

Program 1 :

Aim : Hello world program (Write a program to Toast hello world)

Source Code:

Activity_main.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/toastButton"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="TOAST"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

ActivityMain.java

```
package com.example.amal;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

    Button ToastButton;
```

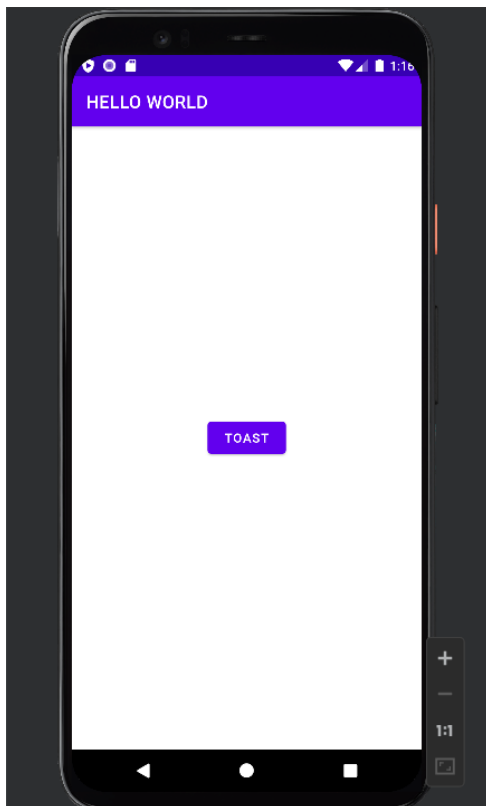
```

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

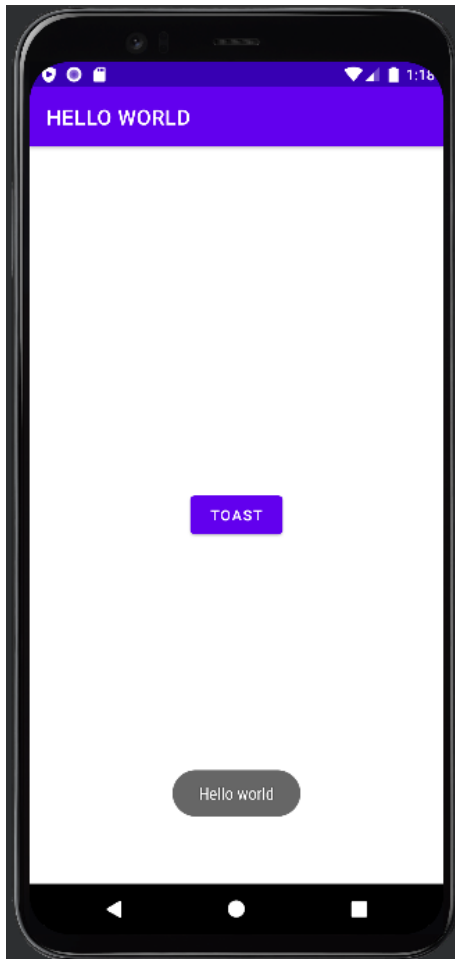
    ToastButton = findViewById(R.id.toastButton);
    ToastButton.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            Toast.makeText(MainActivity.this,"Hello World",Toast.LENGTH_SHORT).show();
        }
    });
}
}

```

User Interface :



Output :



Program 2

Aim : Addition of two numbers (Write a program to add numbers)

Source Code :

Activity_main.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">
```

```
<EditText  
    android:id="@+id/num1"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:layout_marginTop="33dp"  
    android:ems="10"  
    android:hint="Enter num1"  
    android:inputType="number"  
    app:layout_constraintEnd_toEndOf="parent"  
    app:layout_constraintStart_toStartOf="parent"  
    app:layout_constraintTop_toTopOf="parent" />
```

```
<EditText  
    android:id="@+id/num2"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:layout_marginTop="28dp"  
    android:ems="10"  
    android:hint="Enter num 2 "  
    android:inputType="number"  
    app:layout_constraintEnd_toEndOf="parent"  
    app:layout_constraintHorizontal_bias="0.502"  
    app:layout_constraintStart_toStartOf="parent"  
    app:layout_constraintTop_toBottomOf="@+id/num1" />
```

```
<Button  
    android:id="@+id/add"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:layout_marginTop="36dp"  
    android:onClick="addNumbers"  
    android:text="ADD"  
    app:layout_constraintEnd_toEndOf="parent"  
    app:layout_constraintHorizontal_bias="0.498"
```

```

        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/num2" />

<TextView
    android:id="@+id/result"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="27dp"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.498"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/add" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

ActivityMain.xml

```

package com.example.amal;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity {

    EditText num1,num2;
    TextView result;

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

        num1 = findViewById(R.id.num1);
        num2 = findViewById(R.id.num2);
        result = findViewById(R.id.result);
    }
}

```

```
}
```

```
public void addNumbers(View v){  
    double n1,n2,r;
```

```
    n1 = Double.parseDouble(num1.getText().toString());
```

```
    n2 = Double.parseDouble(num2.getText().toString());
```

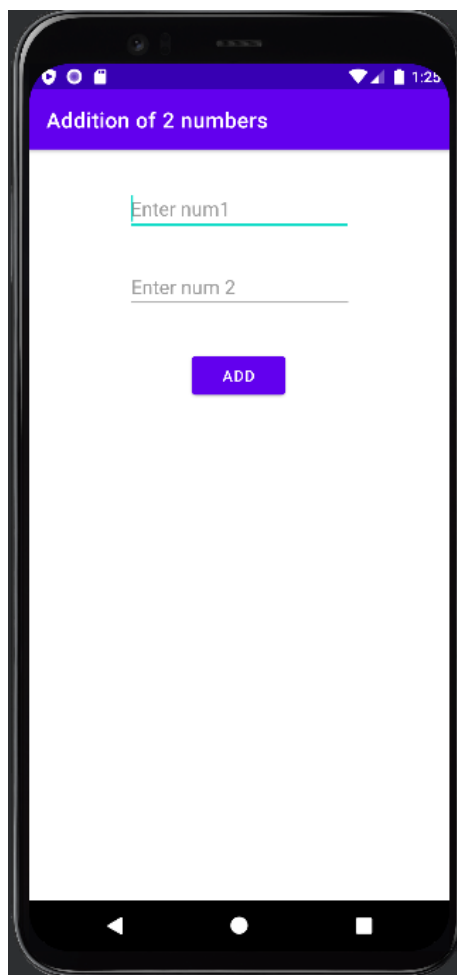
```
    r = n1+n2;
```

```
    result.setText(String.valueOf(r));
```

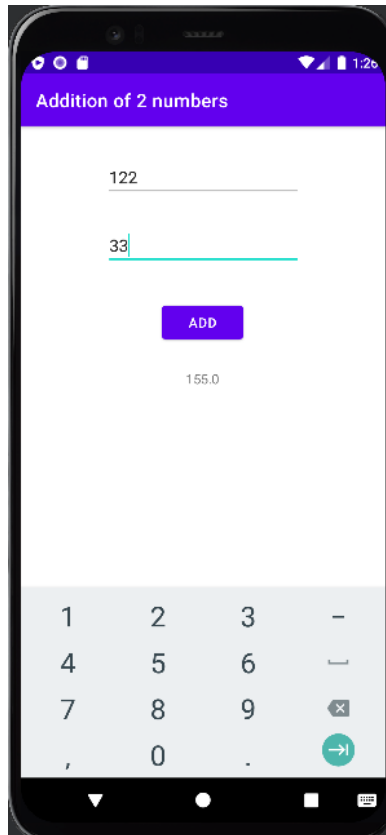
```
}
```

```
}
```

User Interface :



Output



Program 3

Aim : Alert Box (Write a program to display an alert box with Ok and cancel)

Source Code :

Activity_main.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/alert"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:onClick="alertme"
        android:text="ALERT ME!"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

ActivityMain.java

```

package com.example.amal;

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

import android.content.DialogInterface;
import android.os.Bundle;
import android.view.View;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

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

    public void alertme(View v){
        AlertDialog dlg = new AlertDialog.Builder(MainActivity.this)
            .setTitle("Message")
            .setMessage("Alert box is awesome")
            .setPositiveButton("ok", new DialogInterface.OnClickListener() {
                @Override
                public void onClick(DialogInterface dialogInterface, int i) {

