MAD LAB – CYCLE 1

1.Design a login page

Xml code

```xml
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    xmlns:android="http://schemas.android.com/apk/res/android" >
    <TextView
        android:id="@+id/head"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="30dp"
        android:gravity="center_horizontal"
        android:padding="5dp"
        android:text="Login"
        android:textAlignment="center"
        android:textColor="@color/colorPrimaryDark"
        android:textSize="18sp" />

    <EditText
        android:id="@+id/usr"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter Username"
        android:layout_marginTop="20dp"
        android:layout_marginBottom="10dp"/>

    <EditText
        android:id="@+id/pwd"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="20dp"
        android:layout_marginBottom="10dp"
        android:hint="Enter Password"/>
    <Button
        android:id="@+id/lgnbtn"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="20dp"
        android:layout_marginBottom="10dp"
        android:background="@color/colorPrimary"
        android:onClick="Click"
        android:text="Login"
        tools:background="@android:color/holo_green_dark" />
</LinearLayout>
```

Java code

```java
package com.example.sjcet.pg1;

import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.LinearLayout;
public class MainActivity extends AppCompatActivity {
    EditText username,password;
    Button lgnbtn;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        username=findViewById(R.id.usr);
        password=findViewById(R.id.pwd);
        lgnbtn=findViewById(R.id.lgnbtn);
    }
    public void Click(View view) {
        String user = username.getText().toString();
    }
}
```

Output
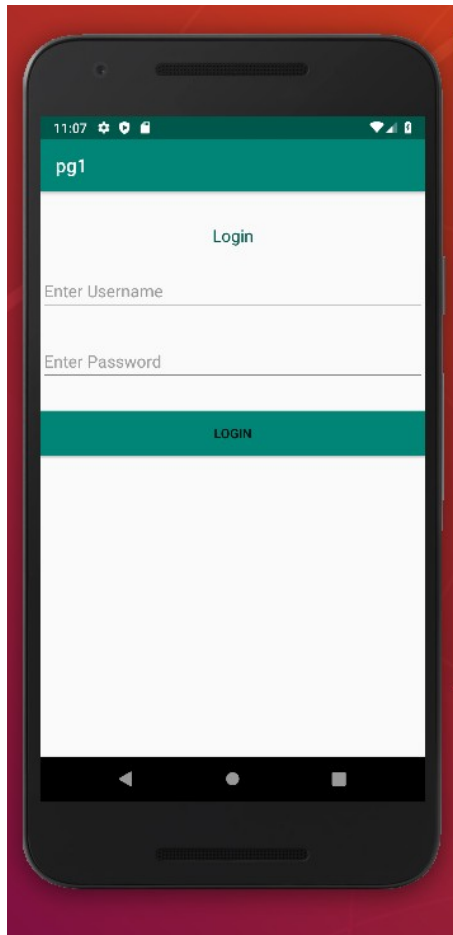
2.Change the content in textview on a button click

Xml code

```xml
<LinearLayout
  android:layout_height="match_parent"
  android:layout_width="match_parent"
  android:orientation="vertical"
  xmlns:android="http://schemas.android.com/apk/res/android" >
  <TextView
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginTop="30dp"
    android:gravity="center_horizontal"
    android:padding="5dp"
    android:text="Change Content on Button Click"
```

```xml
        android:textAlignment="center"
        android:textColor="@color/colorPrimaryDark"
        android:textSize="18sp"/>
    <EditText
        android:id="@+id/txt"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Ask who win Ballon D'or 2021"
        android:layout_marginTop="20dp"
        android:layout_marginBottom="10dp"/>
    <Button
        android:id="@+id/btn"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="20dp"
        android:layout_marginBottom="10dp"
        android:background="@color/colorPrimary"
        android:onClick="click"

        android:text="Change"/>
</LinearLayout>
```

Java code

```java
package com.example.sjcet.pg2;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
public class MainActivity extends AppCompatActivity {
    EditText txt;
    Button btn;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        txt= findViewById(R.id.txt);
        btn= findViewById(R.id.btn);
    }
    public void click(View view) {
        txt.setText("Lionel Messi");
    }
}
```

