

## PROGRAM-1

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

### PROGRAM CODE

Main 2activity.java a	<pre>package com.example.intent_and_sharedpreferences; import androidx.appcompat.app.AppCompatActivity; import android.content.Intent; import android.content.SharedPreferences; import android.os.Bundle; import android.view.View; import android.widget.EditText; import android.widget.Toast; public class MainActivity extends AppCompatActivity {     EditText name,number,email;     @Override     protected void onCreate(Bundle savedInstanceState) {         super.onCreate(savedInstanceState);         setContentView(R.layout.activity_main);}     public void onSubmit(View view){         name=findViewById(R.id.name);         number=findViewById(R.id.number);         email=findViewById(R.id.email);         SharedPreferences sharedPreferences = getSharedPreferences("myfile",MODE_PRIVATE);         SharedPreferences.Editor myEdit=sharedPreferences.edit();         myEdit.putString("name",name.getText().toString());         myEdit.putString("number",number.getText().toString());         myEdit.putString("email",email.getText().toString());         myEdit.apply();         Toast.makeText(this,"Successfully Registered",Toast.LENGTH_LONG).show();         Intent i=new Intent(getApplicationContext(),MainActivity2.class);         i.putExtra("name",name.getText().toString());         i.putExtra("email",email.getText().toString());         i.putExtra("number",number.getText().toString());         startActivity(i);}     @Override     protected void onResume() {         super.onResume();         SharedPreferences sharedPreferences=getSharedPreferences("myfile",MODE_PRIVATE);         name=findViewById(R.id.name);         number=findViewById(R.id.number);</pre>
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	<pre> email=findViewById(R.id.email); name.setText(sharedPreferences.getString("name","")); number.setText(sharedPreferences.getString("number","")); email.setText(sharedPreferences.getString("email","")); } } </pre>
MainActivity2.java	<pre> package com.example.intent_and_sharedpreferences; import androidx.appcompat.app.AppCompatActivity; import android.os.Bundle; import android.widget.EditText; import android.widget.TextView; public class MainActivity2 extends AppCompatActivity {     TextView name_view,number_view,email_view;     @Override     protected void onCreate(Bundle savedInstanceState) {         super.onCreate(savedInstanceState);         setContentView(R.layout.activity_main2);         name_view=findViewById(R.id.name_view);         number_view=findViewById(R.id.number_view);         email_view=findViewById(R.id.email_view);         Bundle values=getIntent().getExtras();         String name=values.getString("name");         String number=values.getString("number");         String email=values.getString("email");         name_view.setText("Hai "+name+", You have Successfully Registered");         number_view.setText("Your Mobile Number is: "+number);         email_view.setText("Your Email Address is: "+email); } } </pre>
Activitymain.xml	<pre> &lt;?xml version="1.0" encoding="utf-8"?&gt; &lt;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:id="@+id/on" android:layout_width="match_parent" android:layout_height="match_parent" tools:context=".MainActivity"&gt; &lt;TextView     android:id="@+id/textView"     android:layout_width="wrap_content"     android:layout_height="wrap_content"     android:text="Registration"     android:textColor="#910707"     android:textSize="34sp"     app:layout_constraintBottom_toBottomOf="parent"     app:layout_constraintEnd_toEndOf="parent"     app:layout_constraintHorizontal_bias="0.497"     app:layout_constraintStart_toStartOf="parent"     app:layout_constraintTop_toTopOf="parent"     app:layout_constraintVertical_bias="0.078" /&gt; &lt;EditText     android:id="@+id/name"     android:layout_width="291dp" </pre>