```



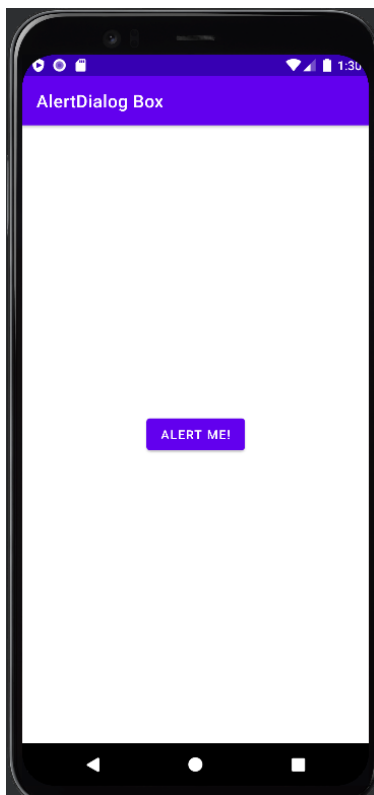
```

        dialogInterface.dismiss();
        Toast.makeText(MainActivity.this, "clicked ok!", Toast.LENGTH_SHORT).show();
    }
})
.setNegativeButton("cancel", new DialogInterface.OnClickListener() {
    @Override
    public void onClick(DialogInterface dialogInterface, int i) {
        dialogInterface.dismiss();
        Toast.makeText(MainActivity.this, "clicked
cancel!", Toast.LENGTH_SHORT).show();
    }
})
.create();
dlg.show();
}

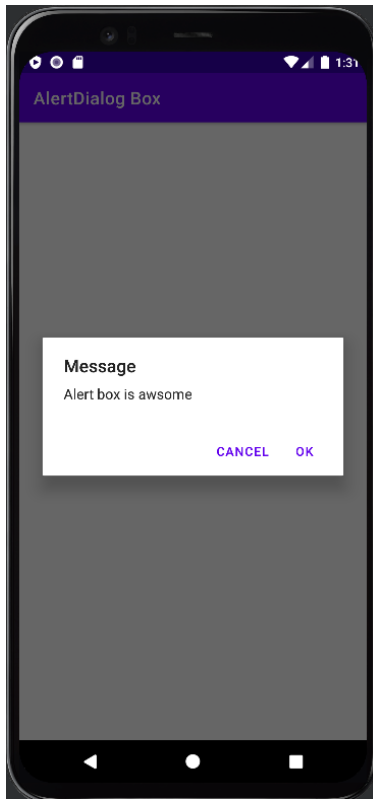
}

```

User Interface



Output



Program 4

Aim : Menu Program (Write a program to create menu with three menu items)

Source code

Activity_main.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">
```

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

Menu.xml

```
<?xml version="1.0" encoding="utf-8"?>
<menu xmlns:android="http://schemas.android.com/apk/res/android">
    <item android:id="@+id/settings"
        android:title="Settings" />
    <item android:id="@+id/contact"
        android:title="Contact" />
    <item android:id="@+id/about"
        android:title="About Us" />
</menu>
```

ActivityMain.java

```
package com.example.amal;

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

import android.content.DialogInterface;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuInflater;
import android.view.MenuItem;
import android.view.View;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

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

    @Override
    public boolean onCreatePanelMenu(int featureId, @NonNull Menu menu) {
```

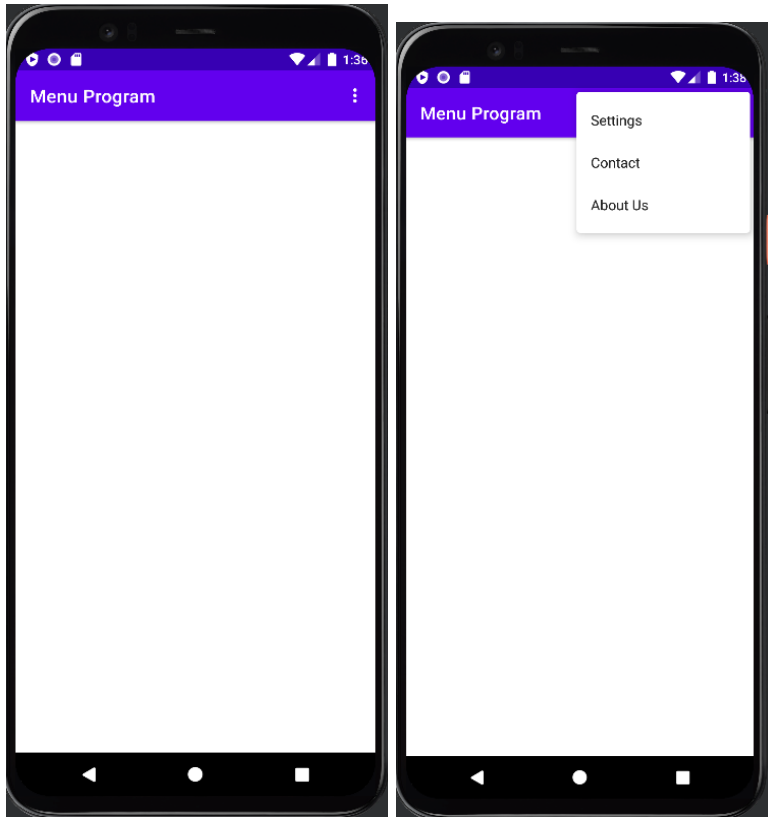
```

//    return super.onCreatePanelMenu(featureId, menu);
    MenuInflater inflater = getMenuInflater();
    inflater.inflate(R.menu.menu, menu);
    return true;
}

@Override
public boolean onOptionsItemSelected(@NonNull MenuItem item) {
    switch (item.getItemId()){
        case R.id.settings:
            Toast.makeText(MainActivity.this, "Settings", Toast.LENGTH_SHORT).show();
            return true;
        case R.id.contact:
            Toast.makeText(MainActivity.this, "Thank you for contacting us !",
Toast.LENGTH_SHORT).show();
            return true;
        case R.id.about:
            Toast.makeText(MainActivity.this, "Made with ❤️", Toast.LENGTH_SHORT).show();
            return true;
        default:
            return super.onOptionsItemSelected(item);
    }
}
}

```

User Interface :



Output



Program 5

Aim : Radio Button (Write a Program to select gender using radio button)

Source code

Activity_main.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">

    <RadioGroup
        android:id="@+id/radioGroup3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent">

        <RadioButton
            android:id="@+id/male"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Male"
            android:onClick="isChecked"
            tools:layout_editor_absoluteX="134dp"
            tools:layout_editor_absoluteY="320dp" />

        <RadioButton
            android:id="@+id/female"
            android:layout_width="wrap_content"
```

```

        android:layout_height="wrap_content"
        android:text="Female"
        android:onClick="isChecked"
        tools:layout_editor_absoluteX="151dp"
        tools:layout_editor_absoluteY="405dp" />
</RadioGroup>

<TextView
    android:id="@+id/textView4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="264dp"
    android:layout_marginBottom="35dp"
    android:text="Choose your gender : "
    app:layout_constraintBottom_toTopOf="@+id/radioGroup3"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />

```

```

<TextView
    android:id="@+id/result"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="24dp"
    android:layout_marginBottom="274dp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.498"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/radioGroup3" />

```

```

</androidx.constraintlayout.widget.ConstraintLayout>

```

ActivityMain.java

```

package com.example.amal;

```

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

```
import android.os.Bundle;
```

```
import android.view.View;
```

```
import android.widget.RadioButton;
```

```
import android.widget.RadioGroup;
```

```
import android.widget.TextView;
```

```
public class MainActivity extends AppCompatActivity {
```

```
    RadioButton radioButton;
```

```
    RadioGroup radioGroup;
```

```
    TextView result;
```

```
    @Override
```

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

```
        super.onCreate(savedInstanceState);
```

```
        setContentView(R.layout.activity_main);
```

```
        radioGroup = findViewById(R.id.radioGroup3);
```

```
        result = findViewById(R.id.result);
```

```
    }
```

```
    public void isChecked(View v){
```

```
        int radioid = radioGroup.getCheckedRadioButtonId();
```

```
        radioButton = findViewById(radioid);
```

```
        switch (radioid){
```

```
            case R.id.male:
```

```
                result.setText("You selected : " + radioButton.getText());
```

```
            case R.id.female:
```

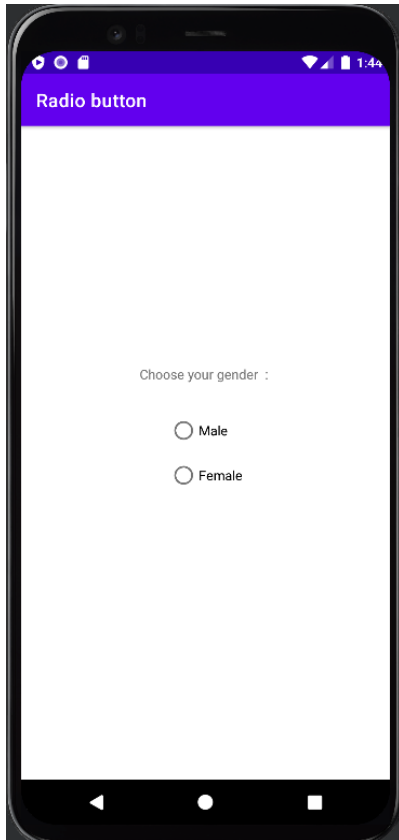
```
                result.setText("You selected : " + radioButton.getText());
```

```
        }
```

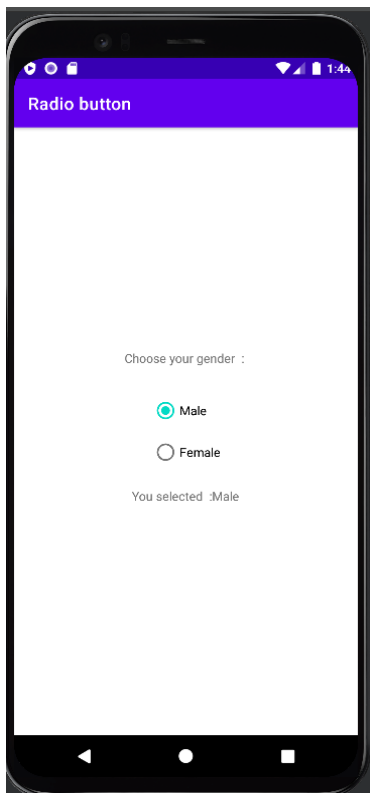
```
    }
```

```
}
```

User Interface



Output



Program 6

Aim : Write a Program to Spin the four items

Source Code :

