

## **COURSE OUTCOME - 2**

## PROGRAM - 5

### AIM:

Design a registration activity and store registration details in local memory of the phone using Intents and SharedPreferences.

### PROGRAM CODE:

#### JAVA CODE:

```
package com.example.sharedpreference;

import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.content.SharedPreferences;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
public class MainActivity extends AppCompatActivity {
    EditText edt1,edt2,edt3,edt4,edt5;
    Button bt;
    TextView t1,t2,t3,t4,t5,t6,t7,t8,t9,t10;

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

        edt1=(EditText) findViewById(R.id.editcheck);
        edt2=(EditText) findViewById(R.id.editText);
        edt3=(EditText) findViewById(R.id.editText2);
        edt4=(EditText) findViewById(R.id.editText3);
        edt5=(EditText) findViewById(R.id.editText4);
        bt=(Button) findViewById(R.id.button);
        t1=(TextView) findViewById(R.id.textView);
        t2=(TextView) findViewById(R.id.textView2);
        t3=(TextView) findViewById(R.id.textView3);
        t4=(TextView) findViewById(R.id.textView4);
        t5=(TextView) findViewById(R.id.textView5);
        t6=(TextView) findViewById(R.id.textView6);
        t7=(TextView) findViewById(R.id.textView7);
        t8=(TextView) findViewById(R.id.textView8);
        t9=(TextView) findViewById(R.id.textView9);
        t10=(TextView) findViewById(R.id.textView10);
        bt.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
```

```

        SharedPreferences sharedpref=getSharedPreferences("pref",MODE_PRIVATE);
        SharedPreferences.Editor editor=sharedpref.edit();
        editor.putString("key",edt1.getText().toString());
        editor.putString("key1",edt2.getText().toString());
        editor.putString("key2",edt3.getText().toString());
        editor.putString("key3",edt4.getText().toString());
        editor.putString("key4",edt5.getText().toString());
        editor.apply();
    }

});
SharedPreferences getsharedValue=getSharedPreferences("pref",MODE_PRIVATE);
String value=getsharedValue.getString("key","this is the default value for pref");
t6.setText(value);
String value1=getsharedValue.getString("key1","this is the default value for pref");
t7.setText(value1);
String value2=getsharedValue.getString("key2","this is the default value for pref");
t8.setText(value2);
String value3=getsharedValue.getString("key3","this is the default value for pref");
t9.setText(value3);
String value4=getsharedValue.getString("key4","this is the default value for pref");
t10.setText(value4);

}
}

```

### **XML CODE:**

```

<?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">

<EditText
    android:id="@+id/editcheck"
    android:layout_width="148dp"
    android:layout_height="43dp"
    android:layout_marginTop="8dp"
    android:layout_marginBottom="8dp"
    android:ems="10"
    android:hint="Enter username"
    android:inputType="textPersonName"

```

```
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.822"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.07" />
```

<Button

```
android:id="@+id/button"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginStart="158dp"
android:layout_marginTop="8dp"
android:layout_marginEnd="159dp"
android:layout_marginBottom="8dp"
android:text="Save"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="1.0"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.615" />
```

<TextView

```
android:id="@+id/textView6"
android:layout_width="151dp"
android:layout_height="20dp"
android:layout_marginStart="165dp"
android:layout_marginTop="8dp"
android:layout_marginEnd="189dp"
android:layout_marginBottom="50dp"
android:text="Do You Want to save this Username"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.504"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.773" />
```

<TextView

```
android:id="@+id/textView"
android:layout_width="115dp"
android:layout_height="33dp"
android:layout_marginStart="8dp"
android:layout_marginTop="8dp"
android:layout_marginEnd="8dp"
android:layout_marginBottom="8dp"
android:text="Name"
```

```
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.221"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.069" />
```

<TextView

```
android:id="@+id/textView2"
android:layout_width="64dp"
android:layout_height="30dp"
android:layout_marginStart="8dp"
android:layout_marginTop="8dp"
android:layout_marginEnd="8dp"
android:layout_marginBottom="8dp"
android:text="Age"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.207"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.18" />
```

<EditText

```
android:id="@+id/editText"
android:layout_width="142dp"
android:layout_height="42dp"
android:layout_marginStart="8dp"
android:layout_marginTop="8dp"
android:layout_marginEnd="8dp"
android:layout_marginBottom="8dp"
android:ems="10"
android:hint="Enter age"
android:inputType="textPersonName"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.849"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.182" />
```

<TextView

```
android:id="@+id/textView3"
android:layout_width="71dp"
android:layout_height="28dp"
android:layout_marginStart="8dp"
android:layout_marginTop="8dp"
android:layout_marginEnd="8dp"
```

```
android:layout_marginBottom="8dp"
android:text="Mob no"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.212"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.289" />
```

