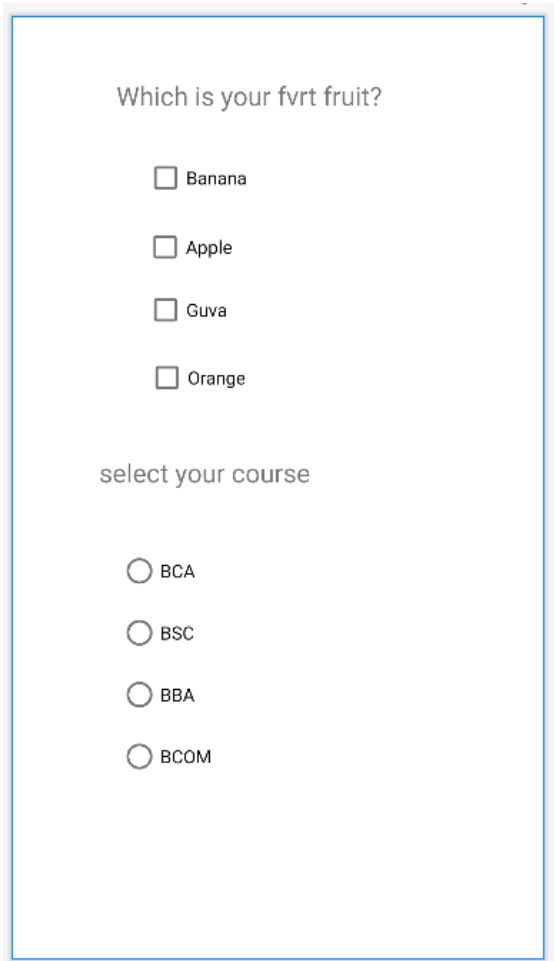1. **Create an android application to demonstrate radio button and checkbox control by displaying suitable toasts.**

   **DESIGN:**

   

## XML FILE:

```xml
<?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"
    tools:context=".MainActivity">

    <TextView
        android:id="@+id/textView"
        android:layout_width="248dp"
        android:layout_height="50dp"
        android:text="Which is your fvrt fruit?"
        android:textSize="20dp"
```

```xml
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.496"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.071" />

    <TextView
        android:id="@+id/textView3"
        android:layout_width="276dp"
        android:layout_height="50dp"
        android:text="select your course"
        android:textSize="20dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <CheckBox
        android:id="@+id/checkBox2"
        android:layout_width="206dp"
        android:layout_height="38dp"
        android:text="Banana"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.502"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.154" />

    <CheckBox
        android:id="@+id/checkBox3"
        android:layout_width="204dp"
        android:layout_height="42dp"
        android:text="Apple"
        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="0.23" />

    <CheckBox
        android:id="@+id/checkBox4"
        android:layout_width="203dp"
        android:layout_height="41dp"
        android:text="Guva"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.495"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.301" />

    <CheckBox
        android:id="@+id/checkBox5"
        android:layout_width="203dp"
```

```xml
        android:layout_height="45dp"
        android:text="Orange"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.376" />

    <RadioGroup
        android:layout_width="246dp"
        android:layout_height="203dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.503"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.77" >

        <RadioButton
            android:id="@+id/radioButton"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="BCA" />

        <RadioButton
            android:id="@+id/radioButton2"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="BSC" />

        <RadioButton
            android:id="@+id/radioButton3"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="BBA" />

        <RadioButton
            android:id="@+id/radioButton4"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="BCOM" />
    </RadioGroup>

</androidx.constraintlayout.widget.ConstraintLayout>
```

## CODING:
## MainActivity.java:

```java
package com.example.checkbox;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.CheckBox;
```

```java
import android.widget.RadioButton;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        RadioButton b1=(RadioButton) findViewById(R.id.radioButton);
        RadioButton b2=(RadioButton) findViewById(R.id.radioButton2);
        RadioButton b3=(RadioButton) findViewById(R.id.radioButton3);
        RadioButton b4=(RadioButton) findViewById(R.id.radioButton4);
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Toast.makeText(MainActivity.this, "you selected BCA",
Toast.LENGTH_SHORT).show();
            }
        });
        b2.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Toast.makeText(MainActivity.this, "you selected BSC",
Toast.LENGTH_SHORT).show();
            }
        });
        b3.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Toast.makeText(MainActivity.this, "you selected BBA",
Toast.LENGTH_SHORT).show();
            }
        });
        b4.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Toast.makeText(MainActivity.this, "you selected BCOM",
Toast.LENGTH_SHORT).show();
            }
        });
        CheckBox ch1=(CheckBox) findViewById(R.id.checkBox3);
        CheckBox ch2=(CheckBox) findViewById(R.id.checkBox2);
        CheckBox ch3=(CheckBox) findViewById(R.id.checkBox5);
        CheckBox ch4=(CheckBox) findViewById(R.id.checkBox4);
        ch1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Toast.makeText(MainActivity.this,"You selected
Apple",Toast.LENGTH_SHORT).show();
            }
        });
        ch2.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Toast.makeText(MainActivity.this,"You selected
Orange",Toast.LENGTH_SHORT).show();
```
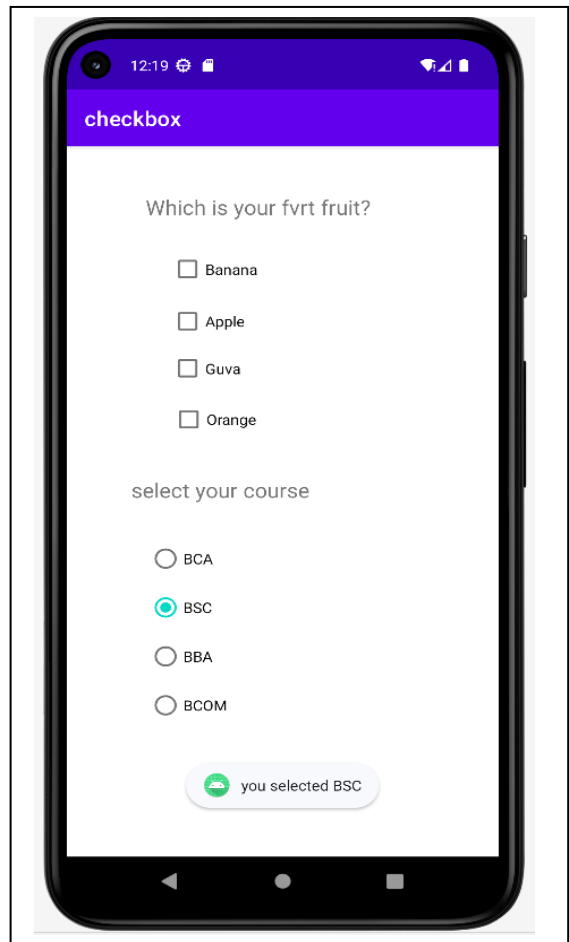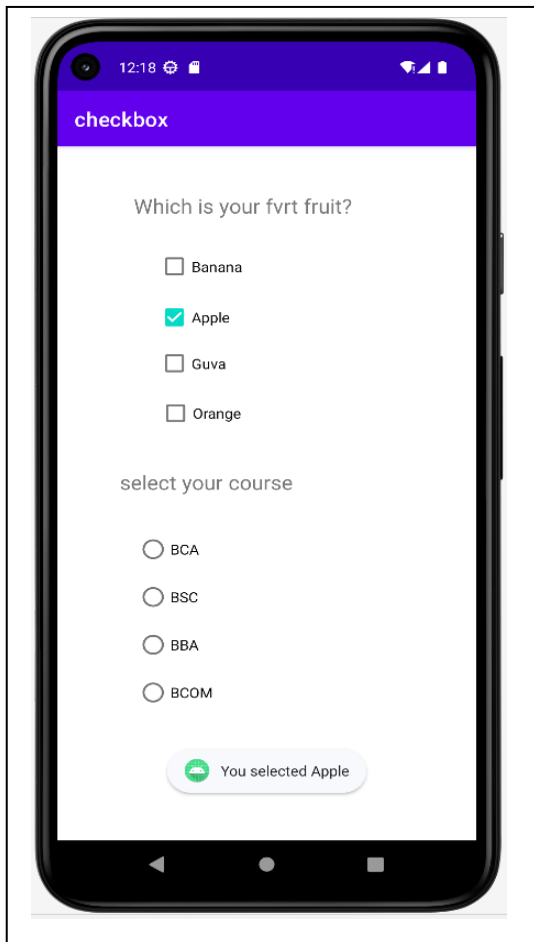
```
            }
        });
        ch3.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Toast.makeText(MainActivity.this,"You selected
Banana",Toast.LENGTH_SHORT).show();
            }
        });
        ch4.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Toast.makeText(MainActivity.this,"You selected
strawberry",Toast.LENGTH_SHORT).show();
            }
        });
    }
}
```
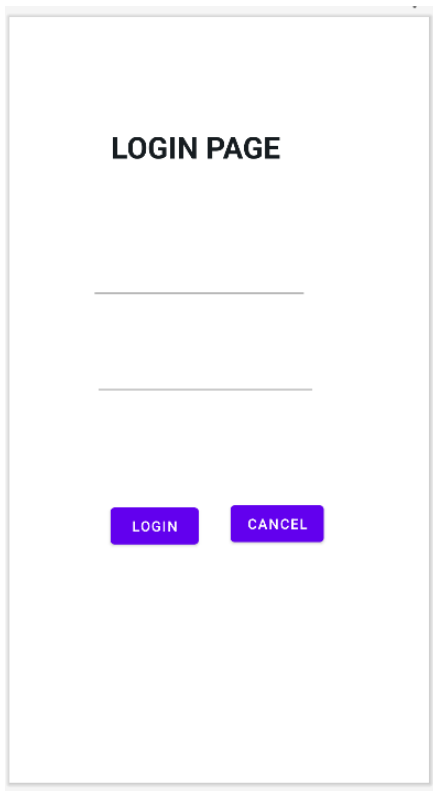
**OUTPUT:**