Activity_main.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">

    <Spinner
        android:id="@+id/spinner"
        android:layout_width="240dp"
        android:layout_height="56dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

ActivityMain.java

```
package com.example.amal;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.Spinner;
import android.widget.Toast;
```

```

public class MainActivity extends AppCompatActivity implements
AdapterView.OnItemSelectedListener {

    Spinner spinner;

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

        spinner = findViewById(R.id.spinner);
        ArrayAdapter<CharSequence> adapter =
        ArrayAdapter.createFromResource(this, R.array.fruit,
        android.R.layout.simple_spinner_item);

        adapter.setDropDownViewResource(android.R.layout.simple_spinner_dropdown_item);
        spinner.setAdapter(adapter);
        spinner.setOnItemSelectedListener(this);

    }

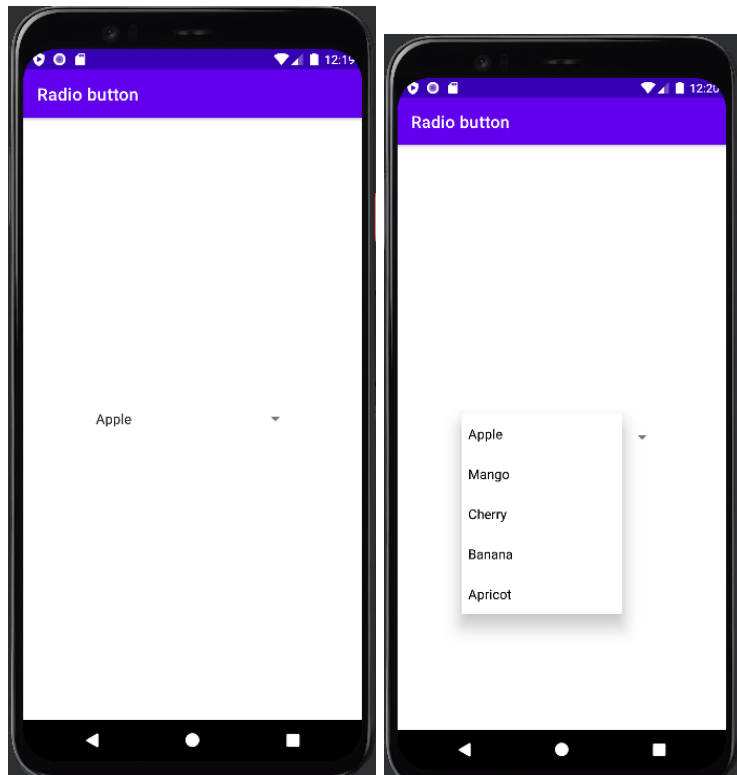
    @Override
    public void onItemSelected(AdapterView<?> adapterView, View view, int i, long l) {
        String choice = adapterView.getItemAtPosition(i).toString();
        Toast.makeText(this, choice, Toast.LENGTH_SHORT).show();
    }

    @Override
    public void onNothingSelected(AdapterView<?> adapterView) {

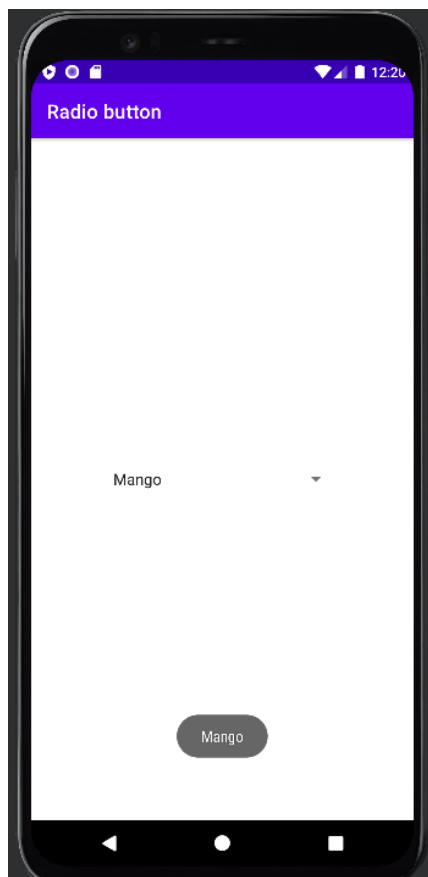
    }
}

```

UserInterface :



Output



Program 7

Aim : Write a Program to check the items listed

SourceCode :

Activity_main.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/textView3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="116dp"
        android:text="Choose your hobby : "
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <CheckBox
        android:id="@+id/checkbox1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="80dp"
        android:text="Cricket"
        android:onClick="itemCheck"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.42"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/textView3" />

    <CheckBox
```

```
android:id="@+id/checkBox2"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginTop="12dp"
android:text="Football"
android:onClick="itemCheck"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.42"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toBottomOf="@+id/checkBox3" />
```

<CheckBox

```
android:id="@+id/checkBox3"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginTop="4dp"
android:text="Volley Ball"
android:onClick="itemCheck"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.439"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toBottomOf="@+id/checkBox4" />
```

<CheckBox

```
android:id="@+id/checkBox4"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginTop="8dp"
android:text="Hockey"
android:onClick="itemCheck"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.421"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toBottomOf="@+id/checkBox1" />
```

<TextView

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

```
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.498"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/checkBox2"
    app:layout_constraintVertical_bias="0.145" />
```

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

MainActivity.java

```
package com.example.amal;
```

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

```
import android.os.Bundle;
```

```
import android.util.Log;
```

```
import android.view.View;
```

```
import android.widget.CheckBox;
```

```
import android.widget.TextView;
```

```
import java.util.ArrayList;
```

```
public class MainActivity extends AppCompatActivity {
```

```
    CheckBox ch1,ch2,ch3,ch4;
```

```
    TextView result;
```

```
    ArrayList<String> arrayList;
```

```
    @Override
```

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

```
        super.onCreate(savedInstanceState);
```

```
        setContentView(R.layout.activity_main);
```

```

ch1 = findViewById(R.id.checkBox1);
ch2 = findViewById(R.id.checkBox2);
ch3 = findViewById(R.id.checkBox3);
ch4 = findViewById(R.id.checkBox4);

result = findViewById(R.id.result);
arrayList = new ArrayList<>();
}

public void itemCheck(View view){

    boolean checked = ((CheckBox) view).isChecked();
    switch (view.getId()){
        case R.id.checkBox1:
            if (checked){
                arrayList.add(ch1.getText().toString());
            }else{
                arrayList.remove(ch1.getText().toString());
            }
            break;
        case R.id.checkBox2:
            if (checked){
                arrayList.add(ch2.getText().toString());
            }else{
                arrayList.remove(ch2.getText().toString());
            }
            break;
        case R.id.checkBox3:
            if (checked){
                arrayList.add(ch3.getText().toString());
            }else{
                arrayList.remove(ch3.getText().toString());
            }
            break;
        case R.id.checkBox4:
            if (checked){

```

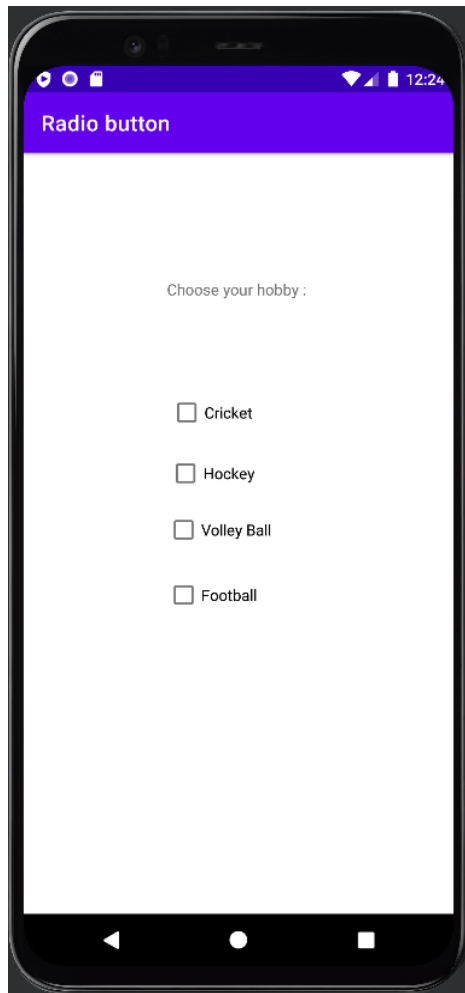


```
        arrayList.add(ch4.getText().toString());
    }else{
        arrayList.remove(ch4.getText().toString());
    }
    break;
}
StringBuilder stringBuilder = new StringBuilder();
for(String s : arrayList){
    stringBuilder.append(s).append(", ");
    Log.i("ME",s);
}