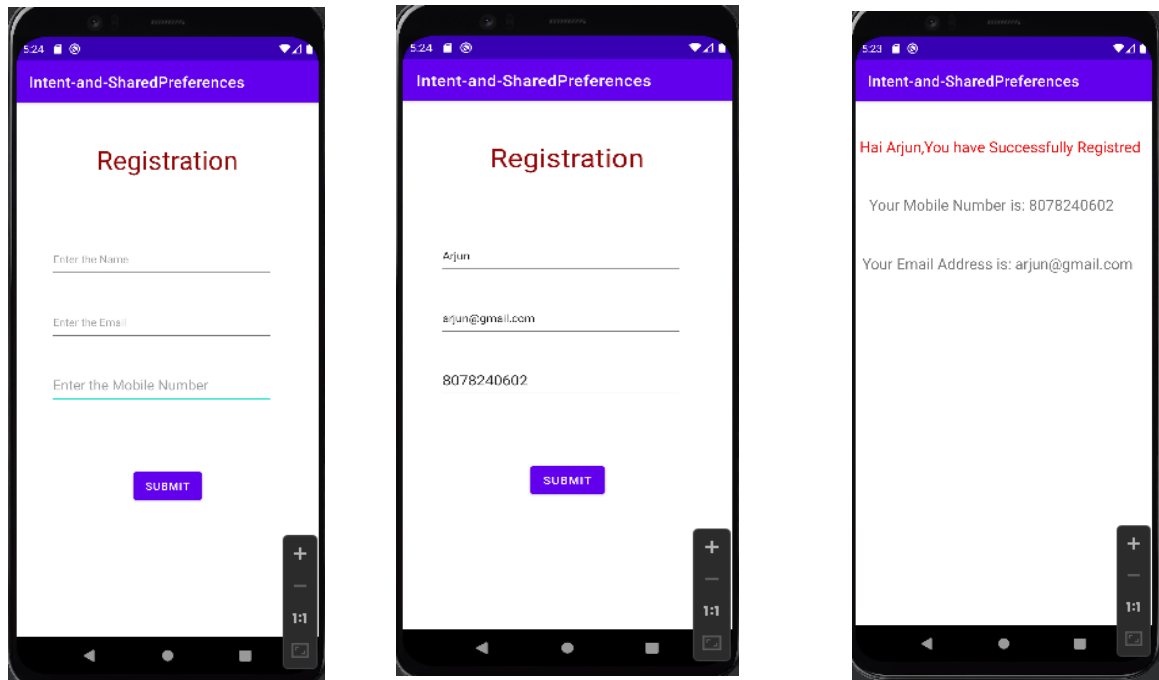
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        android:layout_height="51dp"
        android:ems="10"
        android:hint="Enter the Name"
        android:inputType="textPersonName"
        android:textSize="14sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.425"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.276" />
    <EditText
        android:id="@+id/email"
        android:layout_width="291dp"
        android:layout_height="51dp"
        android:ems="10"
        android:hint="Enter the Email"
        android:inputType="textPersonName"
        android:textSize="14sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.425"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.404" />
    <EditText
        android:id="@+id/number"
        android:layout_width="291dp"
        android:layout_height="51dp"
        android:ems="10"
        android:hint="Enter the Mobile Number"
        android:inputType="textPersonName"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.425"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.53" />
    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:onClick="onSubmit"
        android:text="Submit"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.733" />
</androidx.constraintlayout.widget.ConstraintLayout>

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Activitymain2.xml	<pre> &lt;?xml version="1.0" encoding="utf-8"?&gt; &lt;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" tools:context=".MainActivity2"&gt; &lt;TextView     android:id="@+id/name_view"     android:layout_width="wrap_content"     android:layout_height="wrap_content"     android:textColor="#ED0C0C"     android:textSize="20sp"     app:layout_constraintBottom_toBottomOf="parent"     app:layout_constraintEnd_toEndOf="parent"     app:layout_constraintHorizontal_bias="0.26"     app:layout_constraintStart_toStartOf="parent"     app:layout_constraintTop_toTopOf="parent"     app:layout_constraintVertical_bias="0.069" /&gt; &lt;TextView     android:id="@+id/email_view"     android:layout_width="wrap_content"     android:layout_height="wrap_content"     android:textSize="20sp"     app:layout_constraintBottom_toBottomOf="parent"     app:layout_constraintEnd_toEndOf="parent"     app:layout_constraintHorizontal_bias="0.26"     app:layout_constraintStart_toStartOf="parent"     app:layout_constraintTop_toTopOf="parent"     app:layout_constraintVertical_bias="0.301" /&gt; &lt;TextView     android:id="@+id/number_view"     android:layout_width="wrap_content"     android:layout_height="wrap_content"     android:textSize="20sp"     app:layout_constraintBottom_toBottomOf="parent"     app:layout_constraintEnd_toEndOf="parent"     app:layout_constraintHorizontal_bias="0.26"     app:layout_constraintStart_toStartOf="parent"     app:layout_constraintTop_toTopOf="parent"     app:layout_constraintVertical_bias="0.184" /&gt; &lt;/androidx.constraintlayout.widget.ConstraintLayout&gt; </pre>
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## OUTPUT



## RESULT:

The above program is successfully executed and obtained the output.