Output_1
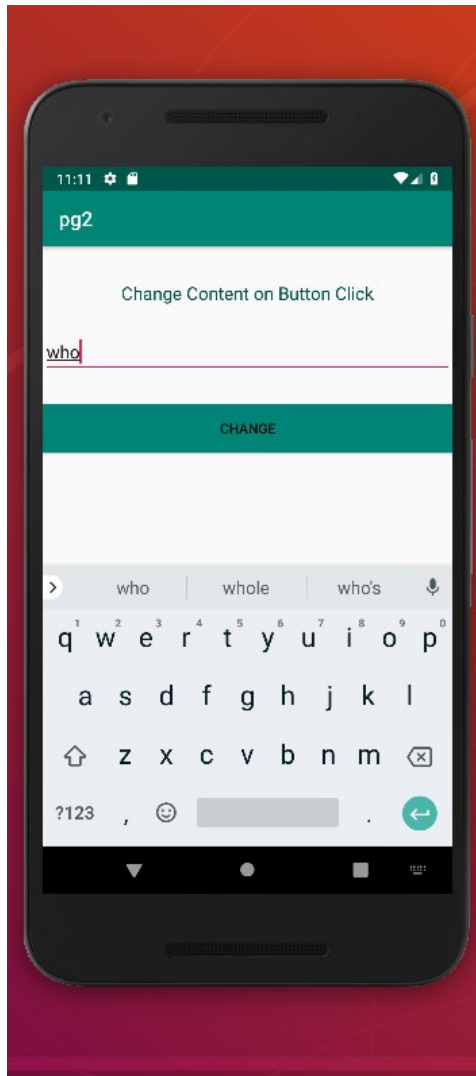
output_2
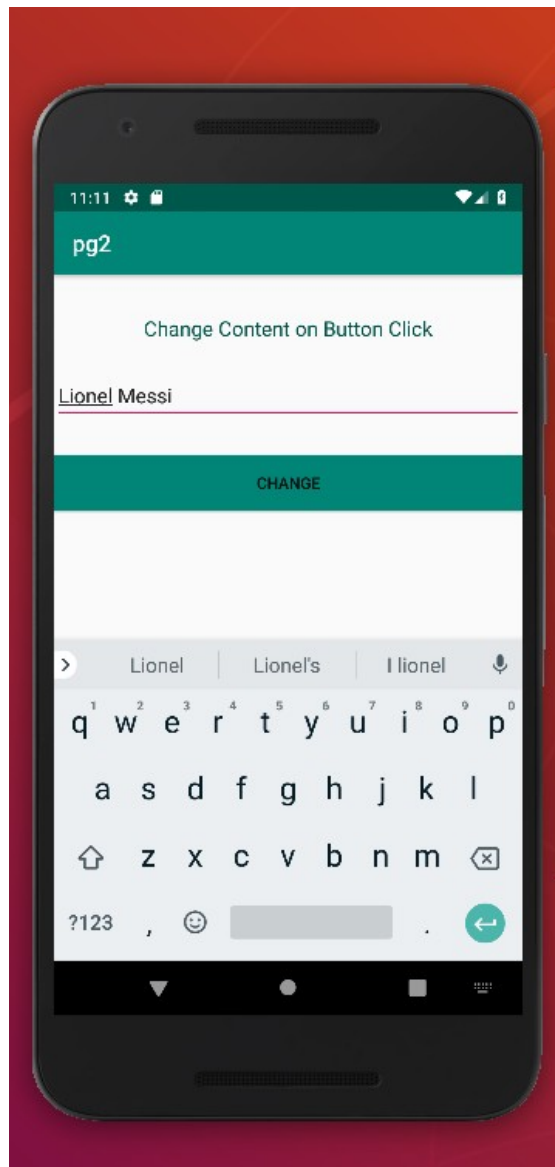
3.Read a content from edittext and print it in A TEXTVIEW

Xml code

```xml
<LinearLayout
  android:layout_height="match_parent"
  android:layout_width="match_parent"
  android:orientation="vertical"
  xmlns:android="http://schemas.android.com/apk/res/android">
  <EditText
     android:id="@+id/text1"
     android:layout_width="match_parent"
     android:layout_height="wrap_content"
     android:hint="Enter Text"/>
  <Button
     android:id="@+id/btn"
     android:layout_width="match_parent"
     android:layout_height="wrap_content"
     android:text="Change"
     android:onClick="Click"
     />
  <TextView
     android:id="@+id/text2"
     android:layout_width="match_parent"
     android:layout_height="wrap_content"
     />
</LinearLayout>
```