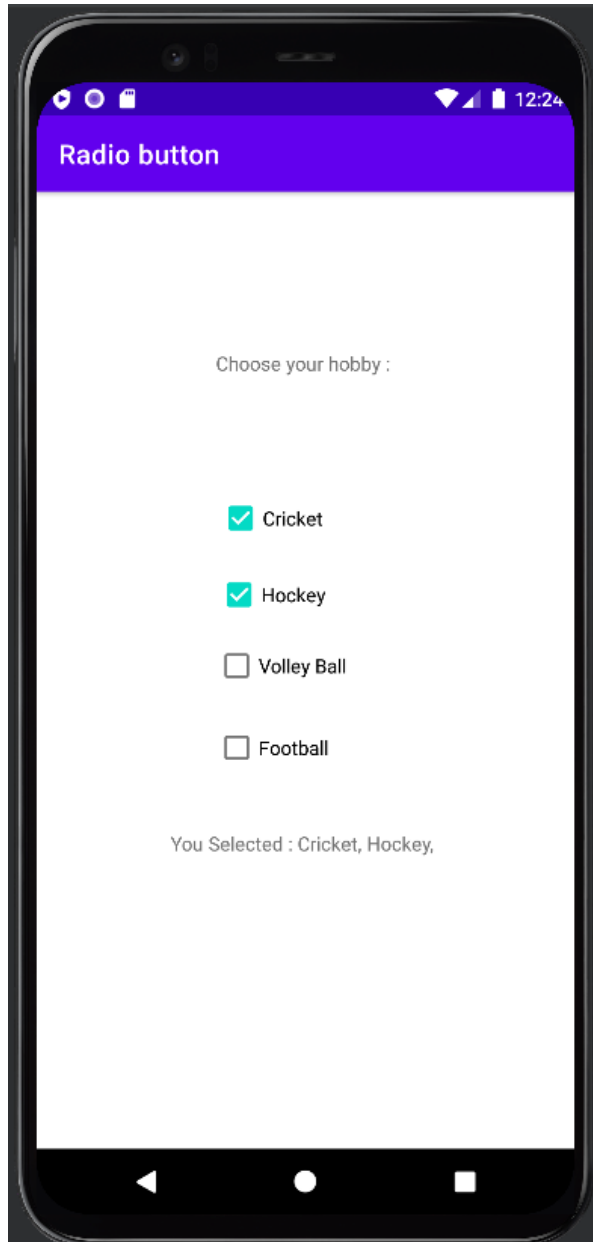
result.setText("You Selected : " + stringBuilder.toString());
}

}
```

User interface



Output



Program 8

Aim : Write a Program to Display images from local drive of the computer

Source Code :

Activiity_main.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="377dp"
    android:layout_height="356dp"
    android:layout_marginTop="72dp"
    app:layout_constraintBottom_toTopOf="@+id/button1"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.602"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.503"
    tools:srcCompat="@tools:sample/avatars" />
```

```
<Button
    android:id="@+id/button2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginBottom="72dp"
    android:onClick="setImageview"
    android:text="Image 2"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.501"
    app:layout_constraintStart_toStartOf="parent" />
```

```
<Button
    android:id="@+id/button3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginBottom="4dp"
    android:onClick="setImageview"
    android:text="Image 3"
    app:layout_constraintBottom_toTopOf="@+id/button2"
```

```
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.498"
app:layout_constraintStart_toStartOf="parent" />
```

```
<Button
    android:id="@+id/button1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginBottom="4dp"
    android:onClick="setImageView"
    android:text="Image 1"
    app:layout_constraintBottom_toTopOf="@+id/button3"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.501"
    app:layout_constraintStart_toStartOf="parent" />
```

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

MainActivity.java

```
package com.example.amal;
```

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

```
import android.os.Bundle;
```

```
import android.view.View;
```

```
import android.widget.Button;
```

```
import android.widget.ImageView;
```

```
public class MainActivity extends AppCompatActivity {
```

```
    ImageView imageView;
```

```
    Button Image1, Image2, Image3;
```

```
    @Override
```

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

```
        super.onCreate(savedInstanceState);
```

```
        setContentView(R.layout.activity_main);
```

```
        imageView = findViewById(R.id.imageView);
```

```
Image1 = findViewById(R.id.button1);  
Image2 = findViewById(R.id.button2);  
Image3 = findViewById(R.id.button3);
```

```
}
```

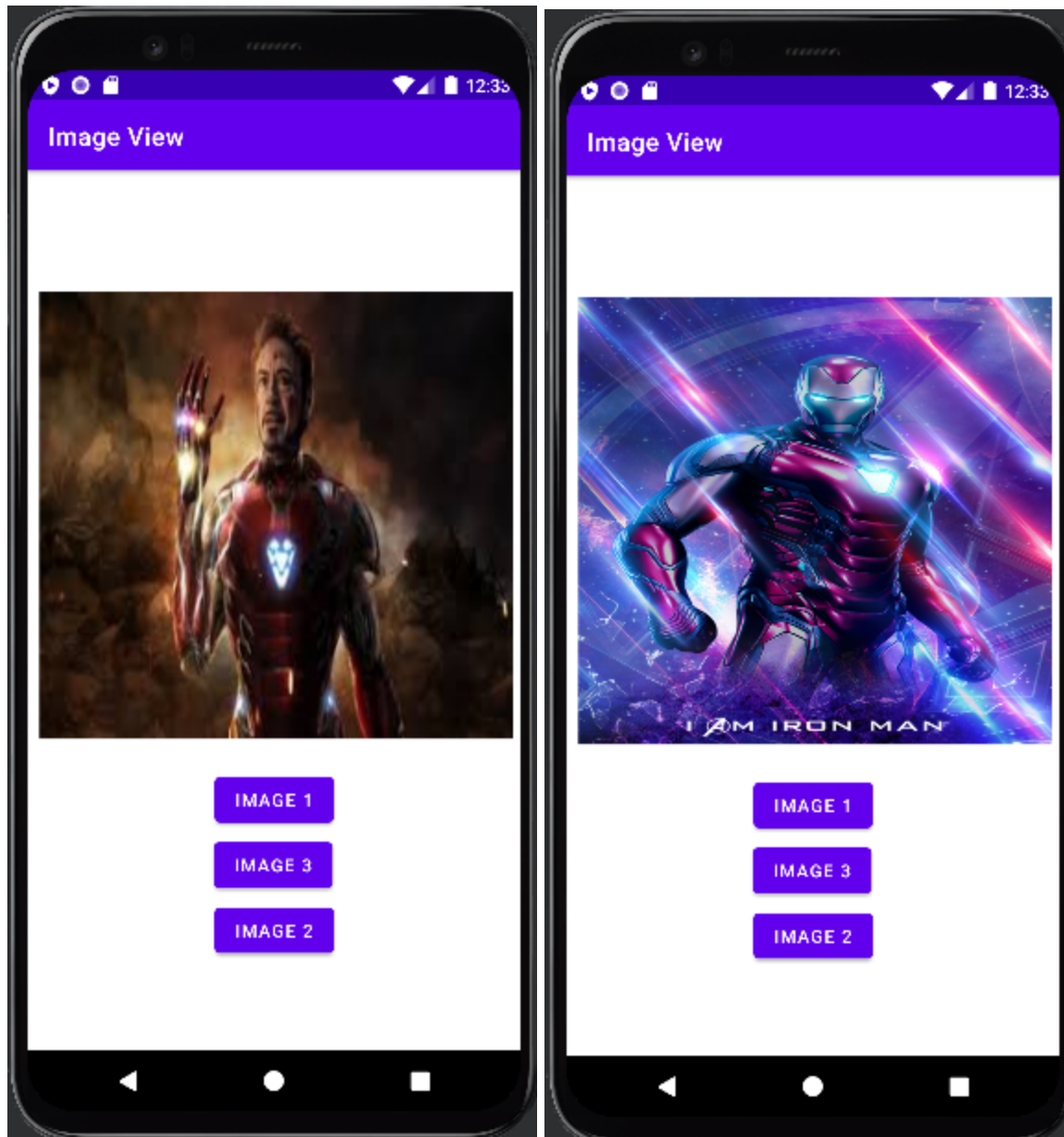
```
public void setImageView(View view){  
    switch (view.getId()){  
        case R.id.button1:  
            imageView.setBackgroundResource(R.drawable.image);  
            break;  
        case R.id.button2:  
            imageView.setBackgroundResource(R.drawable.image2);  
            break;  
        case R.id.button3:  
            imageView.setBackgroundResource(R.drawable.image3);  
            break;  
    }  
}
```

```
}
```

UserInteface



Output



Program 9

Aim : Write a Program to Display the items in a list

Source code :

Activity_main.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="409dp"
    android:layout_height="729dp"
    tools:layout_editor_absoluteX="1dp"
    tools:layout_editor_absoluteY="1dp" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

MainActivity.java

```
package com.example.amal;
```

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

```
import android.os.Bundle;
```

```
import android.widget.ArrayAdapter;
```

```
import android.widget.ListView;
```

```
public class MainActivity extends AppCompatActivity {
```

```
    ListView listView;
```

```
    @Override
```

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

```
        super.onCreate(savedInstanceState);
```

```
        setContentView(R.layout.activity_main);
```

```
        listView = findViewById(R.id.listView);
```

```
        String title[] = {"Google","Faceebook","Netflix","Amazon","Tesla"};
```

