# Fragment1



# Activity\_main.xml

*<?*xml version="1.0" encoding="utf-8"*?>*<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
xmlns:tools="http://schemas.android.com/tools"  
android:layout\_width="match\_parent"  
android:layout\_height="match\_parent"  
android:orientation="vertical"  
  
>  
*<!-- display two Button's and a FrameLayout to replace the Fragment's -->*<Button  
 android:id="@+id/firstFragment"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:background="@color/button\_background\_color"  
 android:text="First Fragment"  
 android:textColor="@color/white"  
 android:textSize="20sp" />  
  
<Button  
 android:id="@+id/secondFragment"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="10dp"  
 android:background="@color/button\_background\_color"  
 android:text="Second Fragment"  
 android:textColor="@color/white"  
 android:textSize="20sp" />  
  
<FrameLayout  
 android:id="@+id/frameLayout"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:layout\_marginTop="10dp" />  
</LinearLayout>

# mainactivity.java

package com.example.fragment1;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
  
import android.app.Fragment;  
import android.app.FragmentManager;  
import android.app.FragmentTransaction;  
  
import android.view.View;  
import android.widget.Button;  
  
import com.abhiandroid.fragmentexample.R;  
  
public class MainActivity extends AppCompatActivity {  
  
 Button firstFragment, secondFragment;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
*// get the reference of Button's* firstFragment = (Button) findViewById(R.id.*firstFragment*);  
 secondFragment = (Button) findViewById(R.id.*secondFragment*);  
  
*// perform setOnClickListener event on First Button* firstFragment.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
*// load First Fragment* loadFragment(new FirstFragment());  
 }  
 });  
*// perform setOnClickListener event on Second Button* secondFragment.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
*// load Second Fragment* loadFragment(new SecondFragment());  
 }  
 });  
  
 }  
  
 private void loadFragment(Fragment fragment) {  
*// create a FragmentManager* FragmentManager fm = getFragmentManager();  
*// create a FragmentTransaction to begin the transaction and replace the Fragment* FragmentTransaction fragmentTransaction = fm.beginTransaction();  
*// replace the FrameLayout with new Fragment* fragmentTransaction.replace(R.id.*frameLayout*, fragment);  
 fragmentTransaction.commit(); *// save the changes* }  
}

# first\_fragment.xml

<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 >  
  
 *<!--TextView and Button displayed in First Fragment -->* <TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_centerHorizontal="true"  
 android:layout\_marginTop="100dp"  
 android:text="This is First Fragment"  
 android:textColor="@color/black"  
 android:textSize="25sp" />  
  
 <Button  
 android:id="@+id/firstButton"  
 android:layout\_width="fill\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_centerInParent="true"  
 android:layout\_marginLeft="20dp"  
 android:layout\_marginRight="20dp"  
 android:background="@color/green"  
 android:text="First Fragment"  
 android:textColor="@color/white"  
 android:textSize="20sp"  
 android:textStyle="bold" />  
</RelativeLayout>

# First\_fragment.java

package com.example.fragment1;  
  
import android.app.Fragment;  
  
import android.app.Fragment;  
import android.os.Bundle;  
import android.view.LayoutInflater;  
import android.view.View;  
import android.view.ViewGroup;  
import android.widget.Button;  
import android.widget.Toast;  
  
import com.abhiandroid.fragmentexample.R;  
  
public class FirstFragment extends Fragment {  
  
  
 View view;  
 Button firstButton;  
  
 @Override  
 public View onCreateView(LayoutInflater inflater, ViewGroup container,  
 Bundle savedInstanceState) {  
*// Inflate the layout for this fragment* view = inflater.inflate(R.layout.*fragment\_first*, container, false);  
*// get the reference of Button* firstButton = (Button) view.findViewById(R.id.*firstButton*);  
*// perform setOnClickListener on first Button* firstButton.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
*// display a message by using a Toast* Toast.*makeText*(getActivity(), "We are in First Fragment", Toast.*LENGTH\_LONG*).show();  
 }  
 });  
 return view;  
 }  
}

# fragment\_second.xml

<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 >  
  
 *<!--TextView and Button displayed in Second Fragment -->* <TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_centerHorizontal="true"  
 android:layout\_marginTop="100dp"  
 android:text="This is Second Fragment"  
 android:textColor="@color/black"  
 android:textSize="25sp" />  
  
 <Button  
 android:id="@+id/secondButton"  
 android:layout\_width="fill\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_centerInParent="true"  
 android:layout\_marginLeft="20dp"  
 android:layout\_marginRight="20dp"  
 android:background="@color/green"  
 android:text="Second Fragment"  
 android:textColor="@color/white"  
 android:textSize="20sp"  
 android:textStyle="bold" />  
  
</RelativeLayout>

# Secondfragment.java

package com.example.fragment1;  
  
import android.app.Fragment;  
  
import android.app.Fragment;  
import android.os.Bundle;  
import android.view.LayoutInflater;  
import android.view.View;  
import android.view.ViewGroup;  
import android.widget.Button;  
import android.widget.Toast;  
  
import com.abhiandroid.fragmentexample.R;  
  
  
public class SecondFragment extends Fragment {  
  
 View view;  
 Button secondButton;  
  
 @Override  
 public View onCreateView(LayoutInflater inflater, ViewGroup container,  
 Bundle savedInstanceState) {  
*// Inflate the layout for this fragment* view = inflater.inflate(R.layout.*fragment\_second*, container, false);  
*// get the reference of Button* secondButton = (Button) view.findViewById(R.id.*secondButton*);  
*// perform setOnClickListener on second Button* secondButton.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
*// display a message by using a Toast* Toast.*makeText*(getActivity(), "We are in Second Fragment", Toast.*LENGTH\_LONG*).show();  
 }  
 });  
 return view;  
 }  
}