Java code

```java
package com.example.sjcet.pg3;

import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
public class MainActivity extends AppCompatActivity {
  EditText text1;
  TextView text2;
  Button btn;
  @Override
  protected void onCreate(Bundle savedInstanceState) {
     super.onCreate(savedInstanceState);
     setContentView(R.layout.activity_main);
     text1=(EditText)findViewById(R.id.text1);
     btn=(Button)findViewById(R.id.btn);
     text2=(TextView)findViewById(R.id.text2);
  }
  public void Click(View view) {
     String content= text1.getText().toString();
```
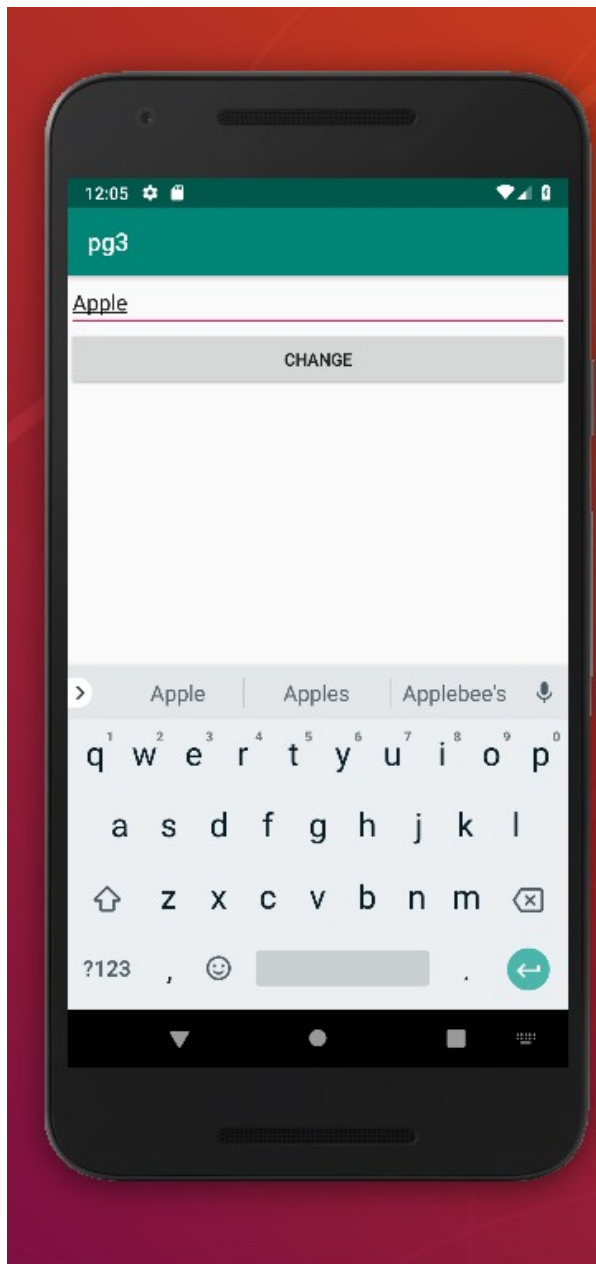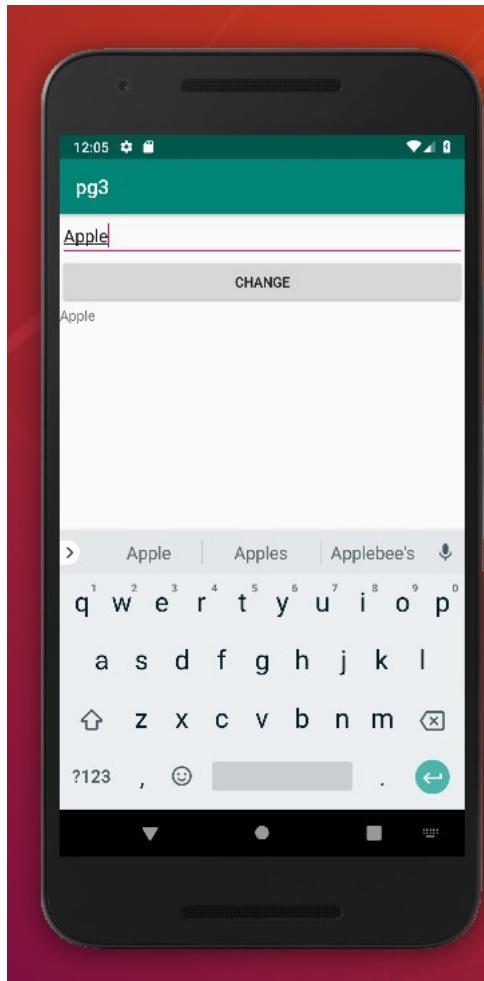
```
        text2.setText(content);
    }
}
```