2. **Create an android application to implement login page.**

   **DESIGN:**



**Coding:**
**XML FILE:**

```xml
<?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"
    tools:context=".MainActivity">

    <TextView
        android:id="@+id/textView"
        android:layout_width="225dp"
        android:layout_height="60dp"
        android:layout_marginStart="138dp"
        android:layout_marginTop="89dp"
        android:layout_marginEnd="135dp"
        android:layout_marginBottom="593dp"
        android:text="LOGIN PAGE"
        android:textColor="@color/material_dynamic_neutral_variant10"
        android:textSize="30dp"
        android:textStyle="bold"
```

```xml
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.459"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="1.0" />

    <EditText
        android:id="@+id/edt1"
        android:layout_width="216dp"
        android:layout_height="43dp"
        android:layout_marginStart="81dp"
        android:layout_marginTop="69dp"
        android:layout_marginEnd="120dp"
        android:layout_marginBottom="479dp"
        android:ems="10"
        android:inputType="textPersonName"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/textView"
        app:layout_constraintVertical_bias="1.0" />

    <EditText
        android:id="@+id/edt2"
        android:layout_width="220dp"
        android:layout_height="43dp"
        android:layout_marginStart="87dp"
        android:layout_marginTop="51dp"
        android:layout_marginEnd="115dp"
        android:layout_marginBottom="382dp"
        android:ems="10"
        android:inputType="textPassword"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/edt1" />

    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="94dp"
        android:layout_marginTop="103dp"
        android:layout_marginEnd="223dp"
        android:layout_marginBottom="231dp"
        android:text="LOGIN"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/edt2" />

    <Button
        android:id="@+id/button2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
```

```xml
            android:layout_marginStart="29dp"
            android:layout_marginTop="101dp"
            android:layout_marginEnd="102dp"
            android:layout_marginBottom="234dp"
            android:text="CANCEL"
            app:layout_constraintBottom_toBottomOf="parent"
            app:layout_constraintEnd_toEndOf="parent"
            app:layout_constraintStart_toEndOf="@+id/button"
            app:layout_constraintTop_toBottomOf="@+id/edt2" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

### MainActivity.java:

```java
package com.example.login;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Button login=(Button) findViewById(R.id.button);
        Button cancel=(Button) findViewById(R.id.button2);
        EditText name=(EditText) findViewById(R.id.edt1);
        EditText password=(EditText) findViewById(R.id.edt2);

        login.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                if (name.getText().toString().equals("Aparna") &&
password.getText().toString().equals("12345"))
                {
                    Intent i = new Intent(MainActivity.this, login.class);
                    startActivity(i);
                    Toast.makeText(MainActivity.this, "login successful",
Toast.LENGTH_SHORT).show();
                }
                else if (name.getText().toString().equals("Aparna") &&
password.getText().toString().equals(""))
                {
                    Toast.makeText(MainActivity.this, "please enter
password", Toast.LENGTH_SHORT).show();
                }
                else if (name.getText().toString().equals("") &&
password.getText().toString().equals("12345"))
```

```java
                {
                    Toast.makeText(MainActivity.this, "please enter
username", Toast.LENGTH_SHORT).show();
                }
                else if (name.getText().toString().equals("") &&
password.getText().toString().equals(""))
                {
                    Toast.makeText(MainActivity.this, "please enter fields",
Toast.LENGTH_SHORT).show();
                }
                else
                {
                    Toast.makeText(MainActivity.this, "Incorrect unsername or
password", Toast.LENGTH_SHORT).show();
                }
            }
        });
        cancel.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                finish();
            }
        });

    }
}
```

## XML FILE:

```xml
<?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">

    <TextView
        android:id="@+id/textView2"
        style="@style/Widget.AppCompat.TextView"
        android:layout_width="331dp"
        android:layout_height="77dp"
        android:layout_marginStart="82dp"
        android:layout_marginTop="134dp"
        android:layout_marginEnd="81dp"
        android:layout_marginBottom="523dp"
        android:text="Login Successful....."
        android:textSize="35dp"
        android:textStyle="bold"