<EditText

```
android:id="@+id/editText2"
android:layout_width="136dp"
android:layout_height="41dp"
android:layout_marginStart="8dp"
android:layout_marginTop="8dp"
android:layout_marginEnd="8dp"
android:layout_marginBottom="8dp"
android:ems="10"
android:inputType="textPersonName"
android:hint="Enter Mob no"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.827"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.297" />
```

<TextView

```
android:id="@+id/textView4"
android:layout_width="66dp"
android:layout_height="25dp"
android:layout_marginStart="8dp"
android:layout_marginTop="8dp"
android:layout_marginEnd="8dp"
android:layout_marginBottom="8dp"
android:text="Email"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.208"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.391" />
```

<EditText

```
android:id="@+id/editText3"
android:layout_width="126dp"
android:layout_height="37dp"
android:layout_marginStart="8dp"
```

```
android:layout_marginTop="8dp"
android:layout_marginEnd="8dp"
android:ems="10"
android:hint="Enter email"
android:inputType="textPersonName"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.793"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.389" />
```

<TextView

```
android:id="@+id/textView5"
android:layout_width="wrap_content"
android:layout_height="25dp"
android:layout_marginStart="8dp"
android:layout_marginTop="8dp"
android:layout_marginEnd="8dp"
android:layout_marginBottom="8dp"
android:text="Password"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.205"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.493" />
```

<EditText

```
android:id="@+id/editText4"
android:layout_width="99dp"
android:layout_height="39dp"
android:layout_marginStart="8dp"
android:layout_marginTop="8dp"
android:layout_marginEnd="8dp"
android:layout_marginBottom="8dp"
android:ems="10"
android:hint="Enter password"
android:inputType="textPersonName"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.713"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent" />
```

<TextView

```
android:id="@+id/textView7"
android:layout_width="149dp"
```

```
android:layout_height="21dp"
android:layout_marginStart="8dp"
android:layout_marginTop="8dp"
android:layout_marginEnd="8dp"
android:layout_marginBottom="8dp"
android:text="TextView"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.452"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.772" />
```

<TextView

```
android:id="@+id/textView8"
android:layout_width="172dp"
android:layout_height="21dp"
android:layout_marginStart="8dp"
android:layout_marginTop="8dp"
android:layout_marginEnd="8dp"
android:layout_marginBottom="8dp"
android:text="TextView"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.841" />
```

<TextView

```
android:id="@+id/textView9"
android:layout_width="149dp"
android:layout_height="23dp"
android:layout_marginStart="8dp"
android:layout_marginTop="8dp"
android:layout_marginEnd="8dp"
android:layout_marginBottom="8dp"
android:text="TextView"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.447"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.925" />
```

<TextView

```
android:id="@+id/textView10"
android:layout_width="140dp"
android:layout_height="26dp"
```



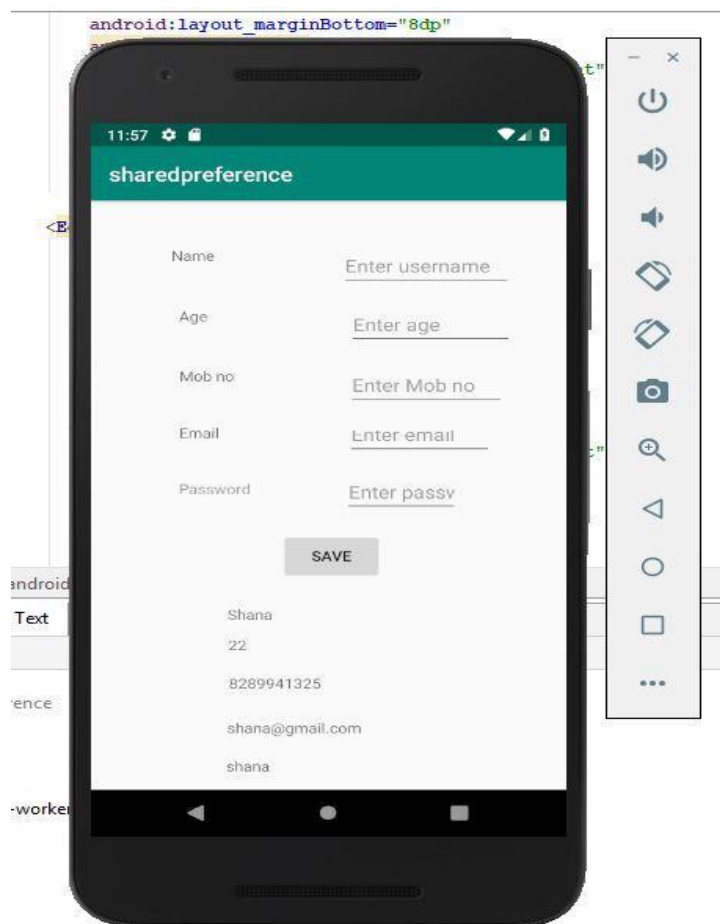
```

android:layout_marginStart="8dp"
android:layout_marginTop="8dp"
android:layout_marginEnd="8dp"
android:layout_marginBottom="8dp"
android:text="TextView"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.429"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="1.0" />

```

</android.support.constraint.ConstraintLayout>

## **OUTPUT:**



## **RESULT:**

The program executed successfully and obtained the output.