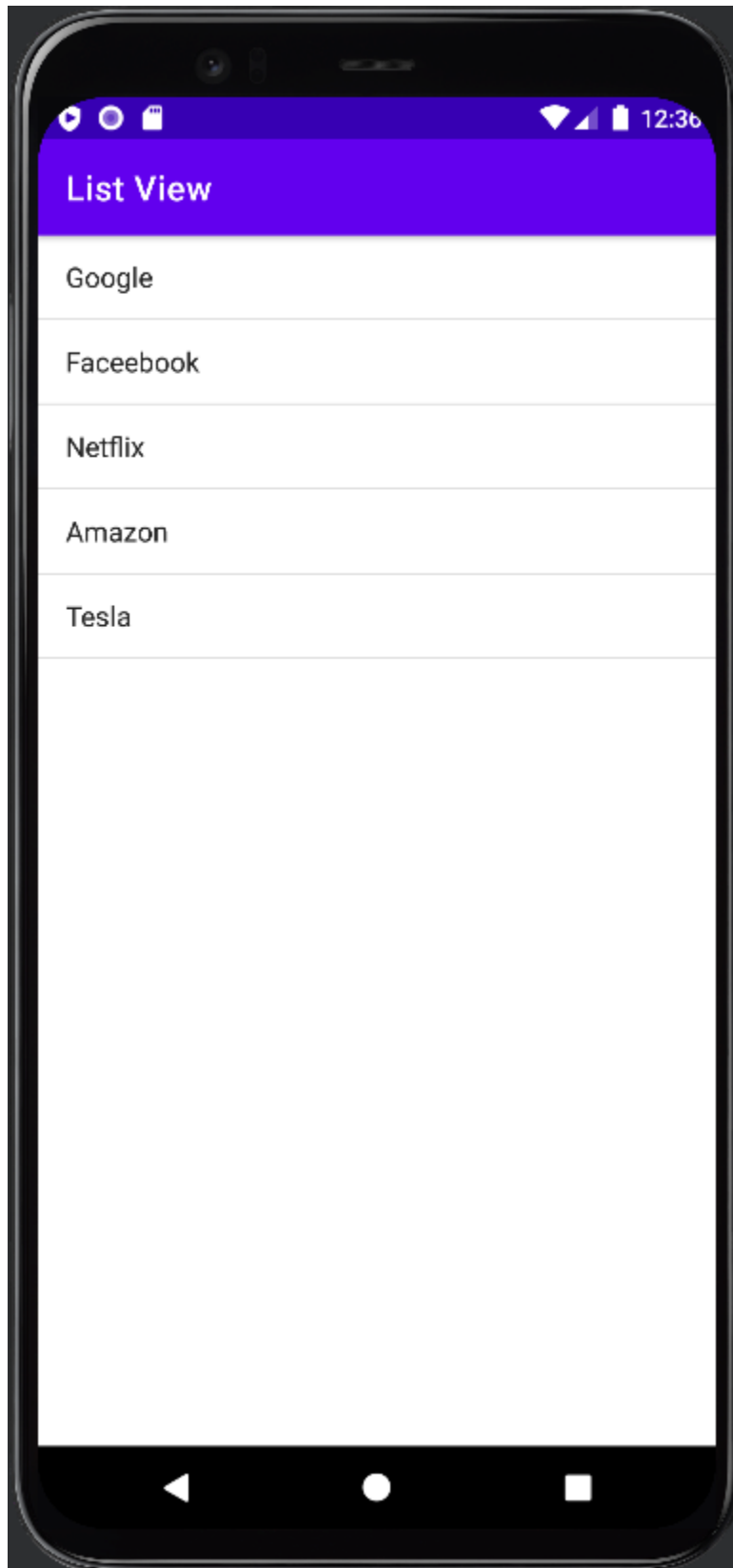
```
        ArrayAdapter<String> adapter = new ArrayAdapter<String>(this,
        android.R.layout.simple_list_item_1,android.R.id.text1,title);
```

```
        listView.setAdapter(adapter);
```

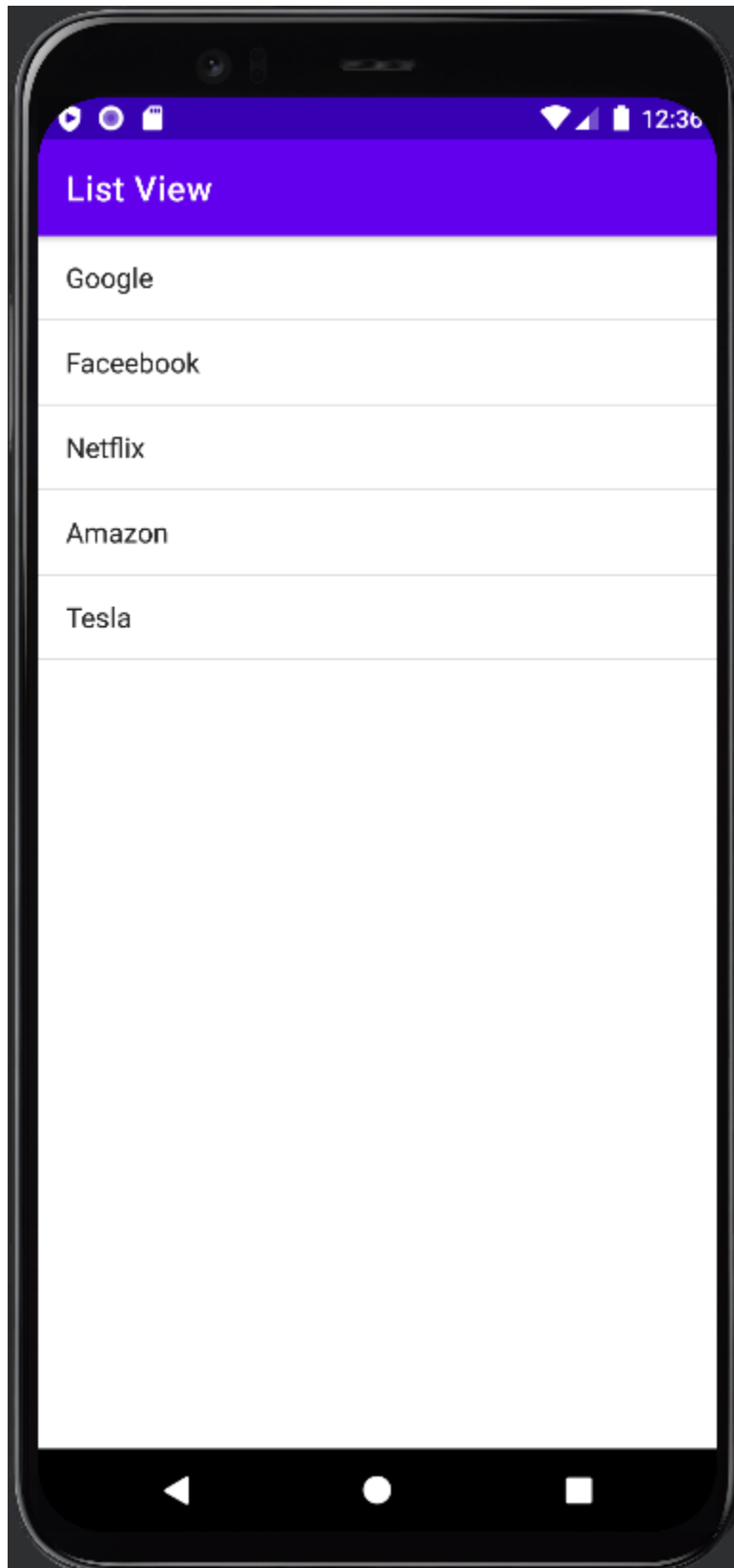
```
    }
```

```
}
```

UserInterface :



Output



Program 10

Aim : Fetch data from an EditText and display it in a TextView

Source Code :

Activity_main.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">

    <EditText
        android:id="@+id/editText"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="244dp"
        android:ems="10"
        android:inputType="textPersonName"
        android:text="Name"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.497"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <TextView
        android:id="@+id/result"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.498"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/editText"
        app:layout_constraintVertical_bias="0.128" />

    <Button
        android:id="@+id/fetch"
```

```
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="48dp"
        android:text="Fetch"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.495"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/editText" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

MainActivity.java

```
package com.example.amal;
```

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

```
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
```

```
public class MainActivity extends AppCompatActivity {
```

```
    EditText editText;
    TextView textView;
    Button button;
```

```
    @Override
```