# colors.xml

*<?*xml version="1.0" encoding="utf-8"*?>*<resources>  
 *<!-- color's used in our project -->* <color name="black">#000</color>  
 <color name="green">#0f0</color>  
 <color name="white">#fff</color>  
 <color name="button\_background\_color">#925</color>  
</resources>

# Example 2:

# Lifecycle see logcat for output

# Activitymain.xml

<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".MainActivity">  
 *<!-- Take a fragment in our activity -->* <fragment  
 android:id="@+id/test\_fragment"  
 class="com.example.fragment4.fragment\_test"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 />  
  
</RelativeLayout>

Mainactivity.java

package com.example.fragment4;  
import androidx.appcompat.app.AppCompatActivity;  
import android.os.Bundle;  
public class MainActivity extends AppCompatActivity {  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 }  
}

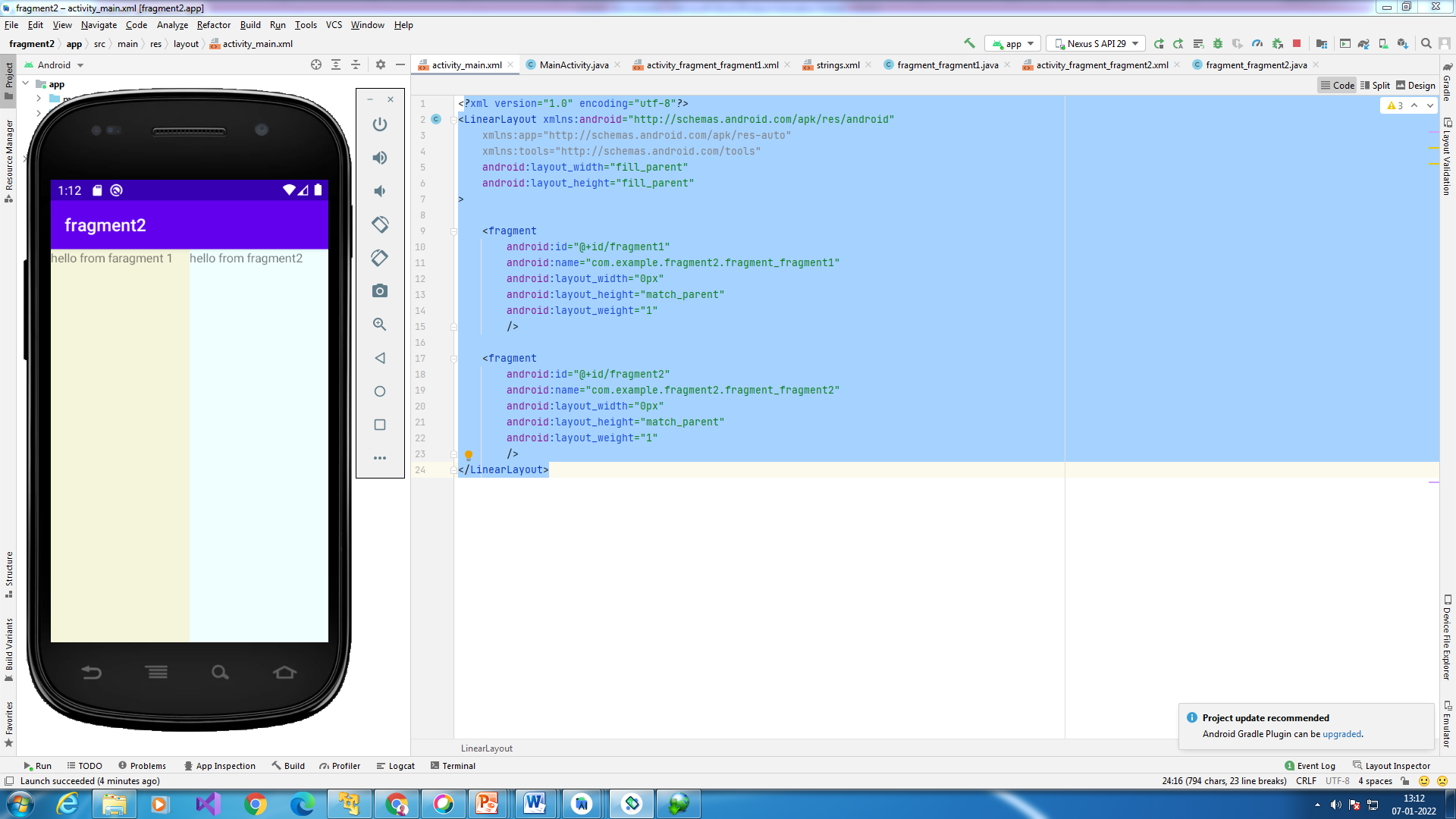
# activity\_fragment\_test.xml

*<?*xml version="1.0" encoding="utf-8"*?>*<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:orientation="vertical">  
  
 *<!-- Create a TextView -->* <TextView  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:gravity="center"  
 android:text="Hello.!!!"  
 android:textColor="#000"  
 android:textSize="25sp" />  
</LinearLayout>

# Activity\_fragment\_test.java

package com.example.fragment4;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.app.Activity;  
import android.app.Fragment;  
import android.os.Bundle;  
import android.util.Log;  
import android.view.LayoutInflater;  
import android.view.View;  
import android.view.ViewGroup;  
  
public class fragment\_test extends Fragment {  
  
 private void printLog(String s) {  
*// display a message in Log File* Log.*d*("LifeCycle:", s);  
 }  
 @Override  
 public void onActivityCreated(Bundle savedInstanceState) {  
 super.onActivityCreated(savedInstanceState);  
 printLog("onActivityCreated Called from program fragment");  
 }  
  
 @Override  
 public View onCreateView(LayoutInflater inflater, ViewGroup container, Bundle savedInstanceState) {  
  
 View v = inflater.inflate(R.layout.*activity\_fragment\_test*, container, false);  
 printLog("onCreateView Called from program fragment");  
  
 return v;  
 }  
 @Override  
 public void onViewCreated(View view, Bundle savedInstanceState) {  
 super.onViewCreated(view, savedInstanceState);  
 printLog("onViewCreated Called from program fragment");  
  