## **PROGRAM - 6**

### **AIM:**

Design a simple Calculator using GridLayout and Cascaded LinearLayout.

### **PROGRAM CODE:**

#### **JAVA CODE:**

```
package com.example.gridcalculator;
import android.os.Bundle;
import androidx.appcompat.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, buttonDiv, buttonC, buttonEqual, buttonPerc;
    EditText cEditText;
    float mValueOne, mValueTwo;
    boolean cAddition, mSubtract, cMultiplication, cDivision, cPerc;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        button0 = (Button) findViewById(R.id.button15);
        button1 = (Button) findViewById(R.id.button8);
        button2 = (Button) findViewById(R.id.button14);
        button3 = (Button) findViewById(R.id.button18);
        button4 = (Button) findViewById(R.id.button7);
        button5 = (Button) findViewById(R.id.button13);
        button6 = (Button) findViewById(R.id.button16);
        button7 = (Button) findViewById(R.id.button6);
        button8 = (Button) findViewById(R.id.button10);
        button9 = (Button) findViewById(R.id.button11);
        buttonDiv = (Button) findViewById(R.id.button19);
        buttonAdd = (Button) findViewById(R.id.button20);
```

```
buttonSub = (Button) findViewById(R.id.button17);
buttonMul = (Button) findViewById(R.id.button12);
buttonDivision = (Button) findViewById(R.id.button5);
buttonC = (Button) findViewById(R.id.button2);
buttonperc = (Button) findViewById(R.id.button4);
buttonEqual = (Button) findViewById(R.id.button21);
cEditText = (EditText) findViewById(R.id.edt1);
button1.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        cEditText.setText(cEditText.getText() + "1");
    }
});
button2.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        cEditText.setText(cEditText.getText() + "2");
    }
});
button3.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        cEditText.setText(cEditText.getText() + "3");
    }
});
button4.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        cEditText.setText(cEditText.getText() + "4");
    }
});
button5.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        cEditText.setText(cEditText.getText() + "5");
    }
});
button6.setOnClickListener(new View.OnClickListener() {
    @Override
```

```

        public void onClick(View v) {
            cEditText.setText(cEditText.getText() + "6");
        }
    });
    button7.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            cEditText.setText(cEditText.getText() + "7");
        }
    });
    button8.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            cEditText.setText(cEditText.getText() + "8");
        }
    });
    button9.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            cEditText.setText(cEditText.getText() + "9");
        }
    });
    button0.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            cEditText.setText(cEditText.getText() + "0");
        }
    });
    buttonAdd.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            if (cEditText == null) {
                cEditText.setText("");
            } else {
                mValueOne = Float.parseFloat(cEditText.getText() +
                    "");
                cAddition = true;
                cEditText.setText(null);
            }
        }
    });

```

```

    }
});
buttonSub.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        mValueOne = Float.parseFloat(cEditText.getText() +
            "");
        mSubtract = true;
        cEditText.setText(null);
    }
});
buttonMul.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        mValueOne = Float.parseFloat(cEditText.getText() +
            "");
        cMultiplication = true;
        cEditText.setText(null);
    }
});
buttonDivision.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        mValueOne = Float.parseFloat(cEditText.getText() +
            "");
        cDivision = true;
        cEditText.setText(null);
    }
});
buttonperc.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        mValueOne = Float.parseFloat(cEditText.getText() +
            "");
        cperc = true;
        cEditText.setText(null);
    }
});
buttonEqual.setOnClickListener(new View.OnClickListener() {

```

```

@Override
public void onClick(View v) {
    mValueTwo = Float.parseFloat(cEditText.getText() +
        "");
    if (cAddition == true) {
        cEditText.setText(mValueOne + mValueTwo + "");
        cAddition = false;
    }
    if (mSubtract == true) {
        cEditText.setText(mValueOne - mValueTwo + "");
        mSubtract = false;
    }
    if (cMultiplication == true) {
        cEditText.setText(mValueOne * mValueTwo + "");
        cMultiplication = false;
    }
    if (cDivision == true) {
        cEditText.setText(mValueOne / mValueTwo + "");
        cDivision = false;
    }
    if (cperc == true) {
        cEditText.setText((mValueOne / mValueTwo)*100 +
            "");
        cperc = false;
    }
}
});
buttonC.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        cEditText.setText("");
    }
});
buttond.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        cEditText.setText(cEditText.getText() + ".");
    }
});