## **PROGRAM 2**

**AIM:** Design a simple Calculator using GridLayout and Cascaded LinearLayout.

### **PROGRAM CODE**

MainActivity.java	<pre>package com.example.calculator; import androidx.appcompat.app.AppCompatActivity; import android.os.Bundle; import android.view.View; import android.widget.EditText; public class MainActivity extends AppCompatActivity {     EditText result;     String ans;     float num1,num2,calcu;     int flag=0;     @Override     protected void onCreate(Bundle savedInstanceState) {         super.onCreate(savedInstanceState);         setContentView(R.layout.activity_main);         result=findViewById(R.id.editTextTextPersonName);}     public void clear(View view){         result.setText("");}     public void one(View view){         ans=result.getText().toString();         result.setText(ans+"1");}     public void two(View view){         ans=result.getText().toString();         result.setText(ans+"2");}     public void three(View view){         ans=result.getText().toString();         result.setText(ans+"3");}     public void four(View view){         ans=result.getText().toString();         result.setText(ans+"4");}     public void five(View view){         ans=result.getText().toString();         result.setText(ans+"5");}     public void six(View view){         ans=result.getText().toString();         result.setText(ans+"6");}     public void seven(View view){         ans=result.getText().toString();         result.setText(ans+"7");}     public void eight(View view){         ans=result.getText().toString();         result.setText(ans+"8");}</pre>
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	<pre> public void nine(View view){     ans=result.getText().toString();     result.setText(ans+"9");} public void zero(View view){     ans=result.getText().toString();     result.setText(ans+"0");} public void add(View view){     num1=Float.parseFloat(result.getText().toString());     result.setText("+");     flag=1;} public void sub(View view){     num1=Float.parseFloat(result.getText().toString());     result.setText("-");     flag=2;} public void multiple(View view){     num1=Float.parseFloat(result.getText().toString());     result.setText("*");     flag=3;} public void div(View view){     num1=Float.parseFloat(result.getText().toString());     result.setText("/");     flag=4;} public void equal(View view){     num2=Float.parseFloat(result.getText().toString());     switch(flag){         case 1:             calcu=num1+num2;             result.setText(String.valueOf(calcu));             break;         case 2:             calcu=num1-num2;             result.setText(String.valueOf(calcu));             break;         case 3:             calcu=num1*num2;             result.setText(String.valueOf(calcu));             break;         case 4:             calcu=num1/num2;             result.setText(String.valueOf(calcu));             break;     } } } </pre>
Activity_main.xml	<pre> &lt;?xml version="1.0" encoding="utf-8"?&gt; &lt;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" tools:context=".MainActivity"&gt; </pre>

	<pre> &lt;androidx.gridlayout.widget.GridLayout     android:layout_width="418dp"     android:layout_height="427dp"     app:layout_constraintBottom_toBottomOf="parent"     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"&gt; &lt;LinearLayout     android:layout_width="96dp"     android:layout_height="match_parent"     android:orientation="vertical"     app:layout_column="0"     app:layout_row="0"&gt; &lt;Button     android:id="@+id/button2"     android:layout_width="match_parent"     android:layout_height="77dp"     android:onClick="one"     android:text="1" /&gt; &lt;Button     android:id="@+id/button3"     android:layout_width="match_parent"     android:layout_height="78dp"     android:onClick="four"     android:text="4" /&gt; &lt;Button     android:id="@+id/button"     android:layout_width="match_parent"     android:layout_height="88dp"     android:onClick="seven"     android:text="7" /&gt; &lt;Button     android:id="@+id/button4"     android:layout_width="match_parent"     android:layout_height="79dp"     android:onClick="clear"     android:text="C" /&gt; &lt;/LinearLayout&gt; &lt;LinearLayout     android:layout_width="107dp"     android:layout_height="match_parent"     android:orientation="vertical"     app:layout_column="1"     app:layout_row="0"&gt; &lt;Button     android:id="@+id/button5"     android:layout_width="match_parent"     android:layout_height="75dp" </pre>
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        android:onClick="two"
        android:text="2" />
<Button
    android:id="@+id/button6"
    android:layout_width="match_parent"
    android:layout_height="78dp"
    android:onClick="five"
    android:text="5" />
<Button
    android:id="@+id/button7"
    android:layout_width="match_parent"
    android:layout_height="87dp"
    android:onClick="eight"
    android:text="8" />
<Button
    android:id="@+id/button8"
    android:layout_width="match_parent"
    android:layout_height="79dp"
    android:onClick="zero"
    android:text="0" />
</LinearLayout>
<LinearLayout
    android:layout_width="107dp"
    android:layout_height="match_parent"
    android:orientation="vertical"
    app:layout_column="2"
    app:layout_row="0">
    <Button
        android:id="@+id/button9"
        android:layout_width="match_parent"
        android:layout_height="79dp"
        android:onClick="three"
        android:text="3" />
    <Button
        android:id="@+id/button10"
        android:layout_width="match_parent"
        android:layout_height="74dp"
        android:onClick="six"
        android:text="6" />
    <Button
        android:id="@+id/button12"
        android:layout_width="match_parent"
        android:layout_height="83dp"
        android:onClick="nine"
        android:text="9" />
    <Button
        android:id="@+id/button11"
        android:layout_width="match_parent"
        android:layout_height="83dp"
        android:onClick="equal"