 }  
  
 @Override  
 public void onAttach(Activity activity) {  
 super.onAttach(activity);  
 printLog("onAttach Called from program fragment");  
 }  
 @Override  
 public void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 printLog("onCreate Called from program fragment");  
 }  
  
 @Override  
 public void onDestroy() {  
 super.onDestroy();  
 printLog("onDestroy Called from program fragment");  
 }  
 @Override  
 public void onDestroyView() {  
 super.onDestroyView();  
 printLog("onDestroyView Called from program fragment");  
 }  
  
 @Override  
 public void onDetach() {  
 super.onDetach();  
 printLog("onDetach Called from program fragment");  
 }  
  
 @Override  
 public void onPause() {  
 super.onPause();  
 printLog("onPause Called from program fragment");  
 }  
 @Override  
 public void onResume() {  
 super.onResume();  
 printLog("onResume Called from program fragment");  
 }  
  
 @Override  
 public void onStart() {  
 super.onStart();  
 printLog("onStart Called from program fragment");  
 }  
  
 @Override  
 public void onStop() {  
 super.onStop();  
 printLog("onStop Called from program fragment");  
 }  
  
}

Example 3:



Activity\_main.xml

*?*xml version="1.0" encoding="utf-8"*?>*<LinearLayout 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="fill\_parent"  
 android:layout\_height="fill\_parent"  
>  
  
 <fragment  
 android:id="@+id/fragment1"  
 android:name="com.example.fragment2.fragment\_fragment1"  
 android:layout\_width="0px"  
 android:layout\_height="match\_parent"  
 android:layout\_weight="1"  
 />  
  
 <fragment  
 android:id="@+id/fragment2"  
 android:name="com.example.fragment2.fragment\_fragment2"  
 android:layout\_width="0px"  
 android:layout\_height="match\_parent"  
 android:layout\_weight="1"  
 />  
</LinearLayout>

# Main activitiy.java

package com.example.fragment2;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
public class MainActivity extends AppCompatActivity {  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 }  
}

activity\_fragment1.xml

<FrameLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:background="#F5F5DC"  
 >  
  
 *<!-- TODO: Update blank fragment layout -->* <TextView  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:text="hello from faragment 1" />  
  
</FrameLayout>

Activiyty\_fragment1.java

package com.example.fragment2;  
  
import androidx.appcompat.app.AppCompatActivity;  
import androidx.fragment.app.Fragment;  
  
import android.os.Bundle;  
  
import android.view.LayoutInflater;  
import android.view.View;  
import android.view.ViewGroup;  
  
public class fragment\_fragment1 extends Fragment {  
  
 @Override  
 public void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 }  
  
 @Override  
 public View onCreateView(LayoutInflater inflater, ViewGroup container,  
 Bundle savedInstanceState) {  
 *// Inflate the layout for this fragment* return inflater.inflate(R.layout.*activity\_fragment\_fragment1*, container, false);  
 }  
}

fragment2.xml

<FrameLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:background="#F0FFFF"  
 >  
  
 *<!-- TODO: Update blank fragment layout -->* <TextView  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:text="hello from fragment2" />  
  
</FrameLayout>

Fragment2.java

package com.example.fragment2;  
  
import androidx.appcompat.app.AppCompatActivity;  
import androidx.fragment.app.Fragment;  
  
import android.os.Bundle;  
  
  
  
import android.view.LayoutInflater;  
import android.view.View;  
import android.view.ViewGroup;  
  
public class fragment\_fragment2 extends Fragment {  
  
 @Override  
 public void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 }  
  
 @Override  
 public View onCreateView(LayoutInflater inflater, ViewGroup container,  
 Bundle savedInstanceState) {  
 *// Inflate the layout for this fragment* return inflater.inflate(R.layout.*activity\_fragment\_fragment2*, container, false);  
 }  
  
}

**Canvas Drawing:**

**Circle**

**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:layout\_width="wrap\_content"  
        android:layout\_height="wrap\_content"  
        android:text="Hello World!"  
        app:layout\_constraintBottom\_toBottomOf="parent"  
        app:layout\_constraintLeft\_toLeftOf="parent"  
        app:layout\_constraintRight\_toRightOf="parent"  
        app:layout\_constraintTop\_toTopOf="parent"** />  
  
</**androidx.constraintlayout.widget.ConstraintLayout**>

**MainActivity.java**

**package** com.example.circle;  
  
**import** androidx.appcompat.app.AppCompatActivity;  
  
**import** android.os.Bundle;  
  
**import** android.app.Activity;  
**import** android.os.Bundle;  
  
**public class** MainActivity **extends** Activity {  
  
    @Override  
    **protected void** onCreate(Bundle savedInstanceState) {  
        **super**.onCreate(savedInstanceState);  
        setContentView(**new** customview(**this**));  
    }  
  
}

**CustomView.java**

**package** com.example.circle;  
  
**import** android.content.Context;  
**import** android.graphics.Canvas;  
**import** android.graphics.Color;  
**import** android.graphics.Paint;  
**import** android.view.View;  
  
**public class** customview **extends** View {  
  
    **private** Paint **paint**;  
  
    **public** customview(Context context) {  
        **super**(context);  
  
        *// create the Paint and set its color* **paint** = **new** Paint();  
        **paint**.setColor(Color.***GRAY***);  
    }  
  
    @Override  
    **protected void** onDraw(Canvas canvas) {  
        canvas.drawColor(Color.***BLUE***);  
        canvas.drawCircle(200, 200, 100, **paint**);  
    }  
  
}

**Oval**

**Activity\_main.xml**

<**RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"  
    xmlns:tools="http://schemas.android.com/tools"  
    android:layout\_width="match\_parent"  
    android:layout\_height="match\_parent"** >  
  