```

```
}  
}
```

## **XML CODE:**

```
<?xml version="1.0" encoding="utf-8"?>  
<androidx.constraintlayout.widget.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"  
    android:background="#F6CACA"  
    tools:context=".MainActivity">  
    <android.widget.GridLayout  
        android:id="@+id/gridLayout"  
        android:layout_width="398dp"  
        android:layout_height="496dp"  
        android:layout_marginStart="1dp"  
        android:layout_marginTop="45dp"  
        android:layout_marginEnd="1dp"  
        app:layout_constraintEnd_toEndOf="parent"  
        app:layout_constraintStart_toStartOf="parent"  
        app:layout_constraintTop_toBottomOf="@+id/edt1">  
        <Button  
            android:id="@+id/button2"  
            android:layout_width="100dp"  
            android:layout_height="60dp"  
            android:text="C"  
            android:textSize="20sp"  
            app:layout_column="0"  
            app:layout_row="0" />  
        <Button  
            android:id="@+id/button3"  
            android:layout_width="98dp"  
            android:layout_height="60dp"  
            android:text="("  
            android:textSize="20sp"  
            app:layout_column="1"
```

```
        app:layout_row="0" />
<Button
    android:id="@+id/button4"
    android:layout_width="wrap_content"
    android:layout_height="60dp"
    android:text="%"
    android:textSize="20sp"
    app:layout_column="2"
    app:layout_row="0" />
<Button
    android:id="@+id/button5"
    android:layout_width="121dp"
    android:layout_height="64dp"
    android:layout_row="0"
    android:layout_column="3"
    android:text="/"
    android:textSize="20sp"
    app:layout_column="3"
    app:layout_row="0" />
<Button
    android:id="@+id/button6"
    android:layout_width="91dp"
    android:layout_height="59dp"
    android:layout_row="1"
    android:layout_column="0"
    android:text="7"
    android:textSize="20sp"
    app:layout_column="0"
    app:layout_row="1" />
<Button
    android:id="@+id/button7"
    android:layout_width="wrap_content"
    android:layout_height="60dp"
    android:layout_row="2"
    android:layout_column="1"
    android:text="4"
    android:textSize="20sp"
    app:layout_column="0"
    app:layout_row="2" />
```



```
<Button
    android:id="@+id/button8"
    android:layout_width="wrap_content"
    android:layout_height="61dp"
    android:layout_row="1"
    android:layout_column="2"
    android:text="1"
    android:textSize="20sp"
    app:layout_column="0"
    app:layout_row="3" />
```

```
<Button
    android:id="@+id/button9"
    android:layout_width="123dp"
    android:layout_height="65dp"
    android:text="+/-"
    android:textSize="20sp"
    app:layout_column="0"
    app:layout_row="4" />
```

```
<Button
    android:id="@+id/button10"
    android:layout_width="wrap_content"
    android:layout_height="61dp"
    android:layout_row="4"
    android:layout_column="0"
    android:text="8"
    android:textSize="20sp"
    app:layout_column="1"
    app:layout_row="1" />
```

```
<Button
    android:id="@+id/button11"
    android:layout_width="wrap_content"
    android:layout_height="59dp"
    android:layout_row="4"
    android:layout_column="1"
    android:text="9"
    android:textSize="20sp"
    app:layout_column="2"
    app:layout_row="1" />
```

```
<Button
```

```
android:id="@+id/button12"  
android:layout_width="113dp"  
android:layout_height="62dp"  
android:layout_row="2"  
android:layout_column="3"  
android:text="*"   
android:textSize="20sp"  
app:layout_column="3"  
app:layout_row="1" />
```

<Button

```
android:id="@+id/button13"  
android:layout_width="wrap_content"  
android:layout_height="61dp"  
android:layout_row="1"  
android:layout_column="1"  
android:text="5"   
android:textSize="20sp"  
app:layout_column="1"  
app:layout_row="2" />
```

<Button

```
android:id="@+id/button14"  
android:layout_width="wrap_content"  
android:layout_height="64dp"  
android:layout_row="2"  
android:layout_column="2"  
android:text="2"   
android:textSize="20sp"  
app:layout_column="1"  
app:layout_row="3" />
```