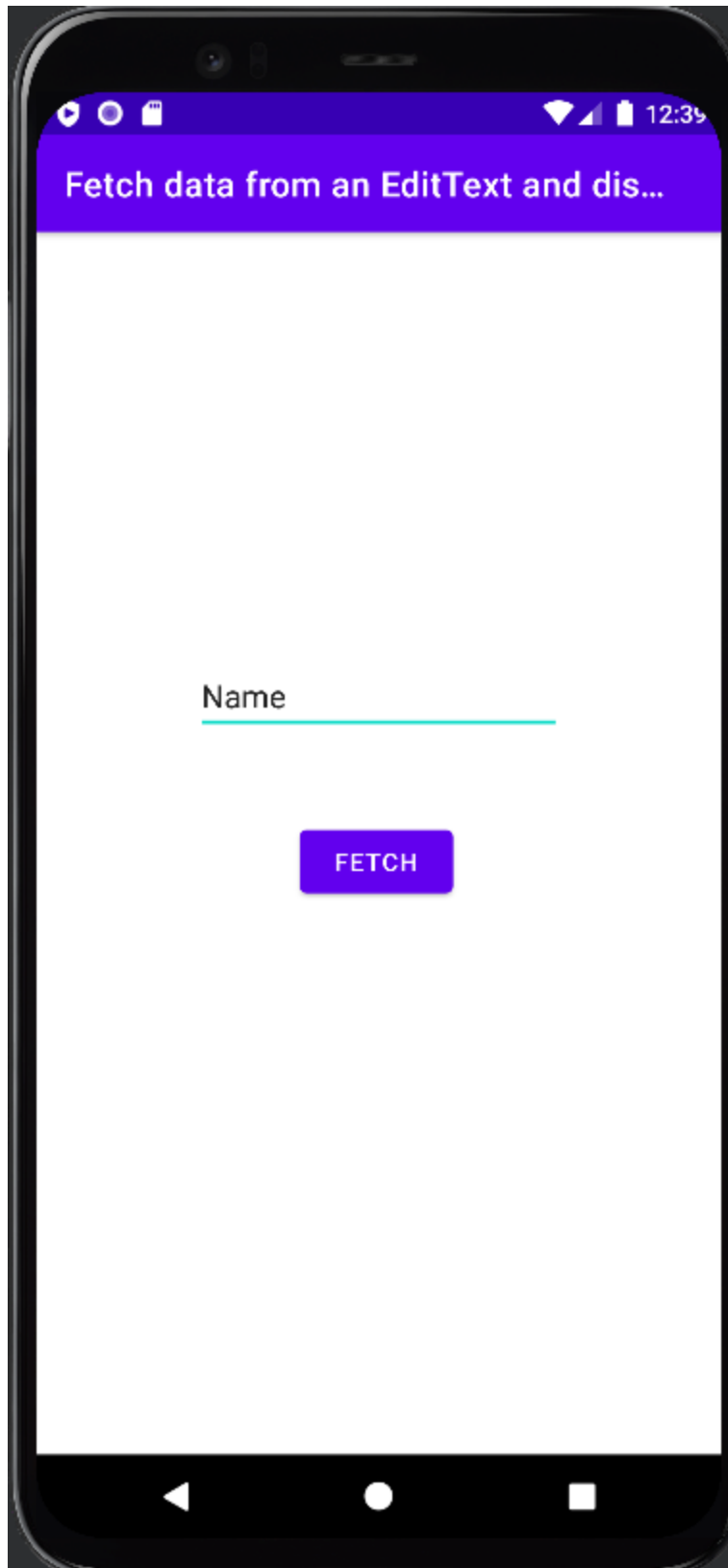
```
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
```

```
        button = findViewById(R.id.fetch);
        editText = findViewById(R.id.editText);
        textView = findViewById(R.id.result);
```

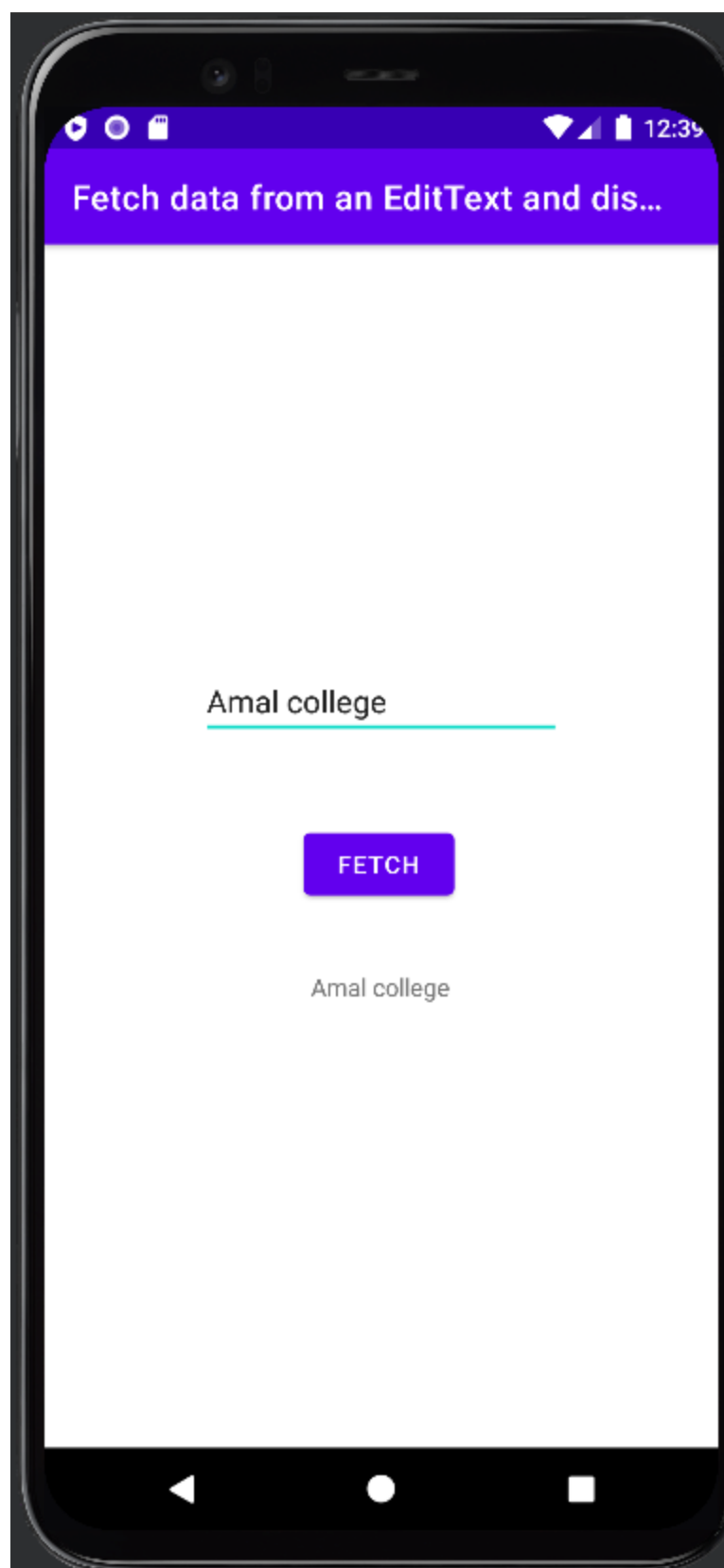
```
        button.setOnClickListener(new View.OnClickListener() {
```

```
    @Override
    public void onClick(View view) {
        textView.setText(editText.getText().toString());
    }
});
}
}
```

User Interface :



Output



Progarm 11

Aim : Write a program to display multiplication table of a given number

Source code :

Activity_main.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">
```

```
<EditText
    android:id="@+id/editText"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="40dp"
    android:layout_marginTop="72dp"
    android:ems="10"
    android:hint="Enter a Number"
    android:inputType="number"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
```

```
<Button
    android:id="@+id/submit"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="submit"
    app:layout_constraintBottom_toTopOf="@+id/result"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.444"
    app:layout_constraintStart_toEndOf="@+id/editText"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.669" />
```

```
<TextView
    android:id="@+id/result"
    android:layout_width="332dp"
    android:layout_height="407dp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/editText"
    app:layout_constraintVertical_bias="0.164" />
```

```
<TextView
    android:id="@+id/textView7"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Multiplication table"
    app:layout_constraintBottom_toTopOf="@+id/editText"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.136"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.584" />
```

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

MainActivity.java

```
package com.example.amal;
```

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

```
import android.os.Bundle;
```

```
import android.view.View;
```

```
import android.widget.Button;
```

```
import android.widget.EditText;
```

```
import android.widget.TextView;
```

```
public class MainActivity extends AppCompatActivity {
```

```
    EditText editText;
```

Button submit;
TextView result;

@Override

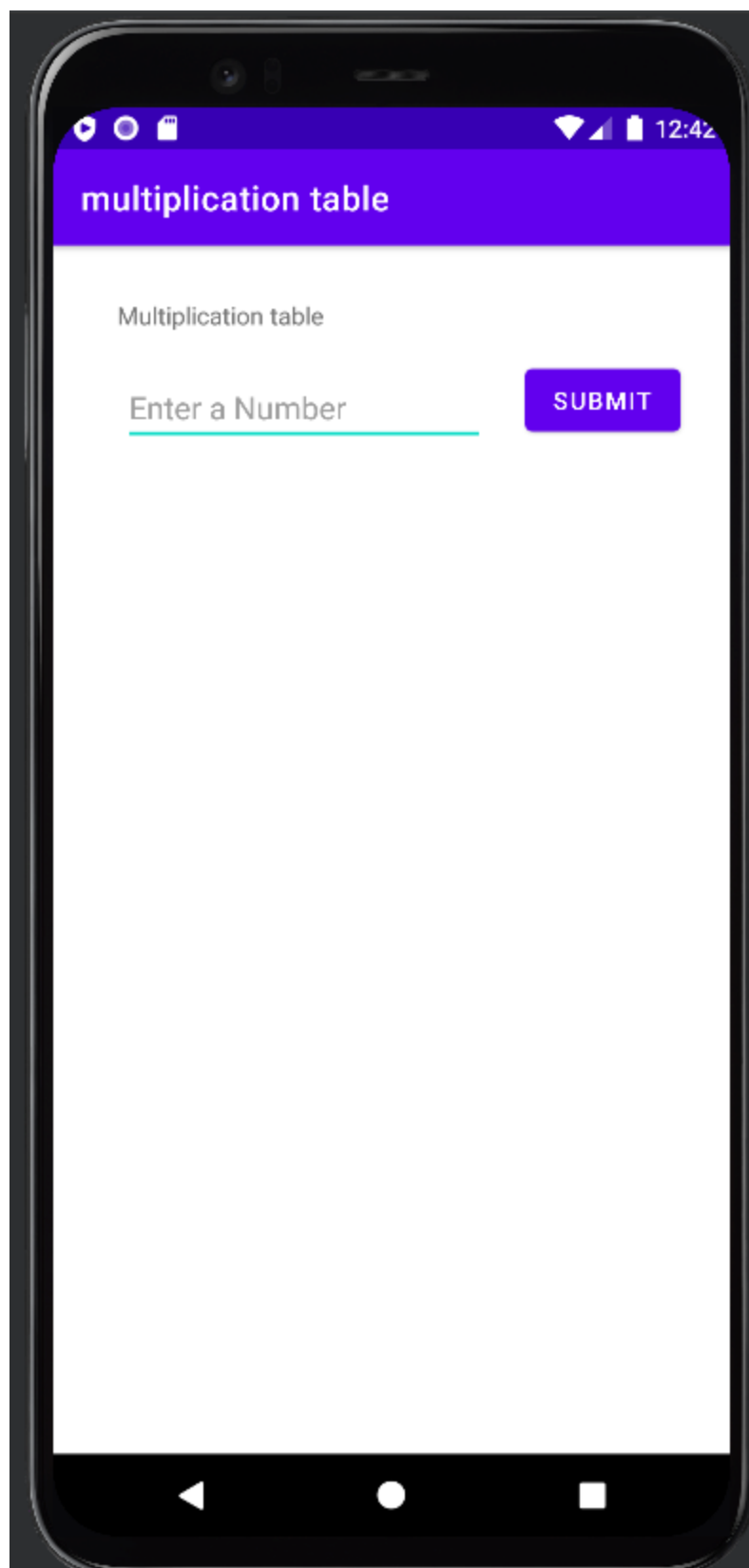
```
protected void onCreate(Bundle savedInstanceState) {  
    super.onCreate(savedInstanceState);  
    setContentView(R.layout.activity_main);
```