    <**TextView  
        android:layout\_width="wrap\_content"  
        android:layout\_height="wrap\_content"** />  
</**RelativeLayout**>

**Mainactivity.java**

**package** com.example.oval;  
**import** android.app.Activity;  
**import** android.os.Bundle;  
  
**public class** MainActivity **extends** Activity {  
    */\*\* Called when the activity is first created. \*/* @Override  
    **public void** onCreate(Bundle savedInstanceState) {  
        **super**.onCreate(savedInstanceState);  
        setContentView(**new** Myview(**this**));  
    }  
}

**myview.java**

**package** com.example.oval;  
**import** android.content.Context;  
**import** android.graphics.Canvas;  
**import** android.graphics.Color;  
**import** android.graphics.Paint;  
**import** android.graphics.RectF;  
**import** android.util.AttributeSet;  
**import** android.view.View;  
  
**public class** Myview **extends** View {  
  
    **public** Myview(Context context) {  
        **super**(context);  
    }  
  
    **public** Myview(Context context, AttributeSet attrs) {  
        **super**(context, attrs);  
    }  
  
    **public** Myview(Context context, AttributeSet attrs, **int** defStyle) {  
        **super**(context, attrs, defStyle);  
    }  
  
    @Override  
    **protected void** onDraw(Canvas canvas) {  
*//* ***TODO Auto-generated method stub* super**.onDraw(canvas);  
  
        Paint paint = **new** Paint();  
        paint.setStyle(Paint.Style.***STROKE***);  
        paint.setColor(Color.***GRAY***);  
     *//   RectF oval1 = new RectF(0, 0, getWidth(), getHeight());  
    //    canvas.drawOval(oval1, paint);* paint.setStyle(Paint.Style.***FILL***);  
   *//     paint.setColor(Color.RED);  
  //      RectF oval2 = new RectF(50, 50, 150, 150);  
//        canvas.drawOval(oval2, paint);* paint.setColor(Color.***BLUE***);  
        RectF oval3 = **new** RectF(250, 50, 350, 400);  
        canvas.drawOval(oval3, paint);  
    }  
}

# Triangle

# Activity\_main.xml

*<?***xml version="1.0" encoding="utf-8"***?>*<**LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
    xmlns:tools="http://schemas.android.com/tools"  
    android:layout\_width="match\_parent"  
    android:layout\_height="match\_parent"  
    android:orientation="vertical"  
    android:gravity="center"  
    android:layout\_marginTop="30dp"  
    tools:context=".MainActivity"**>  
    <**ImageView  
        android:layout\_width="100dp"  
        android:layout\_height="100dp"  
        android:background="@drawable/background"**/>  
</**LinearLayout**>

# Background.xml

<**vector xmlns:android="http://schemas.android.com/apk/res/android"  
    android:height="100dp"  
    android:width="100dp"  
    android:viewportWidth="24"  
    android:viewportHeight="24"  
    android:layout\_height="match\_parent"**>  
    <**path android:fillColor="#000" android:pathData="M1,21H23L12,2"** />  
</**vector**>

# Mainactivity.java

**package** com.example.trianle;  
  
**import** androidx.appcompat.app.AppCompatActivity;  
  
**import** android.os.Bundle;  
  
**public class** MainActivity **extends** AppCompatActivity {  
  
    @Override  
    **protected void** onCreate(Bundle savedInstanceState) {  
        **super**.onCreate(savedInstanceState);  
        setContentView(R.layout.***activity\_main***);  
    }  
}

**Rectangle**

**Activity\_main.xml**

*<?***xml version="1.0" encoding="utf-8"***?>*<**LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
    android:layout\_width="fill\_parent"  
    android:layout\_height="fill\_parent"  
    android:orientation="vertical"** >  
  
    <**TextView  
        android:layout\_width="fill\_parent"  
        android:layout\_height="wrap\_content"  
        android:text="Text"** />  
  
</**LinearLayout**>

**Mainactivity.java**

**package** com.example.rectangle;  
  
**import** android.app.Activity;  
**import** android.os.Bundle;  
  
**public class** MainActivity **extends** Activity {  
  
    @Override  
    **protected void** onCreate(Bundle savedInstanceState) {  
        **super**.onCreate(savedInstanceState);  
        setContentView(**new** Secondactivity(**this**));  
    }  
  
}

**secondactivity.java**

**import** android.content.Context;  
**import** android.graphics.Canvas;  
**import** android.graphics.Color;  
**import** android.graphics.Paint;  
**import** android.graphics.Rect;  
**import** android.view.View;  
  
**public class** Secondactivity **extends** View {  
  
    **private** Rect **rectangle**;  
    **private** Paint **paint**;  
  
    **public** Secondactivity(Context context) {  
        **super**(context);  
        **int** x = 150;  
        **int** y = 150;  
        **int** sideLength = 250;  
        **int** sl=350;  
  
        *// create a rectangle that we'll draw later* **rectangle** = **new** Rect(x, y, sideLength, sl);  
  
        *// create the Paint and set its color* **paint** = **new** Paint();  
        **paint**.setColor(Color.***RED***);  
    }  
  
    @Override  
    **protected void** onDraw(Canvas canvas) {  
        canvas.drawColor(Color.***GRAY***);  
        canvas.drawRect(**rectangle**, **paint**);  
    }  
  
}

**Line**

**Activity\_main.xml**

*<?***xml version="1.0" encoding="utf-8"***?>*<**RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"  
    xmlns:tools="http://schemas.android.com/tools"  
    android:layout\_width="match\_parent"  
    android:layout\_height="match\_parent"  
    android:id="@+id/relativeLayout"  
    tools:context=".MainActivity"**>  
    <**ImageView  
        android:id="@+id/imageView"  
        android:layout\_width="wrap\_content"  
        android:layout\_height="wrap\_content"  
        android:layout\_centerInParent="true"**/>  
    <**Button  
        android:id="@+id/button"  
        android:layout\_width="wrap\_content"  
        android:layout\_height="wrap\_content"  
        android:text="Draw Line"  
        android:layout\_alignParentBottom="true"  
        android:layout\_centerHorizontal="true"  
        android:layout\_marginBottom="70dp"**/>  
</**RelativeLayout**>