<Button

```
android:id="@+id/button15"  
android:layout_width="wrap_content"  
android:layout_height="60dp"  
android:layout_row="3"  
android:layout_column="2"  
android:text="0"   
android:textSize="20sp"  
app:layout_column="1"  
app:layout_row="4" />
```

```
<Button
    android:id="@+id/button16"
    android:layout_width="wrap_content"
    android:layout_height="60dp"
    android:layout_row="2"
    android:layout_column="0"
    android:text="6"
    android:textSize="20sp"
    app:layout_column="2"
    app:layout_row="2" />
```

```
<Button
    android:id="@+id/button17"
    android:layout_width="wrap_content"
    android:layout_height="61dp"
    android:layout_row="3"
    android:layout_column="0"
    android:text="-"
    android:textSize="20sp"
    app:layout_column="3"
    app:layout_row="2" />
```

```
<Button
    android:id="@+id/button18"
    android:layout_width="wrap_content"
    android:layout_height="59dp"
    android:text="3"
    android:textSize="20sp"
    app:layout_column="2"
    app:layout_row="3" />
```

```
<Button
    android:id="@+id/button19"
    android:layout_width="wrap_content"
    android:layout_height="61dp"
    android:layout_row="4"
    android:layout_column="2"
    android:text="."
    android:textSize="24sp"
    app:layout_column="2"
    app:layout_row="4" />
```

```
<Button
```

```

        android:id="@+id/button20"
        android:layout_width="121dp"
        android:layout_height="59dp"
        android:layout_row="3"
        android:layout_column="3"
        android:text="+"
        android:textSize="20sp"
        app:layout_column="3"
        app:layout_row="3" />
    <Button
        android:id="@+id/button21"
        android:layout_width="111dp"
        android:layout_height="62dp"
        android:layout_row="4"
        android:layout_column="3"
        android:text="="
        android:textSize="20sp"
        app:layout_column="3"
        app:layout_row="4" />
</android.widget.GridLayout>
<EditText
    android:id="@+id/edt1"
    android:layout_width="423dp"
    android:layout_height="93dp"
    android:layout_marginTop="140dp"
    android:layout_marginBottom="95dp"
    android:background="#A3D4DA"
    android:backgroundTint="#CCEBEF"
    android:textSize="34sp"
    app:layout_constraintBottom_toTopOf="@+id/gridLayout"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.0"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="1.0"
    tools:ignore="MissingConstraints" />
<EditText
    android:id="@+id/editTextTextPersonName2"
    android:layout_width="406dp"

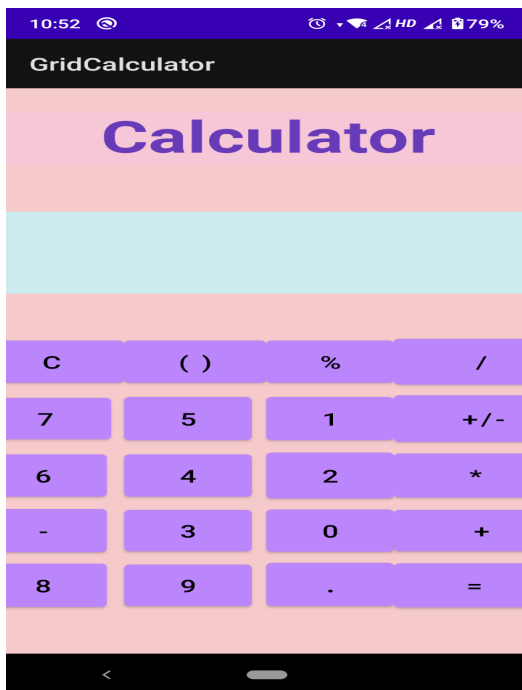
```