Output_1
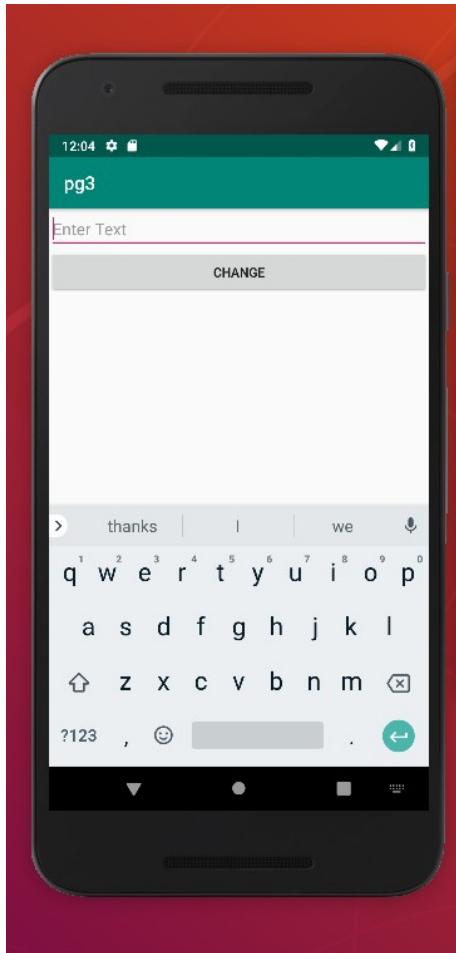
Output_2

Output_3

4.Change the background color on a button click

Xml code

```xml
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout android:id="@+id/l1"
  android:layout_height="match_parent"
  android:layout_width="match_parent"
  xmlns:android="http://schemas.android.com/apk/res/android"
  xmlns:tools="http://schemas.android.com/tools">


  <Button
    android:id="@+id/button"
    android:layout_width="250dp"
    android:layout_height="wrap_content"
    android:padding="20dp"
    android:layout_marginLeft="70dp"
    android:layout_marginTop="190dp"
    android:text="Click here to change color"/>

</LinearLayout>
```

Java code

```java
package com.example.sjcet.pg4;

import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.LinearLayout;

public class MainActivity extends AppCompatActivity {

  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    Button button1;
    final LinearLayout Layout;
    Layout = findViewById(R.id.l1);
    button1 = findViewById(R.id.button);
    button1.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View view) {
        Layout.setBackgroundResource(R.color.colorPrimaryDark);
      }
    });
  }
```