**Mainactivity.java**

**package** com.example.linedrawing;  
**import** androidx.appcompat.app.AppCompatActivity;  
**import** android.os.Bundle;  
**import** android.content.Context;  
**import** android.content.res.Resources;  
**import** android.graphics.Color;  
**import** android.graphics.Paint;  
**import** android.view.View;  
**import** android.widget.Button;  
**import** android.widget.ImageView;  
**import** android.widget.RelativeLayout;  
**import** android.graphics.Canvas;  
**import** android.graphics.Bitmap;  
**public class** MainActivity **extends** AppCompatActivity {  
    Context **context**;  
    Resources **resources**;  
    RelativeLayout **relativeLayout**;  
    Button **button**;  
    ImageView **imageView**;  
    @Override  
    **protected void** onCreate(Bundle savedInstanceState) {  
        **super**.onCreate(savedInstanceState);  
        setContentView(R.layout.***activity\_main***);  
        **context** = getApplicationContext();  
        **resources** = getResources();  
        **relativeLayout** = findViewById(R.id.***relativeLayout***);  
        **button** = findViewById(R.id.***button***);  
        **imageView** = findViewById(R.id.***imageView***);  
        **button**.setOnClickListener(**new** View.OnClickListener() {  
            @Override  
            **public void** onClick(View view) {  
                Bitmap bitmap = Bitmap.*createBitmap*(10, 200, Bitmap.Config.***ARGB\_8888***);  
                Canvas canvas = **new** Canvas(bitmap);  
                canvas.drawColor(Color.***BLUE***);  
                Paint paint = **new** Paint();  
                paint.setColor(Color.***GREEN***);  
                paint.setStyle(Paint.Style.***STROKE***);  
                paint.setStrokeWidth(10);  
                paint.setAntiAlias(**true**);  
                **int** offset = 50;  
                canvas.drawLine(  
                        offset, canvas.getHeight() / 2, canvas.getWidth() - offset, canvas.getHeight() / 2, paint);  
                **imageView**.setImageBitmap(bitmap);  
            }  
        });  
    }  
}

**Shapes using bitmapfactory methods**

# 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:layout\_width="wrap\_content"  
        android:layout\_height="wrap\_content"  
        android:text="Hello World!"  
        app:layout\_constraintBottom\_toBottomOf="parent"  
        app:layout\_constraintLeft\_toLeftOf="parent"  
        app:layout\_constraintRight\_toRightOf="parent"  
        app:layout\_constraintTop\_toTopOf="parent"** />  
  
</**androidx.constraintlayout.widget.ConstraintLayout**>

**MainActivity.java**

**package** com.example.bitmapfactory;  
  
**import** androidx.appcompat.app.AppCompatActivity;  
**import** android.os.Bundle;  
**import** android.graphics.Bitmap;  
**import** android.graphics.BitmapFactory;  
**import** android.util.Base64;  
**import** android.util.DisplayMetrics;  
**import** android.view.ViewGroup;  
**import** android.widget.ImageView;  
**import** android.widget.LinearLayout;  
  
**public class** MainActivity **extends** AppCompatActivity {  
  
  
    ImageView **ivOne**, **ivTwo**, **ivThree**;  
    BitmapFactory.Options **bmfOptions**;  
    Bitmap **bm**;  
  
  
    @Override  
    **protected void** onCreate(Bundle savedInstanceState) {  
        **super**.onCreate(savedInstanceState);  
        */\*  
            create a linear layout with vertical orientation  
         \*/* LinearLayout ll = **new** LinearLayout(**this**);  
        ll.setOrientation(LinearLayout.***VERTICAL***);  
  
        */\*create three imageViews\*/* **ivOne** = **new** ImageView(**this**);  
        **ivTwo** = **new** ImageView(**this**);  
        **ivThree** = **new** ImageView(**this**);  
  
        */\*  
            set scale type of the imageViews to center  
               No scaling is performed on the bitmap  
               bitmap is just centered  
         \*/* **ivOne**.setScaleType(ImageView.ScaleType.***CENTER***);  
        **ivTwo**.setScaleType(ImageView.ScaleType.***CENTER***);  
        **ivThree**.setScaleType(ImageView.ScaleType.***CENTER***);  
  
  
  
  
        */\*Set the layoutparam of the imageViews  
         \*   width : match parent  
         \*   height: wrap content  
         \*   weight : 1  
         \*/* ll.addView(**ivOne**, **new** LinearLayout.LayoutParams(ViewGroup.LayoutParams.***MATCH\_PARENT***, ViewGroup.LayoutParams.***MATCH\_PARENT***, 1));  
        ll.addView(**ivTwo**, **new** LinearLayout.LayoutParams(ViewGroup.LayoutParams.***MATCH\_PARENT***, ViewGroup.LayoutParams.***MATCH\_PARENT***, 1));  
        ll.addView(**ivThree**, **new** LinearLayout.LayoutParams(ViewGroup.LayoutParams.***MATCH\_PARENT***, ViewGroup.LayoutParams.***MATCH\_PARENT***, 1));  
  
  
        *//decode a base 64 encoded image into bytes  
        // the original image is 500px by 500px* **byte**[] bytes = Base64.*decode*(**""**, Base64.***DEFAULT***);  
  
        *//create a bitmap factory options* **bmfOptions** = **new** BitmapFactory.Options();  
        *// decode a bitmap using decodeByteArray default Options* Bitmap bm = BitmapFactory.*decodeByteArray*(bytes, 0, bytes.**length**, **bmfOptions**);  
        *// set the decoded bitmap to the ivOne* **ivOne**.setImageBitmap(bm);  
  