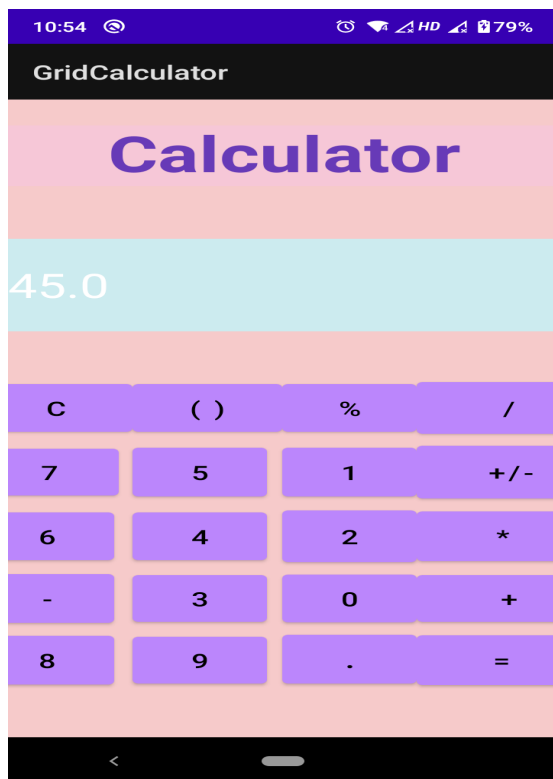
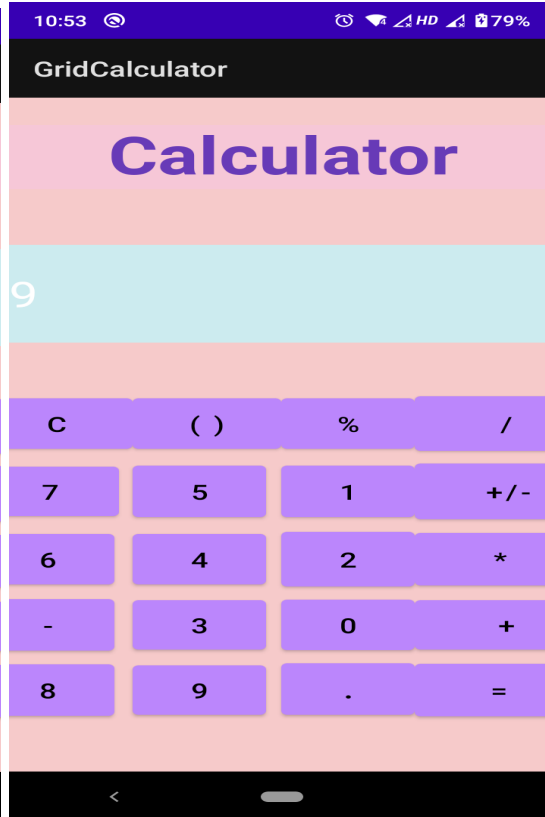
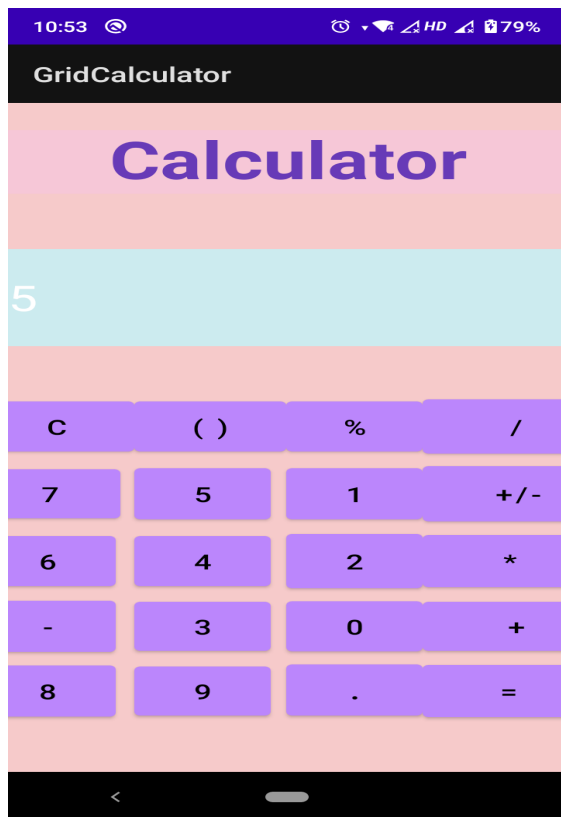
```

        android:layout_height="61dp"
        android:layout_marginStart="1dp"
        android:layout_marginTop="15dp"
        android:layout_marginBottom="42dp"
        android:background="#F6C7D7"
        android:ems="10"
        android:foregroundGravity="center"
        android:gravity="center"
        android:inputType="textPersonName"
        android:text="Calculator"
        android:textColor="#673AB7"
        android:textSize="50sp"
        android:textStyle="bold"
        app:layout_constraintBottom_toTopOf="@+id/edt1"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        android:layout_marginLeft="1dp" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

## OUTPUT:





### **RESULT:**

The program executed successfully and obtained the output.

## PROGRAM - 7

### AIM:

Create a Facebook page using RelativeLayout; set properties using .xml file.

### PROGRAM CODE:

#### XML CODE:

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

    <ImageView
        android:id="@+id/imageView3"
        android:layout_width="309dp"
        android:layout_height="130dp"
        android:layout_centerHorizontal="true"
        app:srcCompat="@drawable/fb_logo" />

    <ImageView
        android:id="@+id/imageView7"
        android:layout_width="110dp"
        android:layout_height="wrap_content"
        android:layout_below="@+id/imageView3"
        android:layout_alignParentLeft="false"
        android:layout_marginTop="23dp"
        app:srcCompat="@drawable/emoji" />

    <TextView
        android:id="@+id/editText1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@id/imageView7"
        android:layout_alignBottom="@id/imageView7"
```

```
android:layout_alignParentBottom="false"
android:layout_marginLeft="134dp"
android:layout_marginBottom="11dp"
android:layout_toRightOf="@id/imageView7"
android:ems="10"
android:fontFamily="sans-serif-black"
android:inputType="textPersonName"
android:text="Shana Parween"
android:textSize="20dp" />
```

