp"

        android:layout_marginEnd="20dp"

        android:ems="10"

        android:inputType="text"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/et5"/>

    <TextView

        android:id="@+id/textView7"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginStart="36dp"

        android:layout_marginTop="30dp"
```

```xml
        android:text="LAB-1: "

        android:textSize="20dp"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/textView6" />

    <EditText

        android:id="@+id/et7"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginTop="10dp"

        android:layout_marginEnd="20dp"

        android:ems="10"

        android:inputType="text"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/et6"/>

    <TextView

        android:id="@+id/textView8"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginStart="36dp"

        android:layout_marginTop="30dp"

        android:text="LAB-2:"

        android:textSize="20dp"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/textView7" />

    <EditText

        android:id="@+id/et8"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginTop="10dp"

        android:layout_marginEnd="20dp"
```

```xml
        android:ems="10"

        android:inputType="text"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/et7"/>

    <TextView

        android:id="@+id/textView9"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginStart="36dp"

        android:layout_marginTop="30dp"

        android:text="SGPA: "

        android:textSize="20dp"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/textView8" />

    <EditText

        android:id="@+id/etResult"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginTop="10dp"

        android:layout_marginEnd="20dp"

        android:ems="10"

        android:inputType="text"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/et8"/>

    <Button

        android:id="@+id/btnClear"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginTop="5dp"

        android:layout_marginEnd="50dp"
```

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```xml
                android:text="CLEAR"

                app:layout_constraintEnd_toEndOf="parent"

                app:layout_constraintTop_toBottomOf="@+id/etResult" />

            <Button

                android:id="@+id/btnSubmit"

                android:layout_width="wrap_content"

                android:layout_height="wrap_content"

                android:layout_marginStart="36dp"

                android:layout_marginTop="5dp"

                android:text="CALCULATE"

                app:layout_constraintStart_toStartOf="parent"

                app:layout_constraintTop_toBottomOf="@+id/textView9" />

        </android.support.constraint.ConstraintLayout>
```

SCREENSHOTS
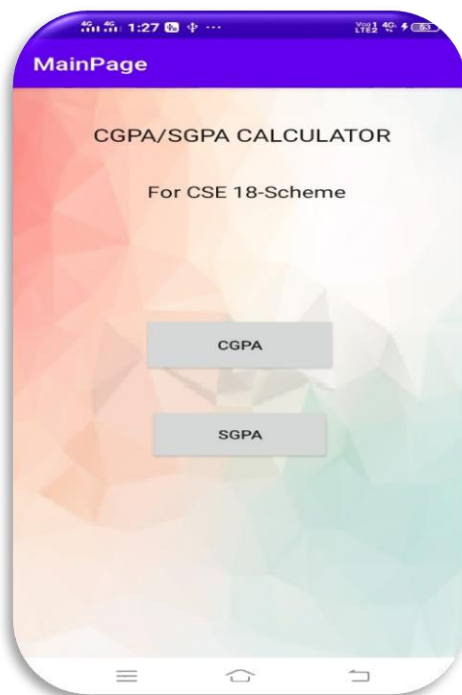
Fig 1: main activity
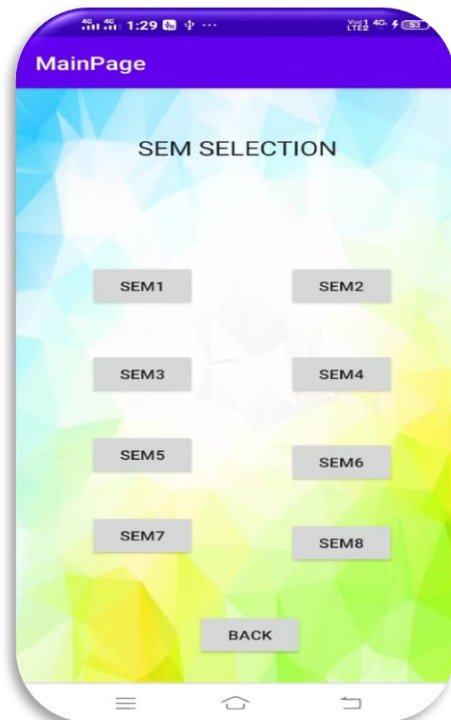
Fig 2: select sem activity

Fig 3: cgpa activity
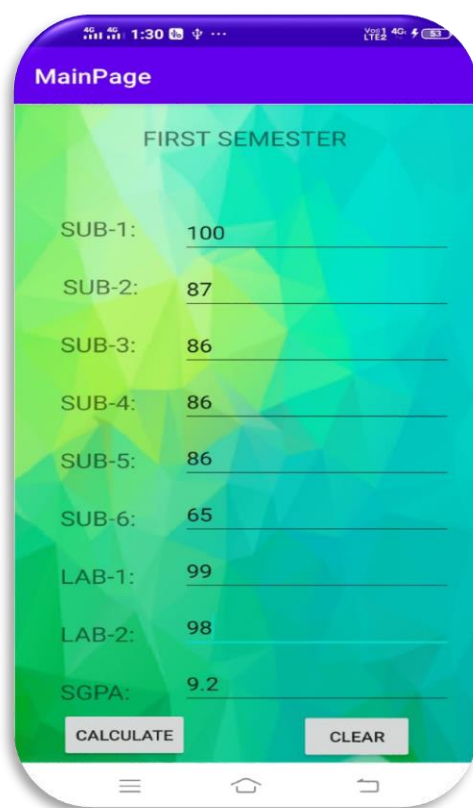
Fig 4: first-sem sgpa activity

Fig 5: second-sem sgpa activity

Fig 6: third-sem sgpa activity

Fig 7: fourth-sem sgpa activity

Fig 8: fifth-sem sgpa activity

Fig 9:sixth-sem sgpa activity

Fig 10:seventh-sem sgpa activity

Fig 11:Eigth-sem sgpa activity

CONCLUSION

This android mobile application which we have developed will be helpful to all the students belonging to VTU computer science branch, at the crucial time where they may have to calculate the CGPA or SGPA they need not have to search for the formulas calculating things in hurry, which would always sometimes lead to wrong results that affects somehow in future. Better in this hurry situations they can download this app and can calculate SGPA or CGPA of their respective semesters with in few seconds. All this idea was to make the things easier and faster for engineers to calculate SGPA and CGPA.