}
Output_1
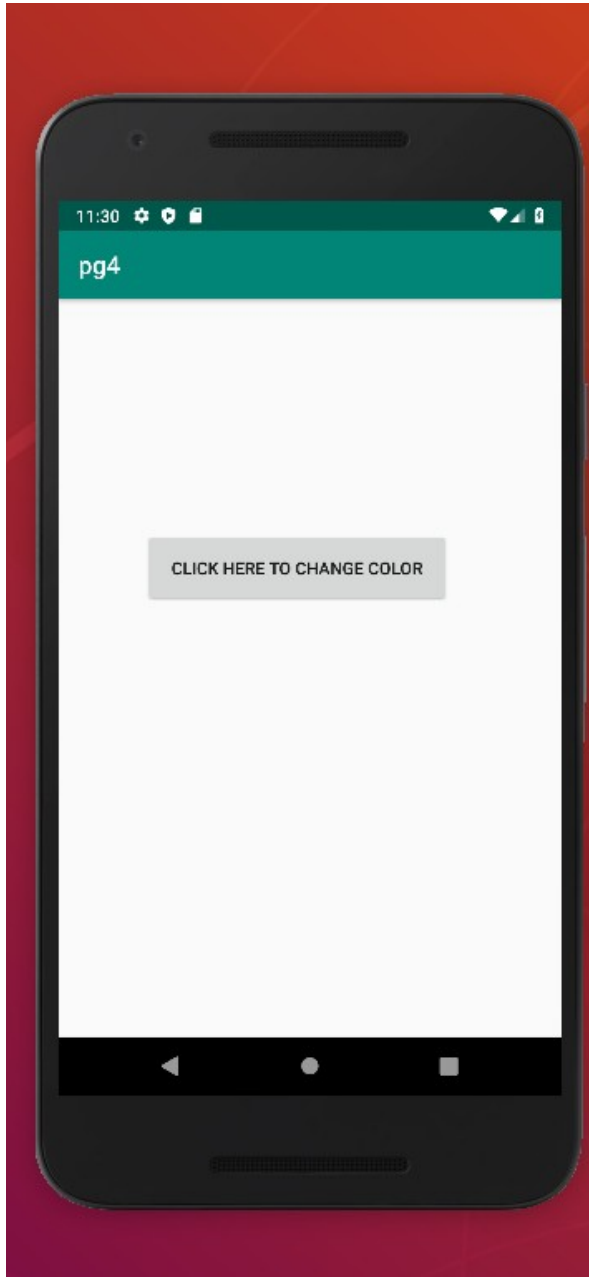
Output_2
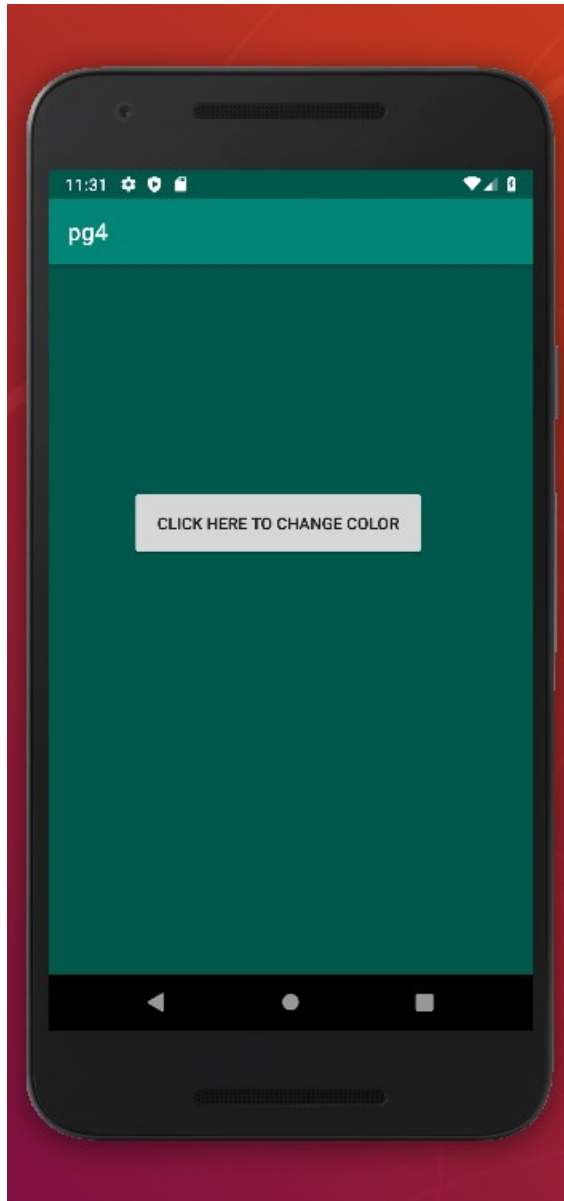
5.Create a sample calculator