<CheckBox

```
android:id="@+id/check1"
android:layout_width="217dp"
android:layout_height="26dp"
android:layout_below="@id/imageView7"
android:layout_marginTop="63dp"
android:layout_marginBottom="56dp"
android:text="Log In" />
```

<CheckBox

```
android:layout_width="217dp"
android:layout_height="26dp"
android:layout_alignTop="@+id/check1"
android:layout_marginTop="60dp"
android:layout_marginBottom="56dp"
android:text="Find your Account" />
```

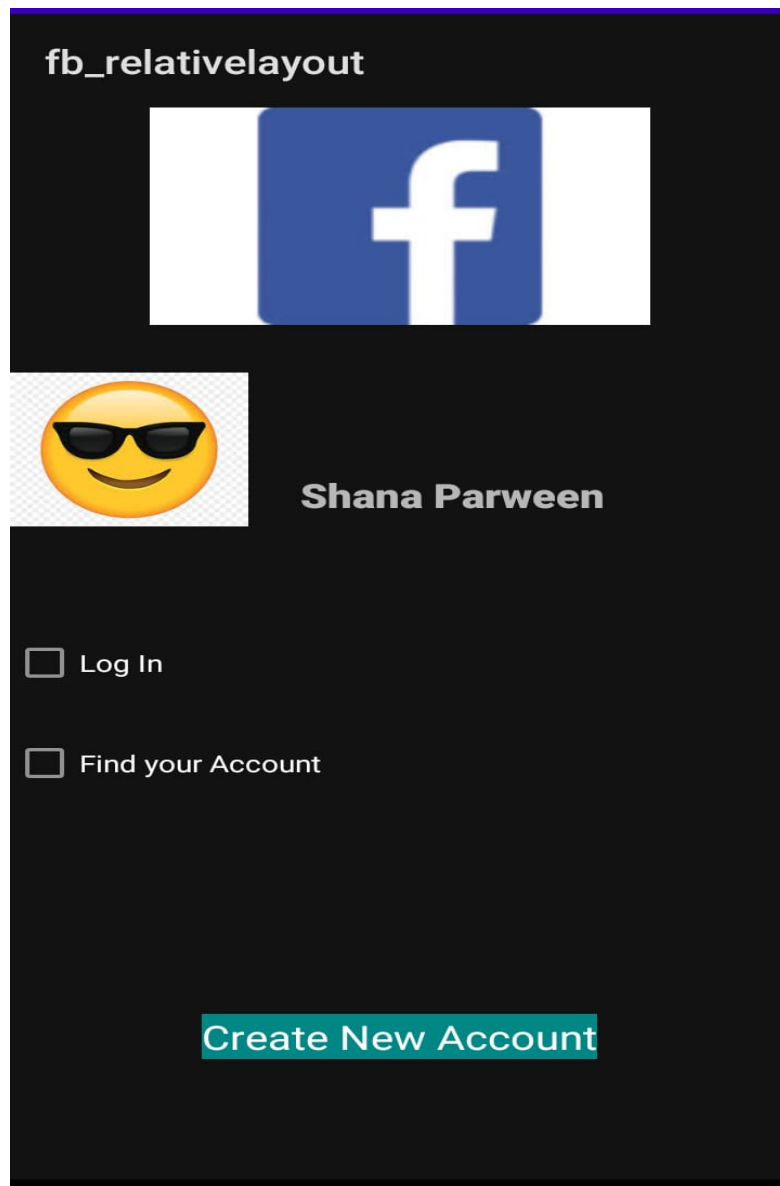
<EditText

```
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignParentBottom="true"
android:layout_centerInParent="true"
android:layout_centerVertical="true"
android:layout_marginBottom="72dp"
android:background="@color/teal_700"
android:text="Create New Account"
android:textColor="@color/white"
android:textSize="20dp" />
```

</RelativeLayout>



### OUTPUT:



### RESULT:

The program executed successfully and obtained the output.

## **PROGRAM - 8**

### **AIM:**

Develop an application that toggles image using FrameLayout

### **PROGRAM CODE:**

#### **JAVA CODE:**

```
package com.example.framelayout;

import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.ImageView;

public class MainActivity extends AppCompatActivity implements View.OnClickListener {
    ImageView i1,i2;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        i1=(ImageView) findViewById(R.id.imageView1);
        i2=(ImageView) findViewById(R.id.imageView2);
        i1.setOnClickListener(this);
        i2.setOnClickListener(this);
    }

    @Override
    public void onClick(View v) {
        if(v.getId()==R.id.imageView1)
        {
            i1.setVisibility(v.GONE);
            i2.setVisibility(v.VISIBLE);
        }
        else
        {
            i2.setVisibility(v.GONE);
            i1.setVisibility(v.VISIBLE);
        }
    }
}
```

```
}  
}
```