        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
```
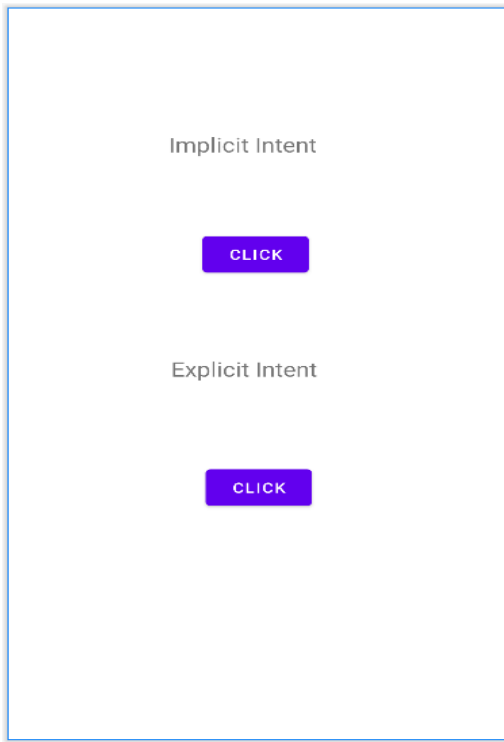
**OUTPUT:**
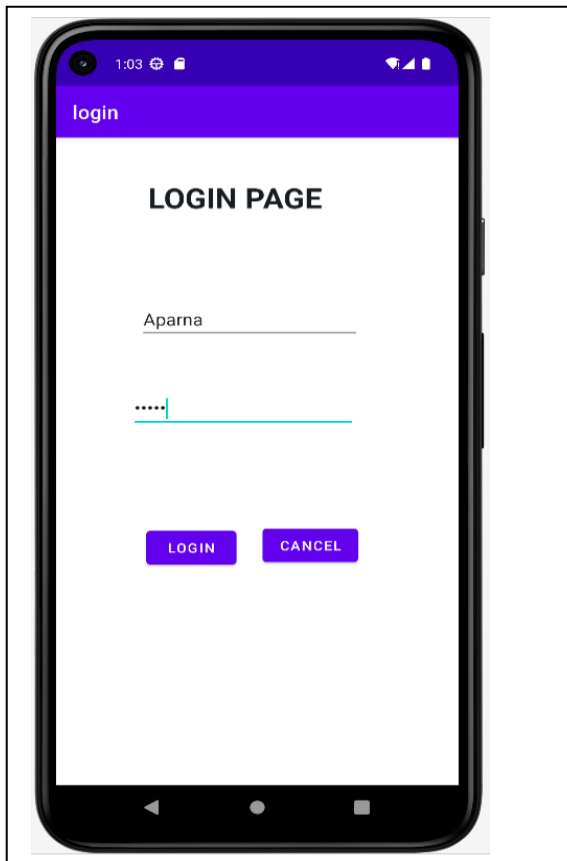
**3. Create an android application to implement Intent (implicit intent and explicit intent).**

   **DESIGN:**



**Coding:**
**XML FILE:**

```xml
<?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"
    tools:context=".MainActivity">

    <TextView
        android:id="@+id/textView"
        android:layout_width="145dp"
        android:layout_height="34dp"
        android:text="Implicit Intent"
        android:textSize="20dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.177" />

    <Button
        android:id="@+id/implicit"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
```

```xml
        android:text="click"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.498"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.326" />

    <TextView
        android:id="@+id/textView2"
        android:layout_width="140dp"
        android:layout_height="36dp"
        android:text="Explicit Intent"
        android:textSize="20dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.498"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <Button
        android:id="@+id/explicit"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="click"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.507"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.667" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

**MainActivity.java:**

```java
package com.example.intent;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.net.Uri;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Button implicit=(Button)findViewById(R.id.implicit);
        Button explicit=(Button) findViewById(R.id.explicit);
        implicit.setOnClickListener(new View.OnClickListener() {
            @Override
```

```
        public void onClick(View v) {
            Intent i=new Intent(Intent.ACTION_VIEW);
            Toast.makeText(MainActivity.this, "Implicit Intent",
Toast.LENGTH_LONG).show();
            i.setData(Uri.parse("https://mangaloreuniversity.ac.in/"));
            startActivity(i);
        }
    });
    explicit.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            Intent intent=new Intent(MainActivity.this,second.class);
            Toast.makeText(MainActivity.this, "Explicit Intent",
Toast.LENGTH_LONG).show();
            startActivity(intent);
        }
    });
    }
}
```

**SecondActivity:**

**Design:**
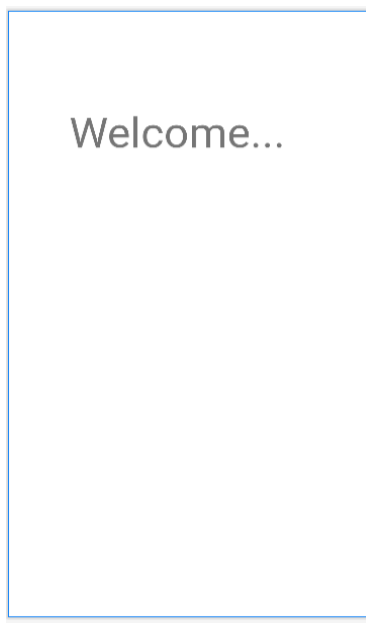


**Xml code:**

```
<?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"
```

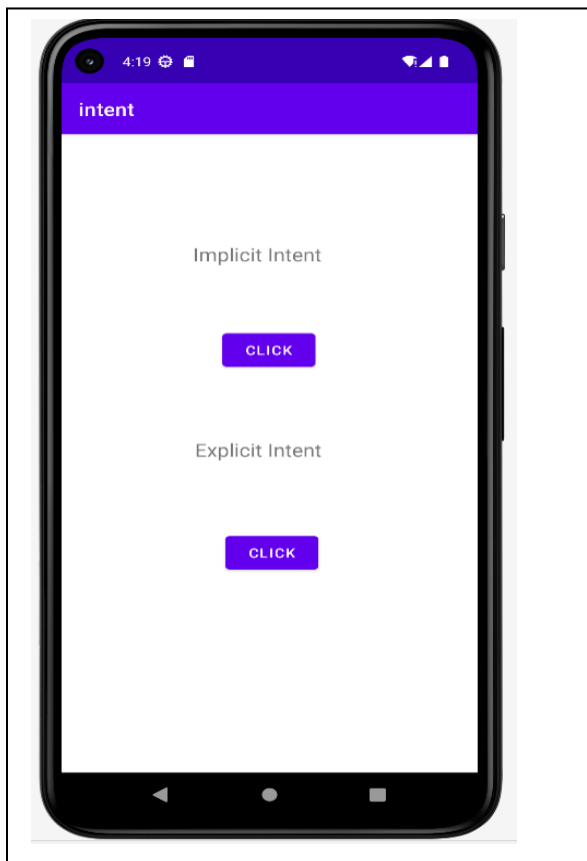```
        android:layout_height="match_parent">

    <TextView
        android:id="@+id/textView3"
        android:layout_width="273dp"
        android:layout_height="114dp"
        android:layout_marginTop="112dp"
        android:layout_marginEnd="68dp"
        android:layout_marginBottom="505dp"
        android:text="Welcome..."
        android:textSize="50dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.0" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