        *//create a bitmap factory options* **bmfOptions** = **new** BitmapFactory.Options();  
        *// sample the image down by a factor of 4* **bmfOptions**.**inSampleSize** = 4;  
        *//set the decoded Bitmap to be mutable* **bmfOptions**.**inMutable** = **true**;  
        bm = BitmapFactory.*decodeByteArray*(bytes, 0, bytes.**length**, **bmfOptions**);  
        *// set the decoded bitmap to the ivTwo* **ivTwo**.setImageBitmap(bm);  
  
  
        *//create a bitmap factory options* **bmfOptions** = **new** BitmapFactory.Options();  
        *// set the original image density* **bmfOptions**.**inDensity** = DisplayMetrics.***DENSITY\_MEDIUM***;  
        **bmfOptions**.**inScaled** = **true**;  
        *//set the decoded Bitmap to be mutable* **bmfOptions**.**inMutable** = **true**;  
        bm = BitmapFactory.*decodeByteArray*(bytes, 0, bytes.**length**, **bmfOptions**);  
        *// set the decoded bitmap to the ivThree* **ivThree**.setImageBitmap(bm);  
  
  
  
  
  
        */\*  
            set the activity content view  
            to ll : linearlayout  
            it will take the full width and height by default  
        \*/* setContentView(ll);  
  
    }  
  
  
}

**Animations**

**Main\_activity.xml**

<**RelativeLayout  
    xmlns:android="http://schemas.android.com/apk/res/android"  
    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="BMSCE"  
        android:id="@+id/textView"  
        android:textSize="35dp"  
        android:layout\_alignParentTop="true"  
        android:layout\_centerHorizontal="true"** />  
  
    <**TextView  
        android:layout\_width="wrap\_content"  
        android:layout\_height="wrap\_content"  
        android:text="Animations"  
        android:id="@+id/textView2"  
        android:textColor="#ff3eff0f"  
        android:textSize="35dp"  
        android:layout\_below="@+id/textView"  
        android:layout\_centerHorizontal="true"** />  
  
    <**ImageView  
        android:layout\_width="wrap\_content"  
        android:layout\_height="wrap\_content"  
        android:id="@+id/imageView"  
        android:src="@drawable/ic\_launcher\_background"  
        android:layout\_below="@+id/textView2"  
        android:layout\_alignRight="@+id/textView2"  
        android:layout\_alignEnd="@+id/textView2"  
        android:layout\_alignLeft="@+id/textView"  
        android:layout\_alignStart="@+id/textView"**/>  
  
    <**Button  
        android:layout\_width="wrap\_content"  
        android:layout\_height="wrap\_content"  
        android:text="zoom"  
        android:id="@+id/button"  
        android:layout\_below="@+id/imageView"  
        android:layout\_alignParentLeft="true"  
        android:layout\_alignParentStart="true"  
        android:layout\_marginTop="40dp"  
        android:onClick="clockwise"**/>  
  
    <**Button  
        android:layout\_width="wrap\_content"  
        android:layout\_height="wrap\_content"  
        android:text="clockwise"  
        android:id="@+id/button2"  
        android:layout\_alignTop="@+id/button"  
        android:layout\_centerHorizontal="true"  
        android:onClick="zoom"**/>  
  
    <**Button  
        android:layout\_width="wrap\_content"  
        android:layout\_height="wrap\_content"  
        android:text="fade"  
        android:id="@+id/button3"  
        android:layout\_alignTop="@+id/button2"  
        android:layout\_alignParentRight="true"  
        android:layout\_alignParentEnd="true"  
        android:onClick="fade"**/>  
  
    <**Button  
        android:layout\_width="wrap\_content"  
        android:layout\_height="wrap\_content"  
        android:text="blink"  
        android:onClick="blink"  
        android:id="@+id/button4"  
        android:layout\_below="@+id/button"  
        android:layout\_alignParentLeft="true"  
        android:layout\_alignParentStart="true"** />  
  
    <**Button  
        android:layout\_width="wrap\_content"  
        android:layout\_height="wrap\_content"  
        android:text="move"  
        android:onClick="move"  
        android:id="@+id/button5"  
        android:layout\_below="@+id/button2"  
        android:layout\_alignRight="@+id/button2"  
        android:layout\_alignEnd="@+id/button2"  
        android:layout\_alignLeft="@+id/button2"  
        android:layout\_alignStart="@+id/button2"** />  
  
    <**Button  
        android:layout\_width="wrap\_content"  
        android:layout\_height="wrap\_content"  
        android:text="slide"  
        android:onClick="slide"  
        android:id="@+id/button6"  
        android:layout\_below="@+id/button3"  
        android:layout\_toRightOf="@+id/textView"  
        android:layout\_toEndOf="@+id/textView"** />  
  
</**RelativeLayout**>

# Mainactivity.java

**package** com.example.animation2;  
  
**import** androidx.appcompat.app.AppCompatActivity;  
  
**import** android.os.Bundle;  
  
**import** android.app.Activity;  
**import** android.os.Bundle;  
**import** android.view.View;  
**import** android.view.animation.Animation;  
**import** android.view.animation.AnimationUtils;  
**import** android.widget.ImageView;  
**import** android.widget.Toast;  
  
**public class** MainActivity **extends** Activity {  
    @Override  
    **protected void** onCreate(Bundle savedInstanceState) {  
        **super**.onCreate(savedInstanceState);  
        setContentView(R.layout.***activity\_main***);  
    }  
  
    **public void** clockwise(View view){  
        ImageView image = (ImageView)findViewById(R.id.***imageView***);  
        Animation animation = AnimationUtils.*loadAnimation*(getApplicationContext(),  
                R.anim.***myanimation***);  
        image.startAnimation(animation);  
    }  
  
    **public void** zoom(View view){  
        ImageView image = (ImageView)findViewById(R.id.***imageView***);  
        Animation animation1 = AnimationUtils.*loadAnimation*(getApplicationContext(),  
                R.anim.***clockwise***);  
        image.startAnimation(animation1);  
    }  
  