## **XML CODE:**

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

```
<ImageView  
  android:id="@+id/imageView1"  
  android:layout_width="400dp"  
  android:layout_height="392dp"  
  app:srcCompat="@drawable/cat"  
  android:layout_gravity="left|top"/>
```

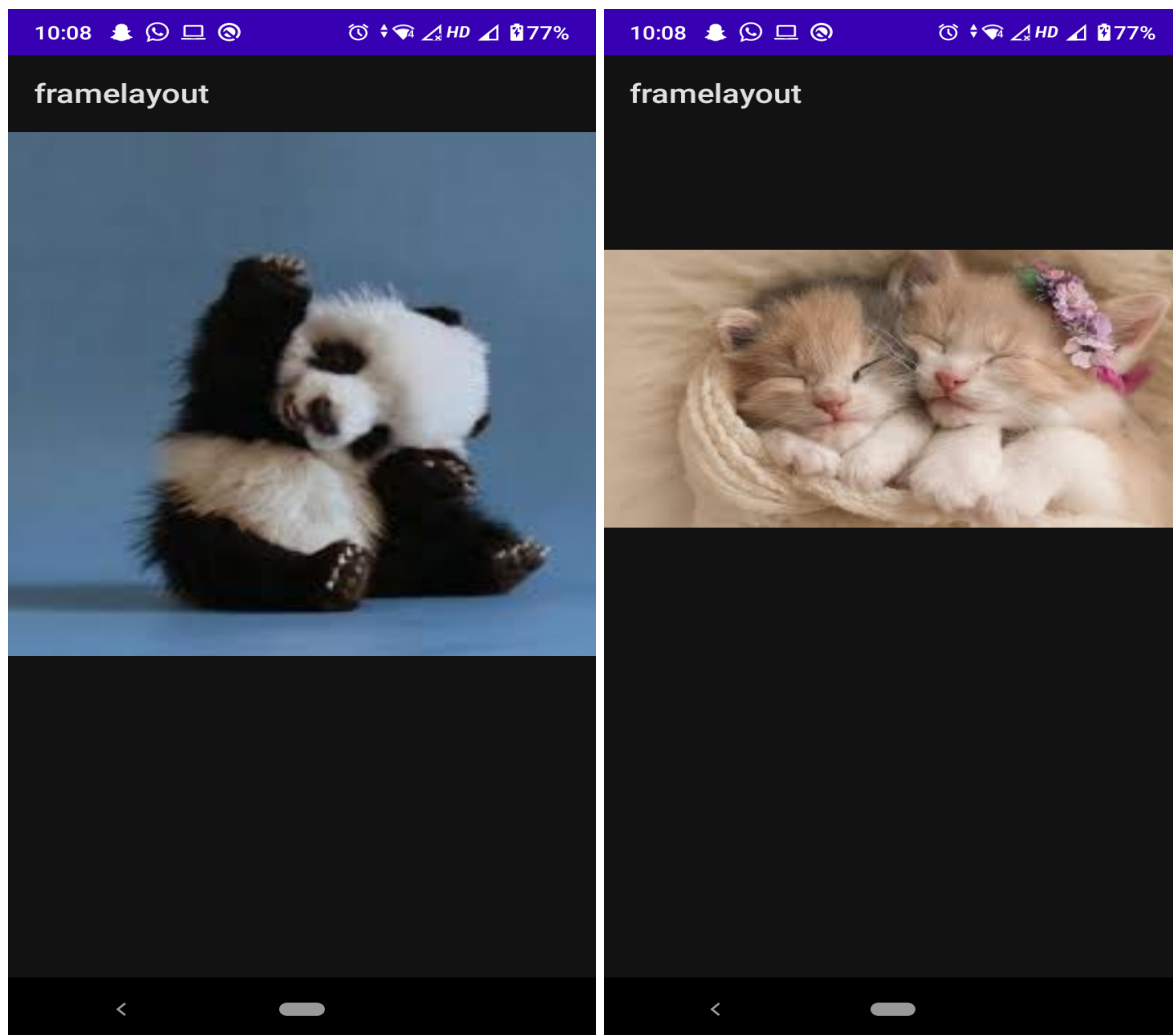
```
<ImageView  
  android:id="@+id/imageView2"  
  android:layout_width="396dp"  
  android:layout_height="400dp"  
  app:srcCompat="@drawable/panda"  
  android:layout_gravity="left|top"  
  android:visibility="gone"/>
```

```
<FrameLayout  
  android:layout_width="match_parent"  
  android:layout_height="match_parent">
```

```
</FrameLayout>
```

```
</FrameLayout>
```

## **OUTPUT:**



## **RESULT:**

The program executed successfully and obtained the output.