Xml code

```xml
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
```

```xml
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/relative1"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
    <EditText
        android:id="@+id/edt1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content" />
    <Button
        android:id="@+id/button1"
        style="?android:attr/buttonStyleSmall"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignEnd="@+id/button4"
        android:layout_alignRight="@+id/button4"
        android:layout_below="@+id/edt1"
        android:layout_marginTop="94dp"
        android:text="1" />
    <Button
        android:id="@+id/button2"
        style="?android:attr/buttonStyleSmall"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignTop="@+id/button1"
        android:layout_toLeftOf="@+id/button3"
        android:layout_toStartOf="@+id/button3"
        android:text="2" />
    <Button
        android:id="@+id/button3"
        style="?android:attr/buttonStyleSmall"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignTop="@+id/button2"
        android:layout_centerHorizontal="true"
        android:text="3" />
    <Button
        android:id="@+id/button4"
        style="?android:attr/buttonStyleSmall"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@+id/button1"
        android:layout_toLeftOf="@+id/button2"
        android:text="4" />
    <Button
        android:id="@+id/button5"
        style="?android:attr/buttonStyleSmall"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignBottom="@+id/button4"
        android:layout_alignLeft="@+id/button2"
        android:layout_alignStart="@+id/button2"
        android:text="5" />
    <Button
```

```xml
    android:id="@+id/button6"
    style="?android:attr/buttonStyleSmall"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignLeft="@+id/button3"
    android:layout_alignStart="@+id/button3"
    android:layout_below="@+id/button3"
    android:text="6" />
<Button
    android:id="@+id/button7"
    style="?android:attr/buttonStyleSmall"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@+id/button4"
    android:layout_toLeftOf="@+id/button2"
    android:text="7" />
<Button
    android:id="@+id/button8"
    style="?android:attr/buttonStyleSmall"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignLeft="@+id/button5"
    android:layout_alignStart="@+id/button5"
    android:layout_below="@+id/button5"
    android:text="8" />
<Button
    android:id="@+id/button9"
    style="?android:attr/buttonStyleSmall"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignLeft="@+id/button6"
    android:layout_alignStart="@+id/button6"
    android:layout_below="@+id/button6"
    android:text="9" />
<Button
    android:id="@+id/buttonadd"
    style="?android:attr/buttonStyleSmall"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignEnd="@+id/edt1"
    android:layout_alignRight="@+id/edt1"
    android:layout_alignTop="@+id/button3"
    android:layout_marginLeft="46dp"
    android:layout_marginStart="46dp"
    android:layout_toRightOf="@+id/button3"
    android:text="+" />
<Button
    android:id="@+id/buttonsub"
    style="?android:attr/buttonStyleSmall"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignEnd="@+id/buttonadd"
    android:layout_alignLeft="@+id/buttonadd"
    android:layout_alignRight="@+id/buttonadd"
```

```xml
        android:layout_alignStart="@+id/buttonadd"
        android:layout_below="@+id/buttonadd"
        android:text="-" />
    <Button
        android:id="@+id/buttonmul"
        style="?android:attr/buttonStyleSmall"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/buttonsub"
        android:layout_alignParentEnd="true"
        android:layout_alignParentRight="true"
        android:layout_alignStart="@+id/buttonsub"
        android:layout_below="@+id/buttonsub"
        android:text="*" />
    <Button
        android:id="@+id/button10"
        style="?android:attr/buttonStyleSmall"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@+id/button7"
        android:layout_toLeftOf="@+id/button2"
        android:text="." />
    <Button
        android:id="@+id/button0"
        style="?android:attr/buttonStyleSmall"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/button8"
        android:layout_alignStart="@+id/button8"
        android:layout_below="@+id/button8"
        android:text="0" />
    <Button
        android:id="@+id/buttonC"
        style="?android:attr/buttonStyleSmall"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/button9"
        android:layout_alignStart="@+id/button9"
        android:layout_below="@+id/button9"
        android:text="C" />
    <Button
        android:id="@+id/buttondiv"
        style="?android:attr/buttonStyleSmall"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignEnd="@+id/buttonmul"
        android:layout_alignLeft="@+id/buttonmul"
        android:layout_alignRight="@+id/buttonmul"
        android:layout_alignStart="@+id/buttonmul"
        android:layout_below="@+id/buttonmul"
        android:text="/" />
    <Button
        android:id="@+id/buttoneql"
        android:layout_width="wrap_content"
```

```xml
        android:layout_height="wrap_content"
        android:layout_alignEnd="@+id/buttondiv"
        android:layout_alignLeft="@+id/button10"
        android:layout_alignRight="@+id/buttondiv"
        android:layout_alignStart="@+id/button10"
        android:layout_below="@+id/button0"
        android:layout_marginTop="37dp"
        android:text="=" />
</RelativeLayout>
```