    **public void** fade(View view){  
        ImageView image = (ImageView)findViewById(R.id.***imageView***);  
        Animation animation1 =  
                AnimationUtils.*loadAnimation*(getApplicationContext(),  
                        R.anim.***fade***);  
        image.startAnimation(animation1);  
    }  
  
    **public void** blink(View view){  
        ImageView image = (ImageView)findViewById(R.id.***imageView***);  
        Animation animation1 =  
                AnimationUtils.*loadAnimation*(getApplicationContext(),  
                        R.anim.***blink***);  
        image.startAnimation(animation1);  
    }  
  
    **public void** move(View view){  
        ImageView image = (ImageView)findViewById(R.id.***imageView***);  
        Animation animation1 =  
                AnimationUtils.*loadAnimation*(getApplicationContext(), R.anim.***move***);  
        image.startAnimation(animation1);  
    }  
  
    **public void** slide(View view){  
        ImageView image = (ImageView)findViewById(R.id.***imageView***);  
        Animation animation1 =  
                AnimationUtils.*loadAnimation*(getApplicationContext(), R.anim.***slide***);  
        image.startAnimation(animation1);  
    }  
}

# /res/anim/myanimation.xml

*<?***xml version="1.0" encoding="utf-8"***?>*<**set xmlns:android="http://schemas.android.com/apk/res/android"**>  
  
    <**scale xmlns:android="http://schemas.android.com/apk/res/android"  
        android:fromXScale="0.5"  
        android:toXScale="3.0"  
        android:fromYScale="0.5"  
        android:toYScale="3.0"  
        android:duration="5000"  
        android:pivotX="50%"  
        android:pivotY="50%"** >  
    </**scale**>  
  
    <**scale xmlns:android="http://schemas.android.com/apk/res/android"  
        android:startOffset="5000"  
        android:fromXScale="3.0"  
        android:toXScale="0.5"  
        android:fromYScale="3.0"  
        android:toYScale="0.5"  
        android:duration="5000"  
        android:pivotX="50%"  
        android:pivotY="50%"** >  
    </**scale**>  
  
</**set**>

# /res/anim/clockwise.xml

*<?***xml version="1.0" encoding="utf-8"***?>*<**set xmlns:android="http://schemas.android.com/apk/res/android"**>  
  
    <**rotate xmlns:android="http://schemas.android.com/apk/res/android"  
        android:fromDegrees="0"  
        android:toDegrees="360"  
        android:pivotX="50%"  
        android:pivotY="50%"  
        android:duration="5000"** >  
    </**rotate**>  
  
    <**rotate xmlns:android="http://schemas.android.com/apk/res/android"  
        android:startOffset="5000"  
        android:fromDegrees="360"  
        android:toDegrees="0"  
        android:pivotX="50%"  
        android:pivotY="50%"  
        android:duration="5000"** >  
    </**rotate**>  
  
</**set**>

# /res/anim/fade .xml

*<?***xml version="1.0" encoding="utf-8"***?>*<**set xmlns:android="http://schemas.android.com/apk/res/android"  
    android:interpolator="@android:anim/accelerate\_interpolator"** >  
  
    <**alpha  
        android:fromAlpha="0"  
        android:toAlpha="1"  
        android:duration="2000"** >  
    </**alpha**>  
  
    <**alpha  
        android:startOffset="2000"  
        android:fromAlpha="1"  
        android:toAlpha="0"  
        android:duration="2000"** >  
    </**alpha**>  
  
</**set**>

# /res/anim/blink .xml

*<?***xml version="1.0" encoding="utf-8"***?>*<**set xmlns:android="http://schemas.android.com/apk/res/android"**>  
    <**alpha android:fromAlpha="0.0"  
        android:toAlpha="1.0"  
        android:interpolator="@android:anim/accelerate\_interpolator"  
        android:duration="600"  
        android:repeatMode="reverse"  
        android:repeatCount="infinite"**/>  
</**set**>

# /res/anim/move .xml

*<?***xml version="1.0" encoding="utf-8"***?>*<**set  
    xmlns:android="http://schemas.android.com/apk/res/android"  
    android:interpolator="@android:anim/linear\_interpolator"  
    android:fillAfter="true"**>  
  
    <**translate  
        android:fromXDelta="0%p"  
        android:toXDelta="75%p"  
        android:duration="800"** />  
</**set**>

# /res/anim/slide .xml

*<?***xml version="1.0" encoding="utf-8"***?>*<**set xmlns:android="http://schemas.android.com/apk/res/android"  
    android:fillAfter="true"** >  
  
    <**scale  
        android:duration="500"  
        android:fromXScale="1.0"  
        android:fromYScale="1.0"  
        android:interpolator="@android:anim/linear\_interpolator"  
        android:toXScale="1.0"  
        android:toYScale="0.0"** />  
</**set**>

# Services

*<?*xml version="1.0" encoding="utf-8"*?>*<androidx.constraintlayout.widget.ConstraintLayout  
 xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:background="#168BC34A"  
 tools:context=".MainActivity">  
  
 <LinearLayout  
 android:id="@+id/linearLayout"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_centerVertical="true"  
 android:orientation="vertical"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="1.0"  
 tools:ignore="MissingConstraints">  
  
 <TextView  
 android:id="@+id/textView1"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginBottom="170dp"  
 android:text="@string/heading"  
 android:textAlignment="center"  
 android:textAppearance="@style/TextAppearance.AppCompat.Large"  
 android:textColor="@android:color/holo\_green\_dark"  
 android:textSize="36sp"  
 android:textStyle="bold"  
 android:gravity="center\_horizontal" />  
  
 <Button  
 android:id="@+id/startButton"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:layout\_marginStart="20dp"  
 android:layout\_marginTop="10dp"  
 android:layout\_marginEnd="20dp"  
 android:layout\_marginBottom="20dp"  
 android:background="#4CAF50"  
 android:text="@string/startButtonText"  
 android:textAlignment="center"  
 android:textAppearance="@style/TextAppearance.AppCompat.Display1"  
 android:textColor="#FFFFFF"  
 android:textStyle="bold"  
 android:gravity="center\_horizontal" />  
  