**OUTPUT:**

**4. Create an android application to implement webview.**
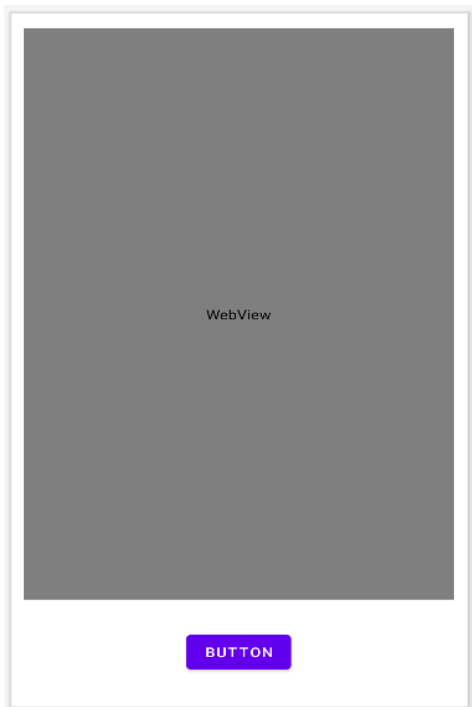
**Coding:**
**XML FILE:**

```xml
<?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"
    tools:context=".MainActivity">

    <WebView
        android:id="@+id/webview"
        android:layout_width="388dp"
        android:layout_height="603dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.478"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.125" />

    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
```

```xml
        android:text="Button"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.498"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.951" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

## MainActivity.java

```java
package com.example.webview;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.webkit.WebView;
import android.widget.Button;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Button btn=(Button)findViewById(R.id.button);
        WebView w=(WebView)findViewById(R.id.webview);
        w.setVisibility(View.INVISIBLE);
        btn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                w.setVisibility(View.VISIBLE);
                String html="<html><body><h3>This is
webview</h3></body></html>";
                w.loadData(html,"text/html","UTF-8");

    //          w.getSettings().setJavaScriptEnabled(true);
    //          w.loadUrl("https://mangaloreuniversity.ac.in/");


            }
        });
    }
}
```
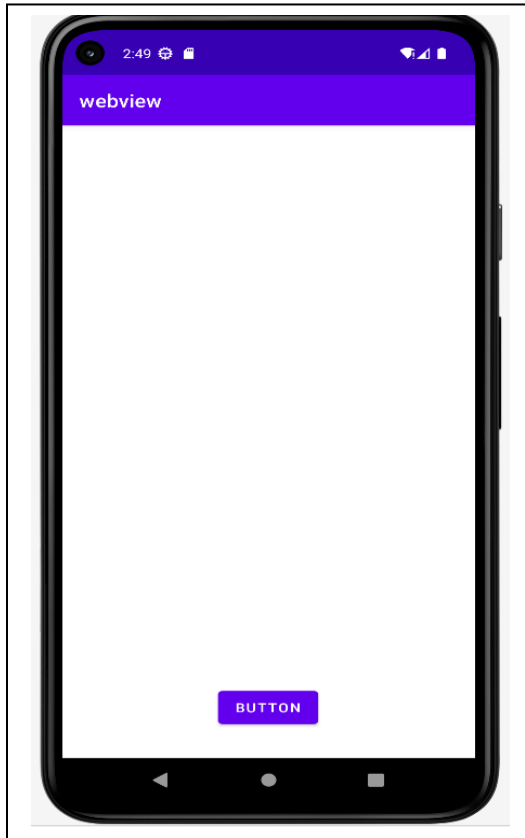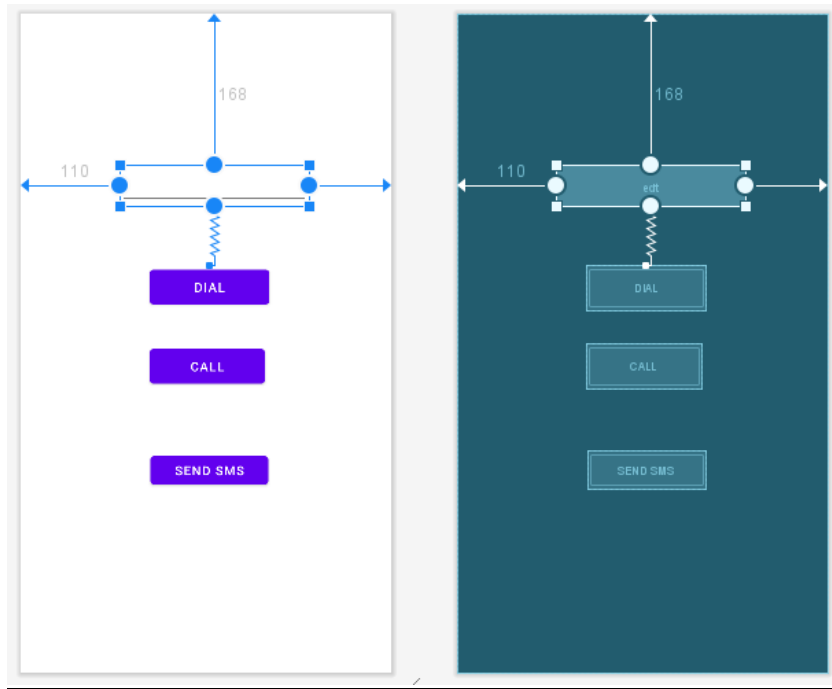
## Manifest:

```xml
<uses-permission android:name="android.permission.INTERNET"/>
```

**Output:**

5. **Create an android application to implement dial.**

**MainActivity:**

**Design:**



**Coding:**

**Xml File:**

```xml
<?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"
    tools:context=".MainActivity">

    <Button
        android:id="@+id/btn2"
        android:layout_width="128dp"
        android:layout_height="50dp"
        android:layout_marginStart="143dp"
        android:layout_marginEnd="140dp"
        android:layout_marginBottom="315dp"
        android:text="call"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
```

```xml
        app:layout_constraintStart_toStartOf="parent" />

    <Button
        android:id="@+id/btn3"
        android:layout_width="131dp"
        android:layout_height="43dp"
        android:layout_marginStart="144dp"
        android:layout_marginTop="53dp"
        android:layout_marginEnd="136dp"
        android:layout_marginBottom="203dp"
        android:text="send sms"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/btn2"
        app:layout_constraintVertical_bias="1.0" />

    <Button
        android:id="@+id/btn1"
        android:layout_width="133dp"
        android:layout_height="50dp"
        android:layout_marginStart="143dp"
        android:layout_marginTop="278dp"
        android:layout_marginEnd="135dp"
        android:layout_marginBottom="38dp"
        android:text="dial"
        app:layout_constraintBottom_toTopOf="@+id/btn2"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <EditText
        android:id="@+id/edt"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="110dp"
        android:layout_marginTop="168dp"
        android:layout_marginEnd="92dp"
        android:layout_marginBottom="65dp"
        android:ems="10"
        android:inputType="phone"
        app:layout_constraintBottom_toTopOf="@+id/btn1"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