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	<pre>         android:text="" /&gt; &lt;/LinearLayout&gt; &lt;LinearLayout     android:layout_width="100dp"     android:layout_height="match_parent"     android:orientation="vertical"     app:layout_column="3"     app:layout_row="0"&gt;     &lt;Button         android:id="@+id/button16"         android:layout_width="match_parent"         android:layout_height="83dp"         android:onClick="add"         android:text="+" /&gt;     &lt;Button         android:id="@+id/button14"         android:layout_width="match_parent"         android:layout_height="70dp"         android:onClick="sub"         android:text="-" /&gt;     &lt;Button         android:id="@+id/button15"         android:layout_width="match_parent"         android:layout_height="83dp"         android:onClick="multiple"         android:text="*" /&gt;     &lt;Button         android:id="@+id/button13"         android:layout_width="match_parent"         android:layout_height="83dp"         android:onClick="div"         android:text="/" /&gt; &lt;/LinearLayout&gt; &lt;/androidx.gridlayout.widget.GridLayout&gt; &lt;EditText     android:id="@+id/editTextTextPersonName"     android:layout_width="413dp"     android:layout_height="85dp"     android:ems="10"     android:inputType="textPersonName"     android:text=""     android:textColor="#282BEC"     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="0.164" /&gt; &lt;TextView     android:id="@+id/textView" </pre>
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	<pre> android:layout_width="289dp" android:layout_height="54dp" android:text="CALCULATOR" android:textColor="#3E4CCD" android:textSize="20sp" android:textStyle="bold" 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="0.023" /&gt; &lt;/androidx.constraintlayout.widget.ConstraintLayout&gt; </pre>
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## **OUTPUT**



**RESULT:** The above program is successfully executed and obtained the output.

## **PROGRAM 3**

### **AIM:**

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

### **PROGRAM CODE**

MainActivity.java	<pre>package com.example.linearlayout;  import androidx.appcompat.app.AppCompatActivity;  import android.os.Bundle;  public class MainActivity extends AppCompatActivity {      @Override      protected void onCreate(Bundle savedInstanceState) {          super.onCreate(savedInstanceState);          setContentView(R.layout.activity_main); } }</pre>
Activity_main.xml	<pre>&lt;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="#E4ECEA" android:backgroundTint="#E4ECEA" tools:context=".MainActivity"&gt; &lt;LinearLayout android:id="@+id/linearLayout" android:layout_width="404dp" android:layout_height="42dp" android:orientation="horizontal" 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="0.989"&gt; &lt;TextView android:id="@+id/textView" android:layout_width="match_parent" android:layout_height="49dp" android:text="CREATE NEW ACCOUNT"/&gt; &lt;/LinearLayout&gt; &lt;RelativeLayout android:id="@+id/relativeLayout" android:layout_width="413dp" android:layout_height="728dp" android:background="#3b5998" android:backgroundTint="#3b5998" app:layout_constraintBottom_toBottomOf="@+id/linearLayout" app:layout_constraintEnd_toEndOf="parent" app:layout_constraintHorizontal_bias="0.0" app:layout_constraintStart_toStartOf="parent"&gt;</pre>