Java code

```java
package com.example.sjcet.pg5;
import android.os.Bundle;
import android.support.v7.app.AppCompatActivity;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
public class MainActivity extends AppCompatActivity {
    Button button0, button1, button2, button3, button4, button5, button6,
            button7, button8, button9, buttonAdd, buttonSub, buttonDivision,
            buttonMul, button10, buttonC, buttonEqual;
    EditText crunchifyEditText;
    float mValueOne, mValueTwo;
    boolean crunchifyAddition, mSubtract, crunchifyMultiplication, crunchifyDivision;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        button0 = (Button) findViewById(R.id.button0);
        button1 = (Button) findViewById(R.id.button1);
        button2 = (Button) findViewById(R.id.button2);
        button3 = (Button) findViewById(R.id.button3);
        button4 = (Button) findViewById(R.id.button4);
        button5 = (Button) findViewById(R.id.button5);
        button6 = (Button) findViewById(R.id.button6);
        button7 = (Button) findViewById(R.id.button7);
        button8 = (Button) findViewById(R.id.button8);
        button9 = (Button) findViewById(R.id.button9);
        button10 = (Button) findViewById(R.id.button10);
        buttonAdd = (Button) findViewById(R.id.buttonadd);
        buttonSub = (Button) findViewById(R.id.buttonsub);
        buttonMul = (Button) findViewById(R.id.buttonmul);
        buttonDivision = (Button) findViewById(R.id.buttondiv);
        buttonC = (Button) findViewById(R.id.buttonC);
        buttonEqual = (Button) findViewById(R.id.buttoneql);
        crunchifyEditText = (EditText) findViewById(R.id.edt1);
        button1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                crunchifyEditText.setText(crunchifyEditText.getText() + "1");
            }
        });
        button2.setOnClickListener(new View.OnClickListener() {
```

```java
            @Override
            public void onClick(View v) {
                crunchifyEditText.setText(crunchifyEditText.getText() + "2");
            }
        });
        button3.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                crunchifyEditText.setText(crunchifyEditText.getText() + "3");
            }
        });
        button4.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                crunchifyEditText.setText(crunchifyEditText.getText() + "4");
            }
        });
        button5.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                crunchifyEditText.setText(crunchifyEditText.getText() + "5");
            }
        });
        button6.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                crunchifyEditText.setText(crunchifyEditText.getText() + "6");
            }
        });
        button7.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                crunchifyEditText.setText(crunchifyEditText.getText() + "7");
            }
        });
        button8.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                crunchifyEditText.setText(crunchifyEditText.getText() + "8");