### MainActivity.java:

```java
package com.example.dial;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
```

```java
import android.net.Uri;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        EditText et=(EditText) findViewById(R.id.edt);
        Button bt1=(Button) findViewById(R.id.btn1);
        Button bt2=(Button) findViewById(R.id.btn2);
        Button bt3=(Button) findViewById(R.id.btn3);
        bt1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
             String url="tel:"+et.getText().toString();
                Intent intent=new Intent(Intent.ACTION_DIAL, Uri.parse(url));
Toast.makeText(MainActivity.this,"You clicked dial",
Toast.LENGTH_LONG).show();

                startActivity(intent);
            }
        });
        bt2.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String url="tel:"+et.getText().toString();
                Intent intent=new Intent(Intent.ACTION_CALL, Uri.parse(url));
Toast.makeText(MainActivity.this,"You clicked
call",Toast.LENGTH_LONG).show();

                startActivity(intent);
            }
        });
        bt3.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String url="sms:"+et.getText().toString();
                Intent intent=new Intent(Intent.ACTION_VIEW, Uri.parse(url));
Toast.makeText(MainActivity.this,"you clicked sms",Toast.LENGTH_LONG).show();

                startActivity(intent);
            }
        });
    }
}
```
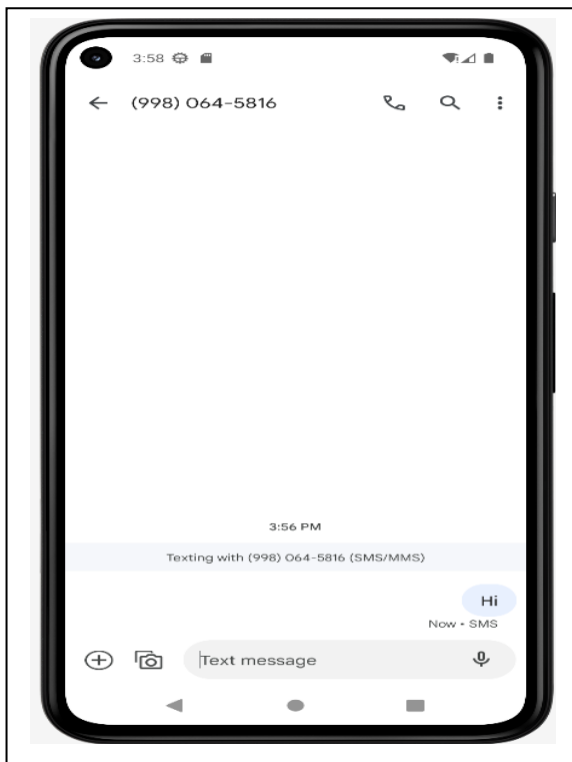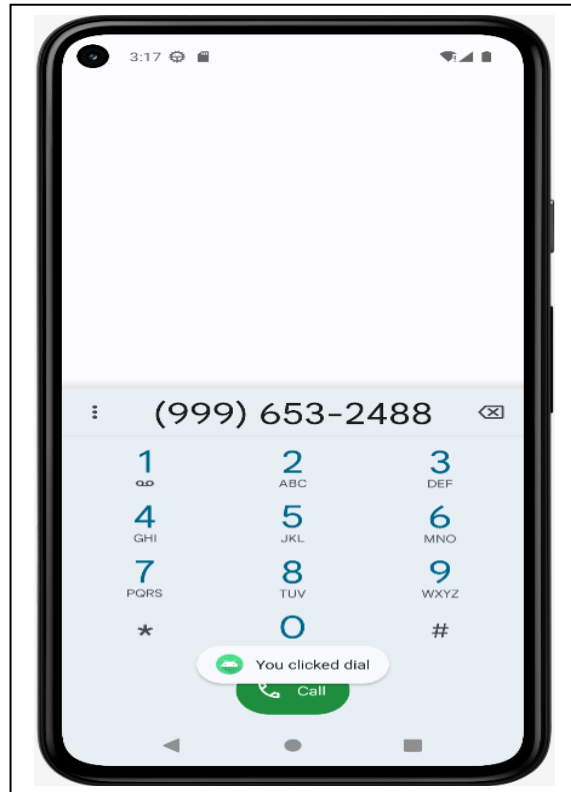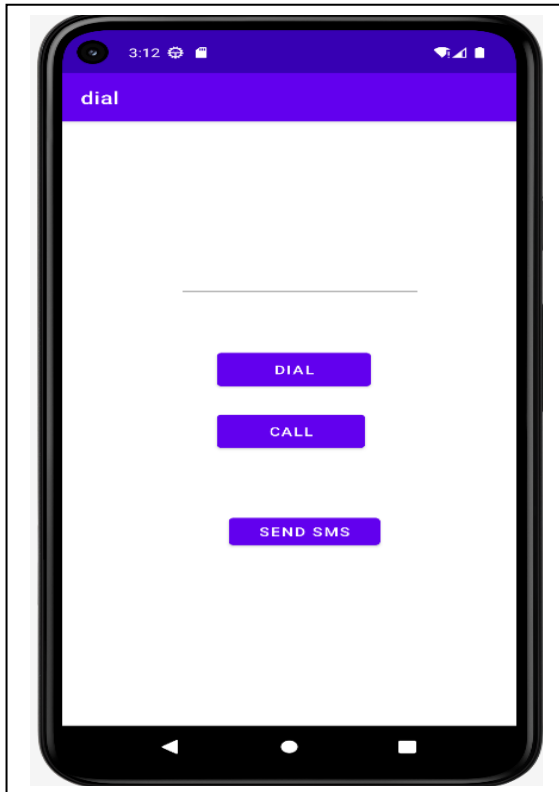**Manifest file:**

```xml
<uses-permission android:name="android.permission.CALL_PHONE"/>
<uses-permission android:name="android.permission.SEND_SMS"/>
```

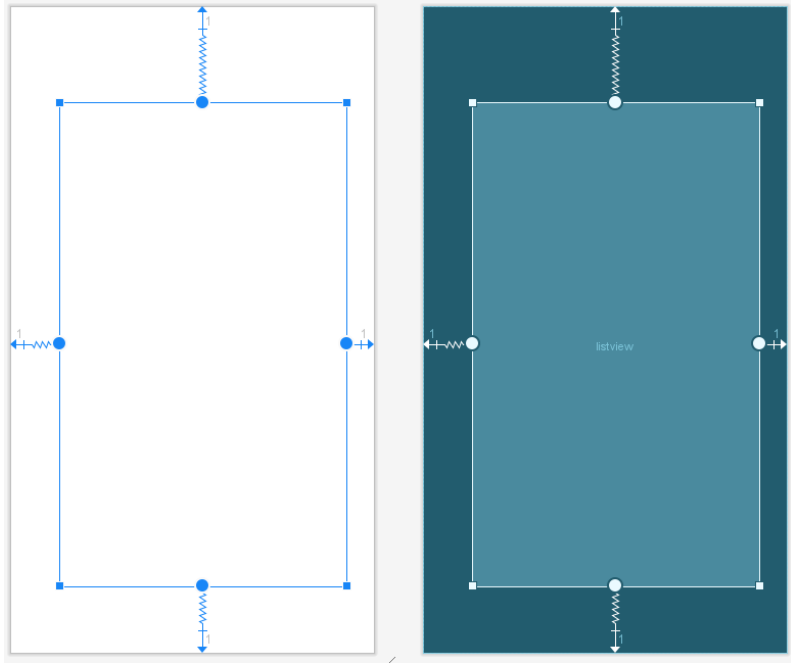**6. Create an android application to implement ListView.**