```
    editText = findViewById(R.id.editText);  
    submit = findViewById(R.id.submit);  
    result = findViewById(R.id.result);
```

```
    submit.setOnClickListener(new View.OnClickListener(){  
        @Override  
        public void onClick(View view) {  
            Integer num = Integer.parseInt(editText.getText().toString());  
            Integer answer;  
            StringBuffer r = new StringBuffer();  
            for(Integer i=1;i<=10;i++){  
                answer = i*num;  
                r.append(i+" X "+num+" = "+answer).append("\n");  
            }  
            result.setText(r.toString());  
        }  
    });
```

```
    }  
}
```

User Interface :



Output

multiplication table

Multiplication table

12

SUBMIT

1 X 12 = 12
2 X 12 = 24
3 X 12 = 36
4 X 12 = 48
5 X 12 = 60
6 X 12 = 72
7 X 12 = 84
8 X 12 = 96
9 X 12 = 108
10 X 12 = 120

Program 12

Aim : Write a program to Get IP Address of the device

Source code :

Activity_main.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/result"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:textAppearance="@style/TextAppearance.AppCompat.Large"
        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

```
package com.example.amal;

import androidx.appcompat.app.AppCompatActivity;

import android.net.wifi.WifiManager;
import android.os.Bundle;
import android.text.format.Formatter;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity {
```

TextView result;

@Override

```
protected void onCreate(Bundle savedInstanceState) {  
    super.onCreate(savedInstanceState);  
    setContentView(R.layout.activity_main);  
  
    result = findViewById(R.id.result);  
    WifiManager wf = (WifiManager)  
getApplicationContext().getSystemService(WIFI_SERVICE);  
  
    int ip = wf.getConnectionInfo().getIpAddress();  
    result.setText(Formatter.formatIpAddress(ip));  
  
    }  
}
```

User Interface :



Output



Program 13

Aim : Write a program to Change the Background colour of the Activity

Source code :

Activity_main.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:id="@+id/Clayout"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <Button
        android:id="@+id/change"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="change me"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <Button
        android:id="@+id/reset"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="reset"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/change"
        app:layout_constraintVertical_bias="0.051" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

MainActivity.java

```
package com.example.amal;
```

```
import androidx.appcompat.app.AppCompatActivity;  
import androidx.constraintlayout.widget.ConstraintLayout;
```

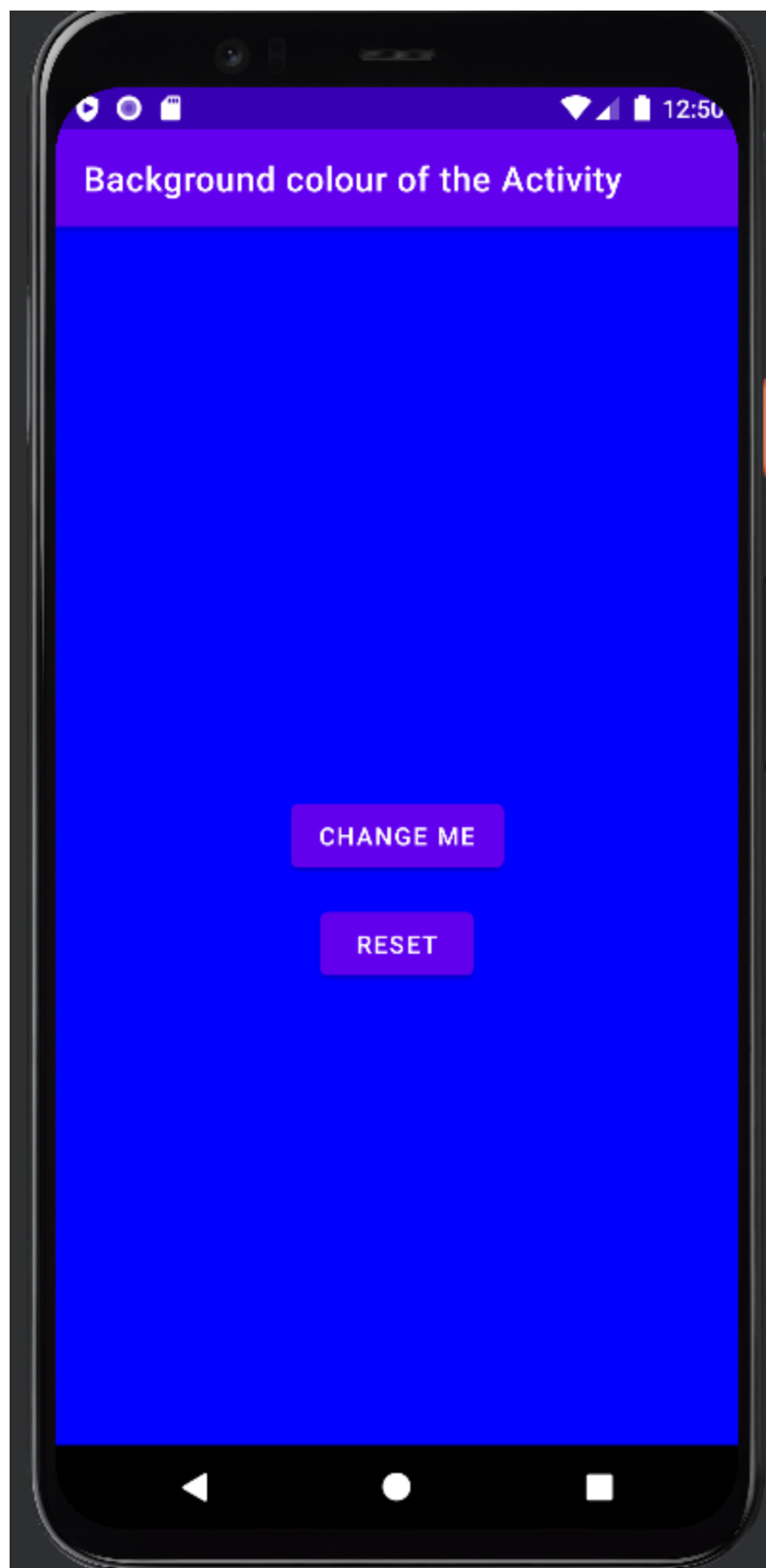
```
import android.graphics.Color;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;
```

```
public class MainActivity extends AppCompatActivity {  
  
    ConstraintLayout layout;  
    Button change, reset;  
  
    @Override  
    protected void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);  
        setContentView(R.layout.activity_main);  
  
        layout = findViewById(R.id.Clayout);  
        change = findViewById(R.id.change);  
        reset = findViewById(R.id.reset);  
  
        change.setOnClickListener(new View.OnClickListener() {  
            @Override  
            public void onClick(View view) {  
                layout.setBackgroundColor(Color.BLUE);  
            }  
        });  
        reset.setOnClickListener(new View.OnClickListener() {  
            @Override  
            public void onClick(View view) {  
                layout.setBackgroundColor(Color.WHITE);  
            }  
        });  
    }  
}
```

User Interface :



Output



Program 14

Aim : Write a program to Change the Background image

Source Code :

Activity_main.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:id="@+id/Clayout"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <Button
        android:id="@+id/bg1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="change BG"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.904" />

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

MainActivity.java

```
package com.example.amal;
```

```
import androidx.appcompat.app.AppCompatActivity;
import androidx.constraintlayout.widget.ConstraintLayout;
```

```
import android.graphics.Color;
import android.os.Bundle;
```

```
import android.view.View;
import android.widget.Button;
```

```
import java.util.Random;
```

```
public class MainActivity extends AppCompatActivity {
```

```
    ConstraintLayout layout;
```

```
    Button change;
```

```
    int images[];
```

```
    @Override
```

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

```
        super.onCreate(savedInstanceState);
```

```
        setContentView(R.layout.activity_main);
```

```
        layout = findViewById(R.id.Clayout);
```

```
        change = findViewById(R.id.bg1);
```

```
        images = new int[] {R.drawable.bg1, R.drawable.bg2, R.drawable.bg3,
R.drawable.bg4, R.drawable.bg5, R.drawable.bg6};
```