	<pre> &lt;ImageView android:id="@+id/imageView5" android:layout_width="wrap_content" android:layout_height="68dp" android:layout_alignParentStart="true" android:layout_alignParentTop="true" android:layout_alignParentEnd="true" android:layout_alignParentBottom="true" android:layout_marginStart="138dp" android:layout_marginTop="141dp" android:layout_marginEnd="190dp" android:layout_marginBottom="519dp" app:srcCompat="@drawable/download"/&gt; &lt;EditText android:id="@+id/editTextTextPersonName4" android:layout_width="wrap_content" android:layout_height="58dp" android:layout_alignParentStart="true" android:layout_alignParentTop="true" android:layout_alignParentEnd="true" android:layout_alignParentBottom="true" android:layout_marginStart="78dp" android:layout_marginTop="248dp" android:layout_marginEnd="85dp" android:layout_marginBottom="422dp" android:background="#E4ECEA" android:backgroundTint="#FFFEFE" android:ems="10" android:hint="emailid/phone number" android:inputType="textPersonName"/&gt; &lt;EditText android:id="@+id/editTextTextPassword2" android:layout_width="wrap_content" android:layout_height="58dp" android:layout_alignParentStart="true" android:layout_alignParentTop="true" android:layout_alignParentEnd="true" android:layout_alignParentBottom="true" android:layout_marginStart="80dp" android:layout_marginTop="316dp" android:layout_marginEnd="83dp" android:layout_marginBottom="354dp" android:background="#E4ECEA" android:backgroundTint="#E4ECEA" android:ems="10" android:hint="password" android:inputType="textPassword"/&gt; &lt;Button android:id="@+id/button" android:layout_width="312dp" android:layout_height="54dp" android:layout_alignParentStart="true" android:layout_alignParentTop="true" android:layout_alignParentEnd="true" android:layout_alignParentBottom="true" android:layout_marginStart="47dp" android:layout_marginTop="422dp" android:layout_marginEnd="51dp" android:layout_marginBottom="252dp" android:background="#2B59A8" android:text="Login "/&gt; &lt;Button android:id="@+id/button2" android:layout_width="314dp" android:layout_height="58dp" android:layout_alignParentStart="true" </pre>
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	<pre> android:layout_alignParentTop="true" android:layout_alignParentEnd="true" android:layout_alignParentBottom="true" android:layout_marginStart="49dp" android:layout_marginTop="490dp" android:layout_marginEnd="49dp" android:layout_marginBottom="180dp" android:background="#2B59A8" android:text=" Login with browser"/&gt; &lt;TextView android:id="@+id/textView2" android:layout_width="wrap_content" android:layout_height="41dp" android:layout_alignParentStart="true" android:layout_alignParentTop="true" android:layout_alignParentEnd="true" android:layout_alignParentBottom="true" android:layout_marginStart="125dp" android:layout_marginTop="590dp" android:layout_marginEnd="109dp" android:layout_marginBottom="97dp" android:text="create new account"/&gt; &lt;/RelativeLayout&gt; &lt;/androidx.constraintlayout.widget.ConstraintLayout&gt; </pre>
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## **OUTPUT**



**Spider Man**

☐ Log in to another account

☐ Find your account

Create new Facebook account



**RESULT:** The above program is successfully executed and obtained the output.

## **PROGRAM 4**

### **AIM:**

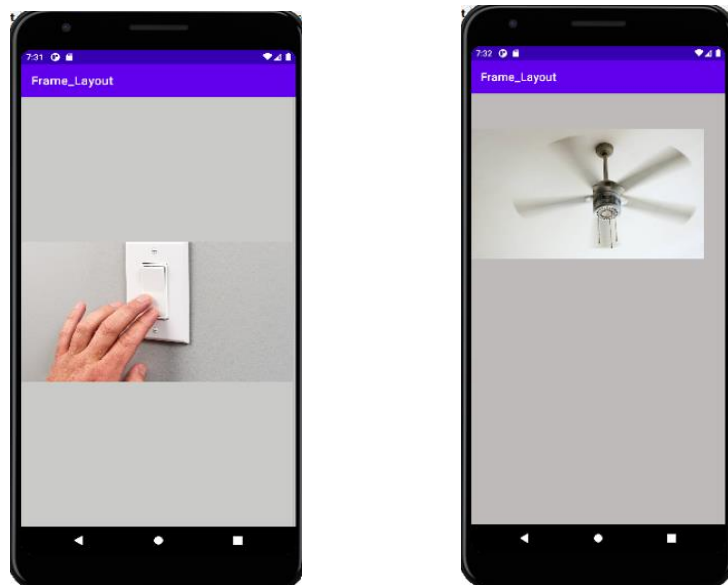
Develop an application that toggles image using FrameLayout.

### **PROGRAM CODE:**

MainActivity.java	<pre>package com.example.frame_layout; 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);}}}</pre>
Activity_main.xml	<pre>&lt;?xml version="1.0" encoding="utf-8"?&gt; &lt;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" android:background="#BDBABA" tools:context=".MainActivity"&gt; &lt;ImageView</pre>

	<pre>android:id="@+id/imageView1" android:layout_width="427dp" android:layout_height="wrap_content" android:layout_gravity="left top" android:background="#CACAC8" app:srcCompat="@drawable/switchon" /&gt; &lt;ImageView android:id="@+id/imageView2" android:layout_width="396dp" android:layout_height="wrap_content" android:layout_gravity="left top" android:visibility="gone" app:srcCompat="@drawable/fanon" /&gt; &lt;/FrameLayout&gt;</pre>
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## **OUTPUT**



## **RESULT:**

The above program is successfully executed and obtained the output.