<u>**MainActivity:**</u>

<u>**Design:**</u>



<u>**Coding:**</u>

<u>**Xml File:**</u>

```xml
<?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"
    tools:context=".MainActivity">

    <ListView
        android:id="@+id/listview"
        android:layout_width="325dp"
        android:layout_height="547dp"
        android:layout_marginStart="1dp"
        android:layout_marginTop="1dp"
        android:layout_marginEnd="1dp"
        android:layout_marginBottom="1dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.642"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.587" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

### MainActivity.java:

```java
package com.example.listview;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.widget.ArrayAdapter;
import android.widget.ListView;

public class MainActivity extends AppCompatActivity {
    String[] colors={"Red","Green","Blue","Orange","Yellow","Pink"};

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        ArrayAdapter adapter=new
ArrayAdapter<String>(this,R.layout.activity_listview, colors);
        ListView listView = (ListView) findViewById(R.id.listview);
        listView.setAdapter(adapter);
    }
}
```
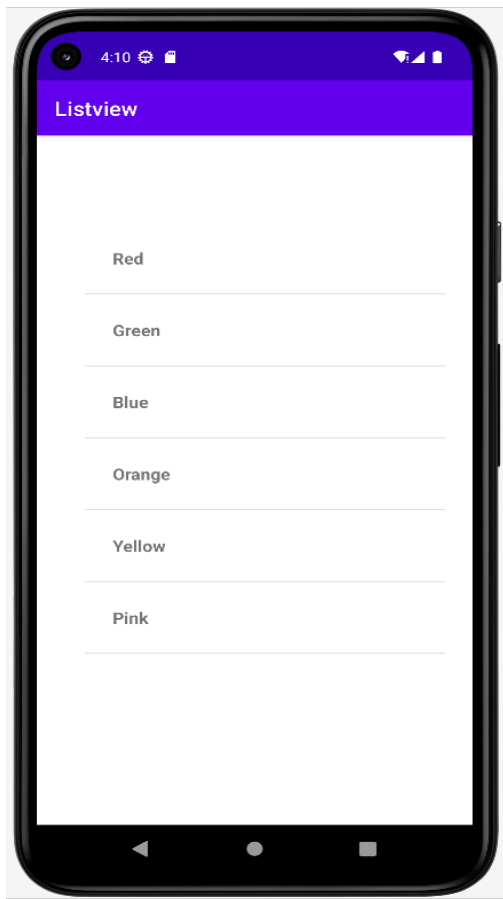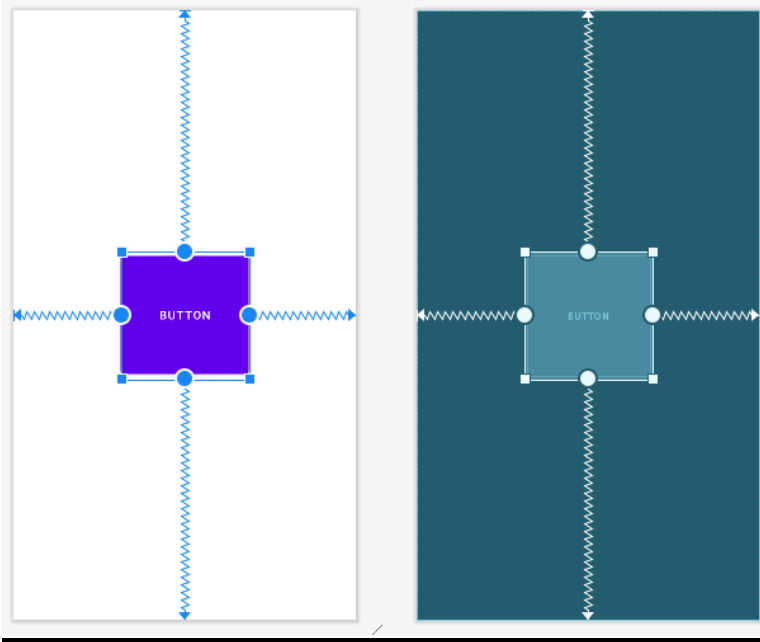
### Output:

**7. Create an android application to implement Email.**

**MainActivity:**

**Design:**



**Coding:**

**Xml File:**

```xml
<?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"
    tools:context=".MainActivity">

    <Button
        android:id="@+id/button"
        android:layout_width="154dp"
        android:layout_height="153dp"
        android:text="Button"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

**MainActivity.java:**

```java
package com.example.email;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Button b=(Button) findViewById(R.id.button);

        b.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {

                Intent i=new Intent(Intent.ACTION_SEND);

                i.setType("message/rfc822");

                i.putExtra(Intent.EXTRA_EMAIL,new
String[]{"aparnatalapady776@gmail.com"});

                i.putExtra(Intent.EXTRA_SUBJECT,"Welcome to MU");

                i.putExtra(Intent.EXTRA_TEXT,"Helloworld");

                startActivity(Intent.createChooser(i,"choose mail app"));

            }

        });

    }

}
```
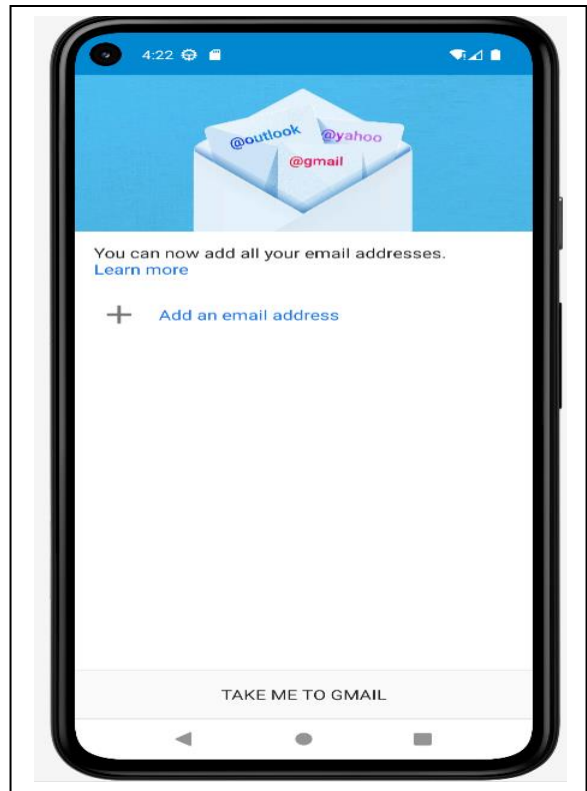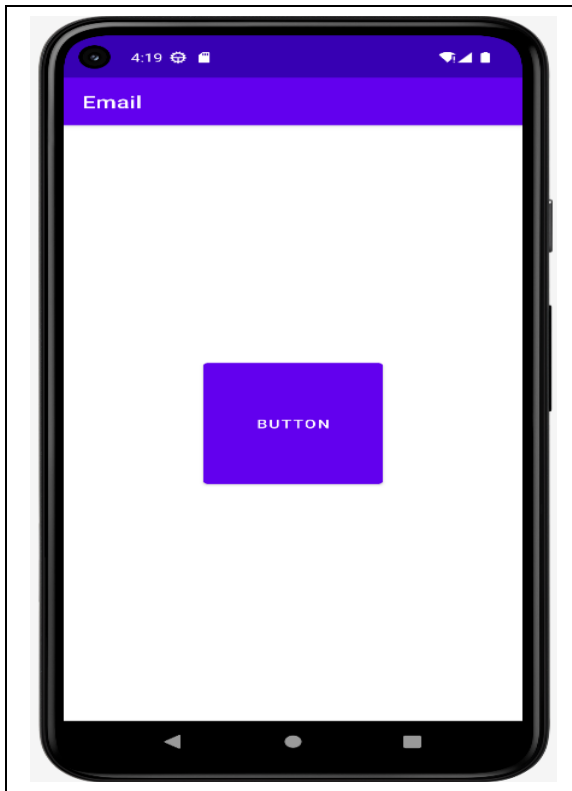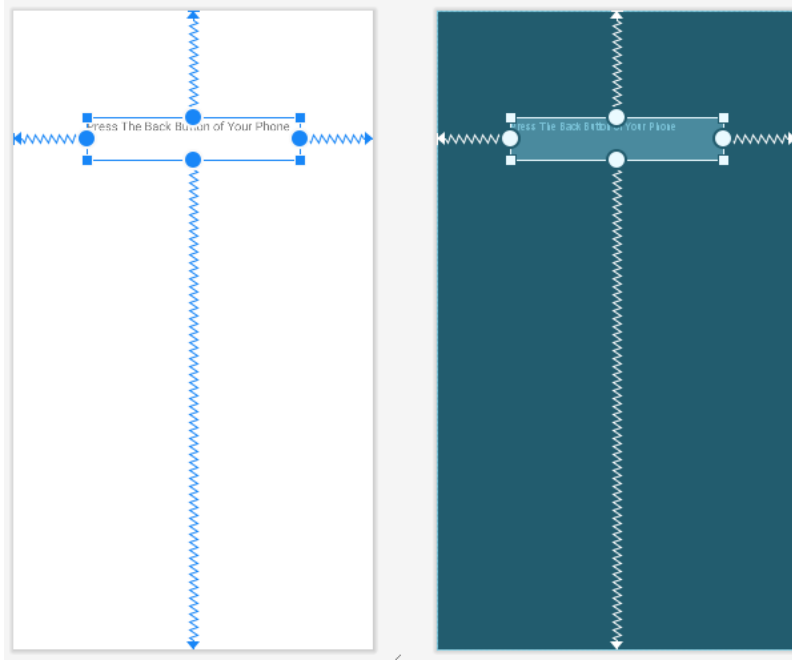
**Output:**