```
        change.setOnClickListener(new View.OnClickListener() {
```

```
            @Override
```

```
            public void onClick(View view) {
```

```
                layout.setBackgroundResource(images[new
Random().nextInt(images.length)]);
```

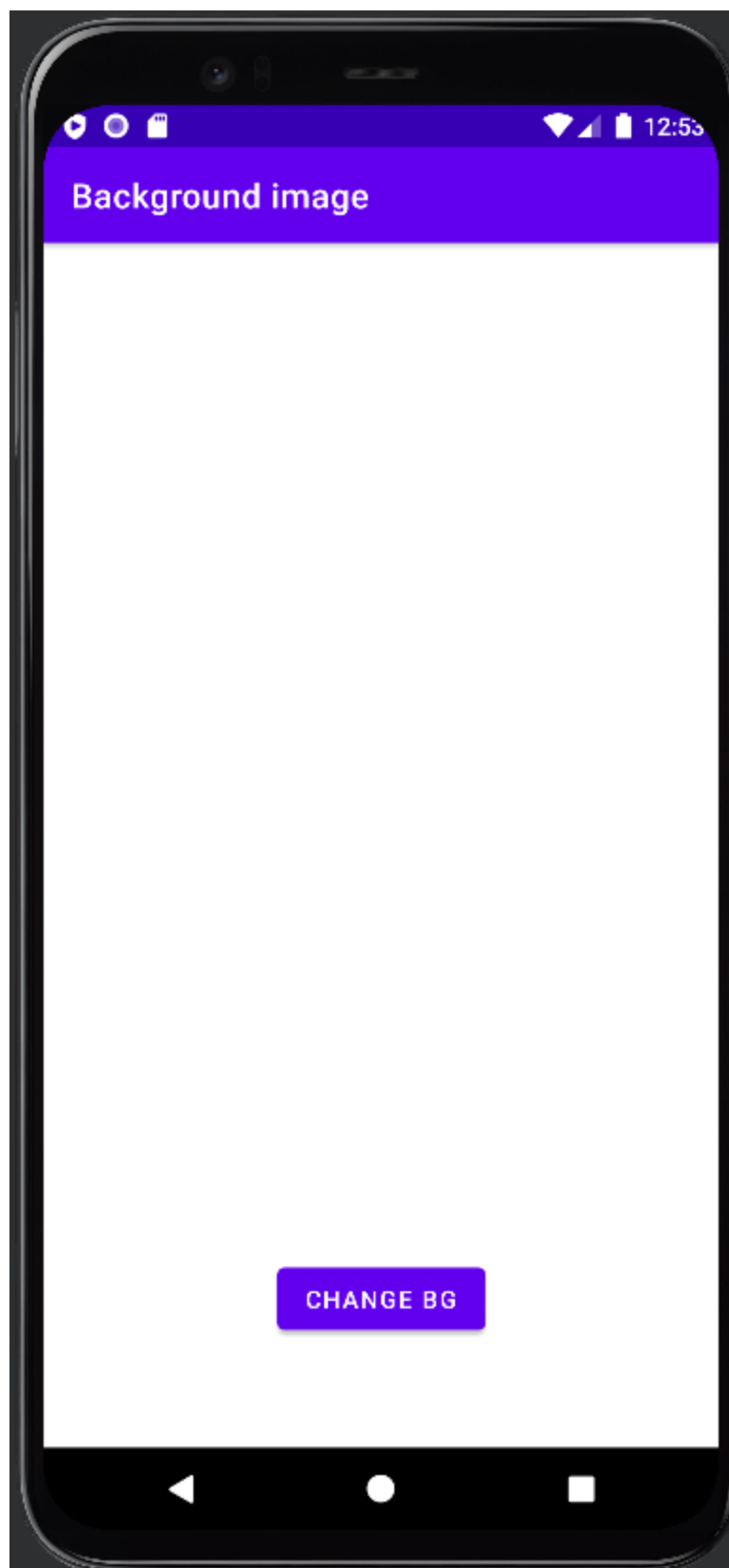
```
            }
```

```
        });
```

```
    }
```

```
}
```

User Interface :



Output



12:53

Background image



CHANGE BG



Program 15

Aim : Write a program to start another activity from your own activity using intent

Source Code :

Activity_main.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:id="@+id/Clayout"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <Button
        android:id="@+id/next"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Move to activity 2"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/textView9"
        app:layout_constraintVertical_bias="0.123" />

    <TextView
        android:id="@+id/textView9"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="292dp"
        android:text="Activity 1"
        android:textAppearance="@style/TextAppearance.AppCompat.Large"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.498"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

Activity_2.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=".Activity2">

    <TextView
        android:id="@+id/textView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Activity 2"
        android:textAppearance="@style/TextAppearance.AppCompat.Large"
        app:layout_constraintBottom_toTopOf="@+id/next2"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.489"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.782" />

    <Button
        android:id="@+id/next2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginBottom="256dp"
        android:text="Move to Activity 1"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.495"
        app:layout_constraintStart_toStartOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

MainActivity.java

```
package com.example.amal;
```

```
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 {

    Button activity1;

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

        activity1 = findViewById(R.id.next);

        activity1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                openAvtivity2();
            }
        });
    }

    public void openAvtivity2(){
        Intent intent = new Intent(this, Activity2.class);
        startActivity(intent);
    }
}
```

Activity2.java

```
package com.example.amal;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
```

```

import android.view.View;
import android.widget.Button;

public class Activity2 extends AppCompatActivity {

    Button activity2;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_2);

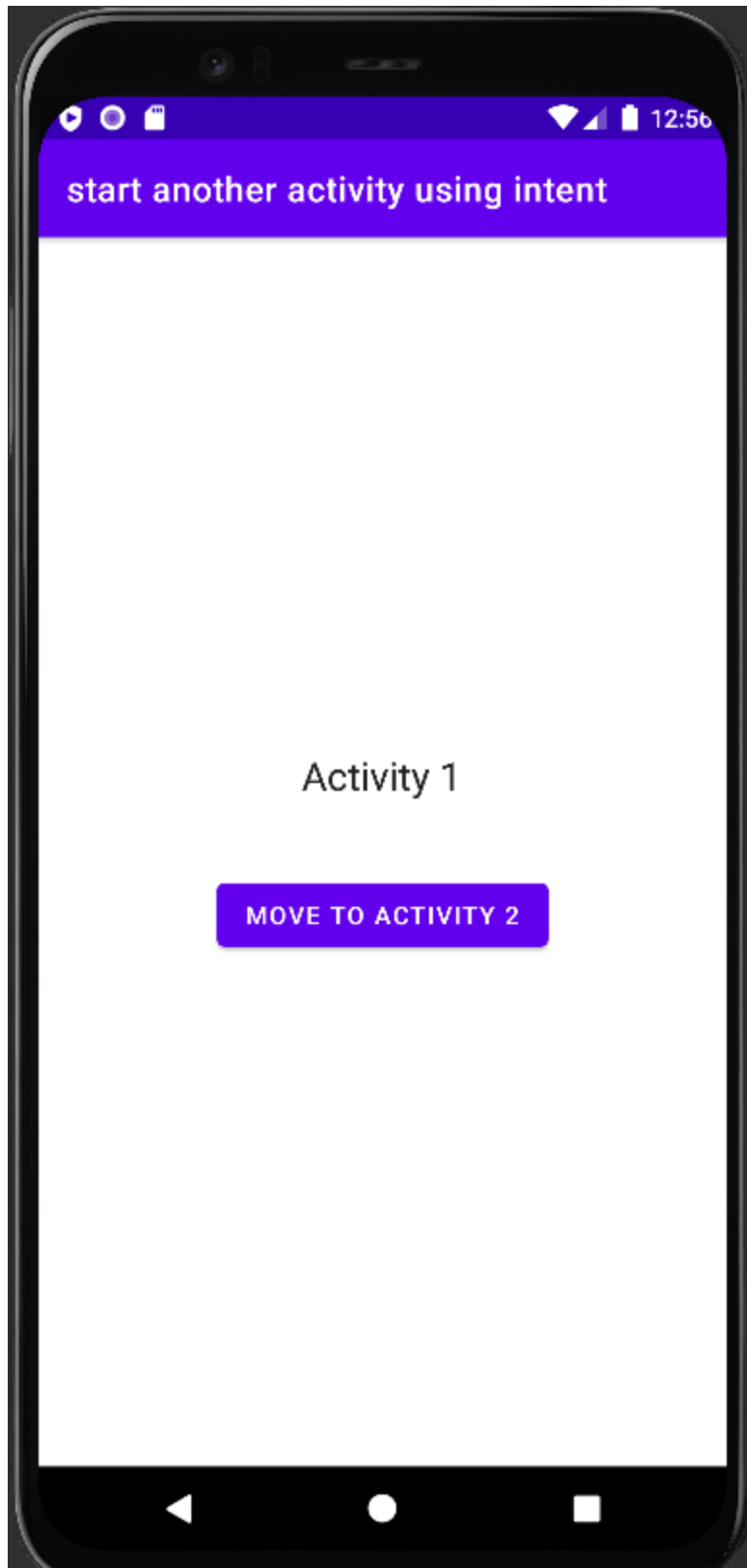
        activity2 = findViewById(R.id.next2);

        activity2.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                openAvtivity1();
            }
        });
    }

    public void openAvtivity1(){
        Intent intent = new Intent(this, MainActivity.class);
        startActivity(intent);
    }
}

```

User Interface :



Output