            }
        });
        button9.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                crunchifyEditText.setText(crunchifyEditText.getText() + "9");
            }
        });
        button0.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                crunchifyEditText.setText(crunchifyEditText.getText() + "0");
            }
        });
        buttonAdd.setOnClickListener(new View.OnClickListener() {
```

```java
        @Override
        public void onClick(View v) {
            if (crunchifyEditText == null) {
                crunchifyEditText.setText("");
            } else {
                mValueOne = Float.parseFloat(crunchifyEditText.getText() + "");
                crunchifyAddition = true;
                crunchifyEditText.setText(null);
            }
        }
    });
    buttonSub.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            mValueOne = Float.parseFloat(crunchifyEditText.getText() + "");
            mSubtract = true;
            crunchifyEditText.setText(null);
        }
    });
    buttonMul.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            mValueOne = Float.parseFloat(crunchifyEditText.getText() + "");
            crunchifyMultiplication = true;
            crunchifyEditText.setText(null);
        }
    });
    buttonDivision.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            mValueOne = Float.parseFloat(crunchifyEditText.getText() + "");
            crunchifyDivision = true;
            crunchifyEditText.setText(null);
        }
    });
    buttonEqual.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            mValueTwo = Float.parseFloat(crunchifyEditText.getText() + "");
            if (crunchifyAddition == true) {
                crunchifyEditText.setText(mValueOne + mValueTwo + "");
                crunchifyAddition = false;
            }
            if (mSubtract == true) {
                crunchifyEditText.setText(mValueOne - mValueTwo + "");
                mSubtract = false;
            }
            if (crunchifyMultiplication == true) {
                crunchifyEditText.setText(mValueOne * mValueTwo + "");
                crunchifyMultiplication = false;
            }
            if (crunchifyDivision == true) {
                crunchifyEditText.setText(mValueOne / mValueTwo + "");
                crunchifyDivision = false;
```

```java
        }


}
    });
    buttonC.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            crunchifyEditText.setText("");
        }
    });
    button10.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            crunchifyEditText.setText(crunchifyEditText.getText() + ".");


    }});}}
```
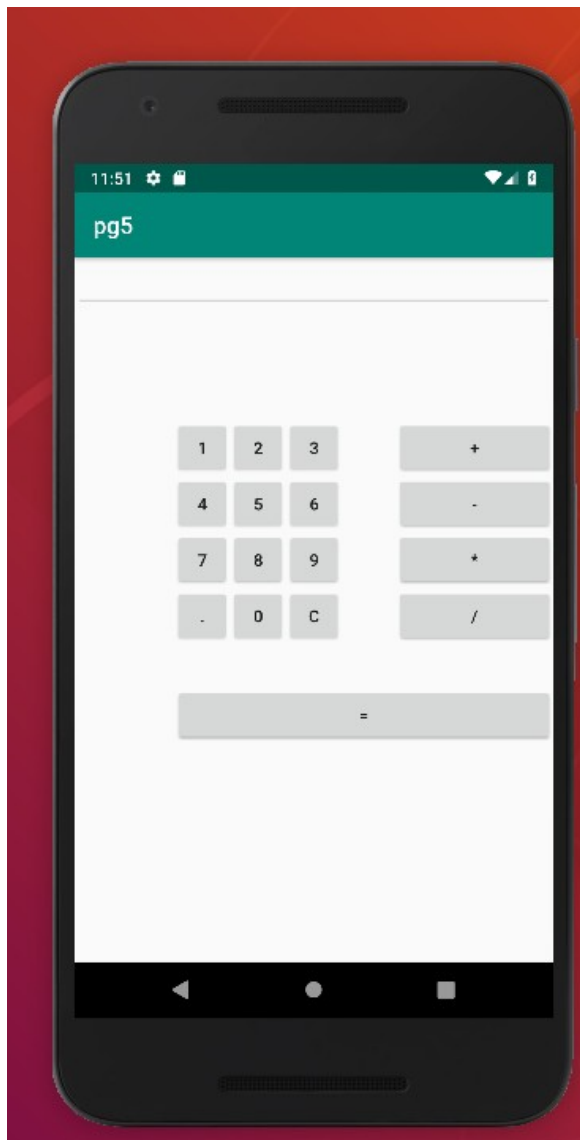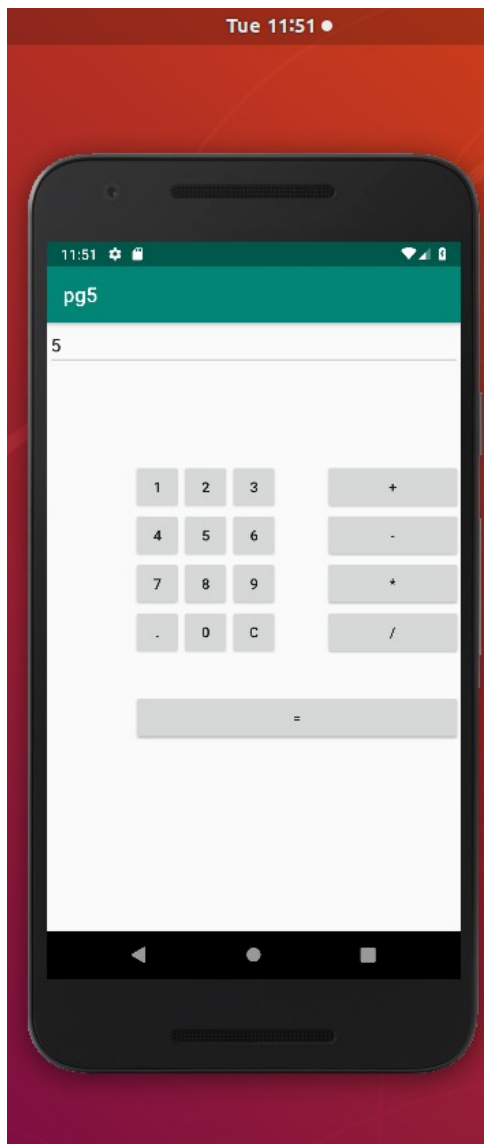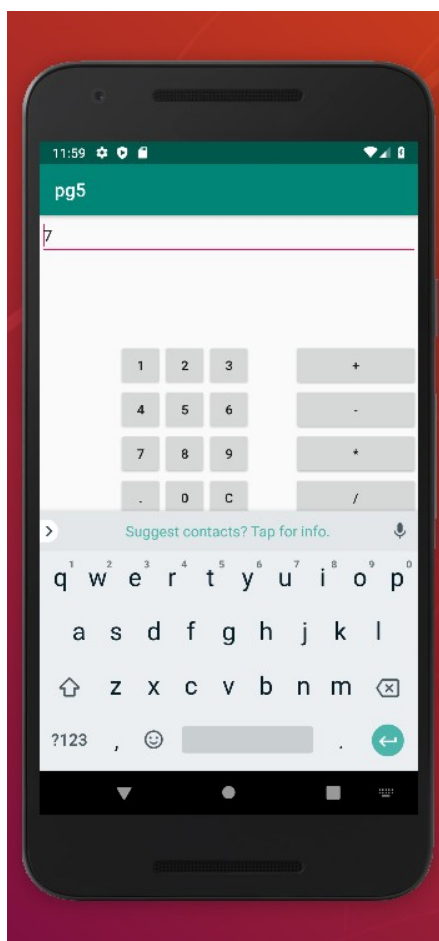
Output_1

Output_2

7

1	2	3		+
4	5	6		-
7	8	9		*
.	0	C		/

Suggest contacts? Tap for info.

q w e r t y u i o p

a s d f g h j k l

z x c v b n m

?123 , .

Output_3

12.0

1	2	3		+
4	5	6		-
7	8	9		*
.	0	C		/

=