## 8. Create an android application to implement AlertBox.

**MainActivity:**

**Design:**



**Coding:**

**Xml File:**

```xml
<?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"
    tools:context=".MainActivity">

    <TextView
        android:id="@+id/textView"
        android:layout_width="244dp"
        android:layout_height="48dp"
        android:text="Press The Back Button of Your Phone"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
```

```
            app:layout_constraintVertical_bias="0.179" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

**MainActivity.java:**

```java
package com.example.alertboxx;

import androidx.appcompat.app.AlertDialog;
import androidx.appcompat.app.AppCompatActivity;

import android.content.DialogInterface;
import android.os.Build;
import android.os.Bundle;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
        public void onBackPressed() {
            AlertDialog.Builder builder = new
AlertDialog.Builder(MainActivity.this);
            builder.setMessage("Do you want to exit ?");

            // Set Alert Title
            builder.setTitle("Alert !");

            // Set Cancelable false for when the user clicks on the outside
the Dialog Box then it will remain show
            builder.setCancelable(false);

            // Set the positive button with yes name Lambda OnClickListener
method is use of DialogInterface interface.
            builder.setPositiveButton("Yes",
(DialogInterface.OnClickListener) (dialog, which) -> {
                // When the user click yes button then app will close
                finish();
            });

            // Set the Negative button with No name Lambda OnClickListener
method is use of DialogInterface interface.
            builder.setNegativeButton("No", (DialogInterface.OnClickListener)
(dialog, which) -> {
                // If user click no then dialog box is canceled.
                dialog.cancel();
            });

            // Create the Alert dialog
            AlertDialog alertDialog = builder.create();
            // Show the Alert Dialog box
            alertDialog.show();
```
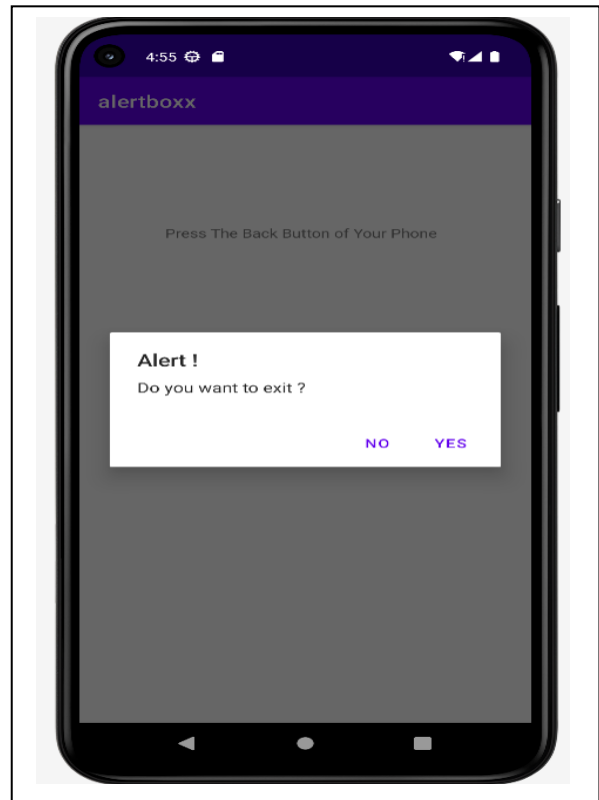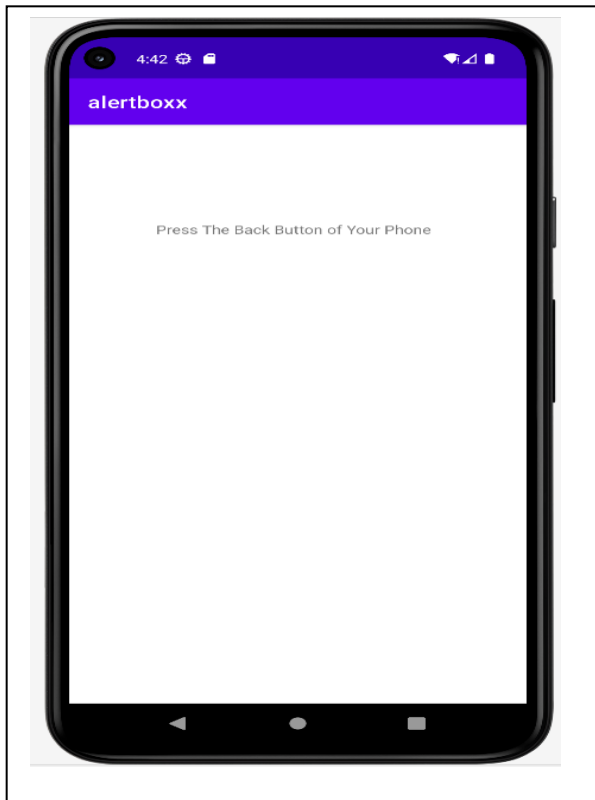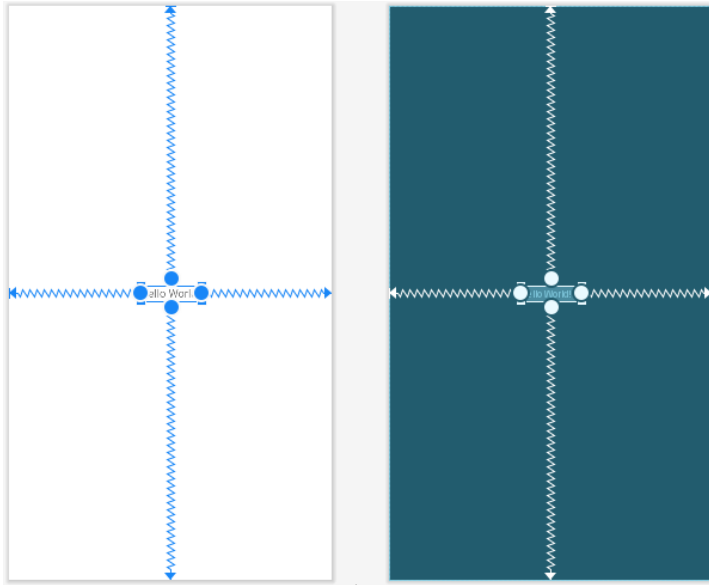
```
            }
}
```

**Output:**

## 9. Create an android application to implement ActivityLifecycle.

### Design:



### MainActivity:
### Xml File:

```xml
<?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"
    tools:context=".MainActivity">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Hello World!"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

### MainActivity.java

```java
package com.example.lifecycle;

import androidx.appcompat.app.AppCompatActivity;
```

```java
import android.os.Bundle;
import android.util.Log;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Log.i("state","onCreate.....................");
    }
    @Override
    protected void onStart(){
        super.onStart();
        Log.i("state","onStart.................");
    }
    @Override
    protected void onResume(){
        super.onResume();
        Log.i("state","onResume...............");
    }
    @Override
    protected void onPause(){
        super.onPause();
        Log.i("state","onPause................");
    }
    @Override
    protected void onRestart(){
        super.onRestart();
        Log.i("state","onRestart.................");
    }
    @Override
    protected void onStop(){
        super.onStop();
        Log.i("state","onStop..................");
    }
    @Override
    protected void onDestroy(){
        super.onDestroy();
        Log.i("state","onDestroy................");
    }

}
```

**OUTPUT:**

```
2023-09-25 14:49:43.758 5287-5287/com.example.lifecycle I/state: onCreate....................
2023-09-25 14:49:43.799 5287-5287/com.example.lifecycle I/state: onStart................
2023-09-25 14:49:43.800 5287-5287/com.example.lifecycle I/state: onResume..............

2023-09-25 14:58:36.672 5287-5287/com.example.lifecycle I/state: onPause...............
2023-09-25 14:58:37.177 5287-5287/com.example.lifecycle I/state: onStop................
```

```
2023-09-25 15:10:39.374 5287-5287/com.example.lifecycle I/state: onRestart................
2023-09-25 15:10:39.374 5287-5287/com.example.lifecycle I/state: onStart................
2023-09-25 15:10:39.375 5287-5287/com.example.lifecycle I/state: onResume..............

2023-09-25 15:11:16.507 5287-5287/com.example.lifecycle I/state: onPause...............
2023-09-25 15:11:16.536 5287-5287/com.example.lifecycle I/state: onStop................
2023-09-25 15:11:16.605 5287-5287/com.example.lifecycle I/state: onDestroy...............
```

**10. Create an android application to implement image hide and show.**

**Design:**
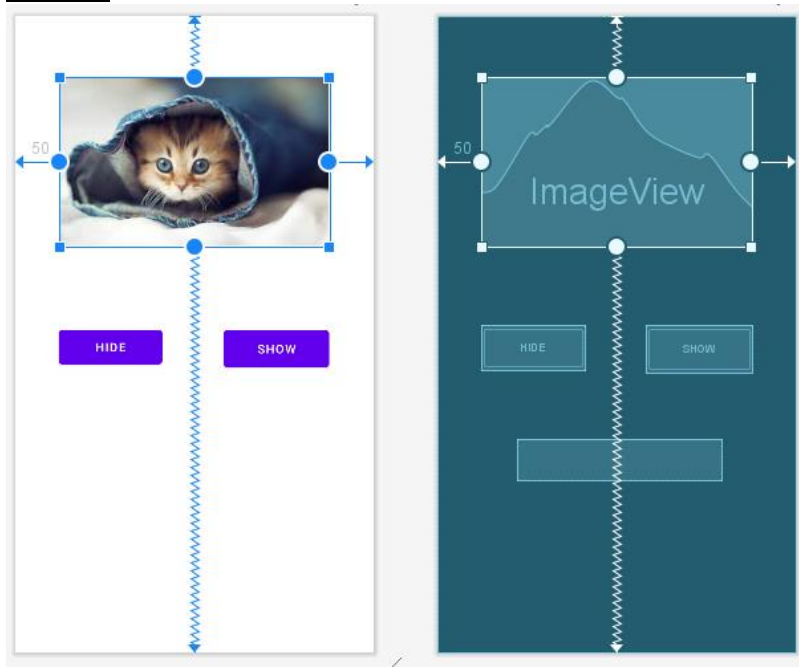


**MainActivity:**

**Xml file:**

```xml
<?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"
    tools:context=".MainActivity">

    <ImageView
        android:id="@+id/imageView"
        android:layout_width="310dp"
        android:layout_height="195dp"
        android:layout_marginStart="50dp"
        android:layout_marginEnd="51dp"
        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="0.13"
        app:srcCompat="@drawable/pic" />

    <Button
        android:id="@+id/button"
        android:layout_width="119dp"
        android:layout_height="51dp"
```

```xml
        android:text="hide"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.171"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.522" />

    <Button
        android:id="@+id/button2"
        android:layout_width="121dp"
        android:layout_height="54dp"
        android:text="show"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.824"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.525" />

    <TextView
        android:id="@+id/textView"
        android:layout_width="235dp"
        android:layout_height="47dp"
        android:layout_marginStart="91dp"
        android:layout_marginTop="77dp"
        android:layout_marginEnd="85dp"
        android:layout_marginBottom="198dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/button2" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

**MainActivity.java:**

```java
package com.example.hideandshow;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.ImageView;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Button hide=(Button) findViewById(R.id.button);
        Button show=(Button) findViewById(R.id.button2);
        ImageView img=(ImageView) findViewById(R.id.imageView);
```

```java
        TextView txt=(TextView)findViewById(R.id.textView);
        img.setVisibility(View.INVISIBLE);
        show.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                img.setVisibility(View.VISIBLE);
                txt.setText("Image is visible");
            }
        });
        hide.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                img.setVisibility(View.INVISIBLE);
                txt.setText("Image is Invisible");
            }
        });
    }
}
```

**OUTPUT:**