 <Button  
 android:id="@+id/stopButton"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:layout\_marginStart="20dp"  
 android:layout\_marginTop="10dp"  
 android:layout\_marginEnd="20dp"  
 android:layout\_marginBottom="20dp"  
 android:background="#4CAF50"  
 android:text="@string/stopButtonText"  
 android:textAlignment="center"  
 android:textAppearance="@style/TextAppearance.AppCompat.Display1"  
 android:textColor="#FFFFFF"  
 android:textStyle="bold"  
 android:gravity="center\_horizontal" />  
  
 </LinearLayout>  
  
</androidx.constraintlayout.widget.ConstraintLayout>

Newservice.java

package com.example.service;  
  
import android.app.Service;  
import android.content.Intent;  
import android.media.MediaPlayer;  
import android.os.IBinder;  
import android.provider.Settings;  
import androidx.annotation.Nullable;  
  
public class newservice extends Service {  
  
 *// declaring object of MediaPlayer* private MediaPlayer player;  
  
 @Override  
  
 *// execution of service will start  
 // on calling this method* public int onStartCommand(Intent intent, int flags, int startId) {  
  
 *// creating a media player which  
 // will play the audio of Default  
 // ringtone in android device* player = MediaPlayer.*create*( this, Settings.System.*DEFAULT\_NOTIFICATION\_URI* );  
  
 *// providing the boolean  
 // value as true to play  
 // the audio on loop* player.setLooping( true );  
  
 *// starting the process* player.start();  
  
 *// returns the status  
 // of the program* return *START\_STICKY*;  
 }  
  
 @Override  
  
 *// execution of the service will  
 // stop on calling this method* public void onDestroy() {  
 super.onDestroy();  
  
 *// stopping the process* player.stop();  
 }  
  
 @Nullable  
 @Override  
 public IBinder onBind(Intent intent) {  
 return null;  
 }  
}

# mainactivity.java

package com.example.service;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
  
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 implements View.OnClickListener {  
  
 *// declaring objects of Button class* private Button start, stop;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate( savedInstanceState );  
 setContentView( R.layout.*activity\_main* );  
  
 *// assigning ID of startButton  
 // to the object start* start = (Button) findViewById( R.id.*startButton* );  
  
 *// assigning ID of stopButton  
 // to the object stop* stop = (Button) findViewById( R.id.*stopButton* );  
  
 *// declaring listeners for the  
 // buttons to make them respond  
 // correctly according to the process* start.setOnClickListener( this );  
 stop.setOnClickListener( this );  
 }  
  
 public void onClick(View view) {  
  
 *// process to be performed  
 // if start button is clicked* if(view == start){  
  
 *// starting the service* startService(new Intent( this, newservice.class ) );  
 }  
  
 *// process to be performed  
 // if stop button is clicked* else if (view == stop){  
  
 *// stopping the service* stopService(new Intent( this, newservice.class ) );  
  
 }  
 }  
}

# popup menu

# 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"  
>  
<Button  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:onClick="showPopup"  
 android:text="show popup"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintLeft\_toLeftOf="parent"  
 app:layout\_constraintRight\_toRightOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent" />  
</androidx.constraintlayout.widget.ConstraintLayout>

## Create afolder menu in res

## /res/menu/popupmenu.xml

*<?*xml version="1.0" encoding="utf-8"*?>* <menu xmlns:android="http://schemas.android.com/apk/res/android">  
 <item  
 android:id="@+id/item1"  
 android:title="Item 1" />  
 <item  
 android:id="@+id/item2"  
 android:title="Item 2" />  
 <item  
 android:id="@+id/item3"  
 android:title="Item 3" />  
 <item  
 android:id="@+id/item4"  
 android:title="Item 4" />  
  
 </menu>

# Mainactivity.java

package com.example.popupmenu;  
import androidx.appcompat.app.AppCompatActivity;  
import android.os.Bundle;  
import android.view.MenuItem;  
import android.view.View;  
import android.widget.PopupMenu;  
import android.widget.Toast;  
public class MainActivity extends AppCompatActivity implements PopupMenu.OnMenuItemClickListener{  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 }  
 public void showPopup(View v) {  
 PopupMenu popup = new PopupMenu(this, v);  
 popup.setOnMenuItemClickListener(this);  
 popup.inflate(R.menu.*popup\_menu*);  
 popup.show();  
 }  
 @Override  
 public boolean onMenuItemClick(MenuItem item) {  
 switch (item.getItemId()) {  
 case R.id.*item1*:  
 Toast.*makeText*(this, "Item 1 clicked", Toast.*LENGTH\_SHORT*).show();  
 return true;  
 case R.id.*item2*:  
 Toast.*makeText*(this, "Item 2 clicked", Toast.*LENGTH\_SHORT*).show();  
 return true;  
 case R.id.*item3*:  
 Toast.*makeText*(this, "Item 3 clicked", Toast.*LENGTH\_SHORT*).show();  
 return true;  
 case R.id.*item4*:  
 Toast.*makeText*(this, "Item 4 clicked", Toast.*LENGTH\_SHORT*).show();  
 return true;  
 default:  
 return false;  
 }  
 }  
}

# Contextmenu

# Activitivy\_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" > <ListView android:layout\_width="368dp" android:layout\_height="495dp" android:id="@+id/listView" android:layout\_marginEnd="8dp" android:layout\_marginStart="8dp" android:layout\_marginTop="8dp" app:layout\_constraintEnd\_toEndOf="parent" app:layout\_constraintHorizontal\_bias="0.0" app:layout\_constraintStart\_toStartOf="parent" app:layout\_constraintTop\_toTopOf="parent" /> </androidx.constraintlayout.widget.ConstraintLayout>

# Main Activity.java

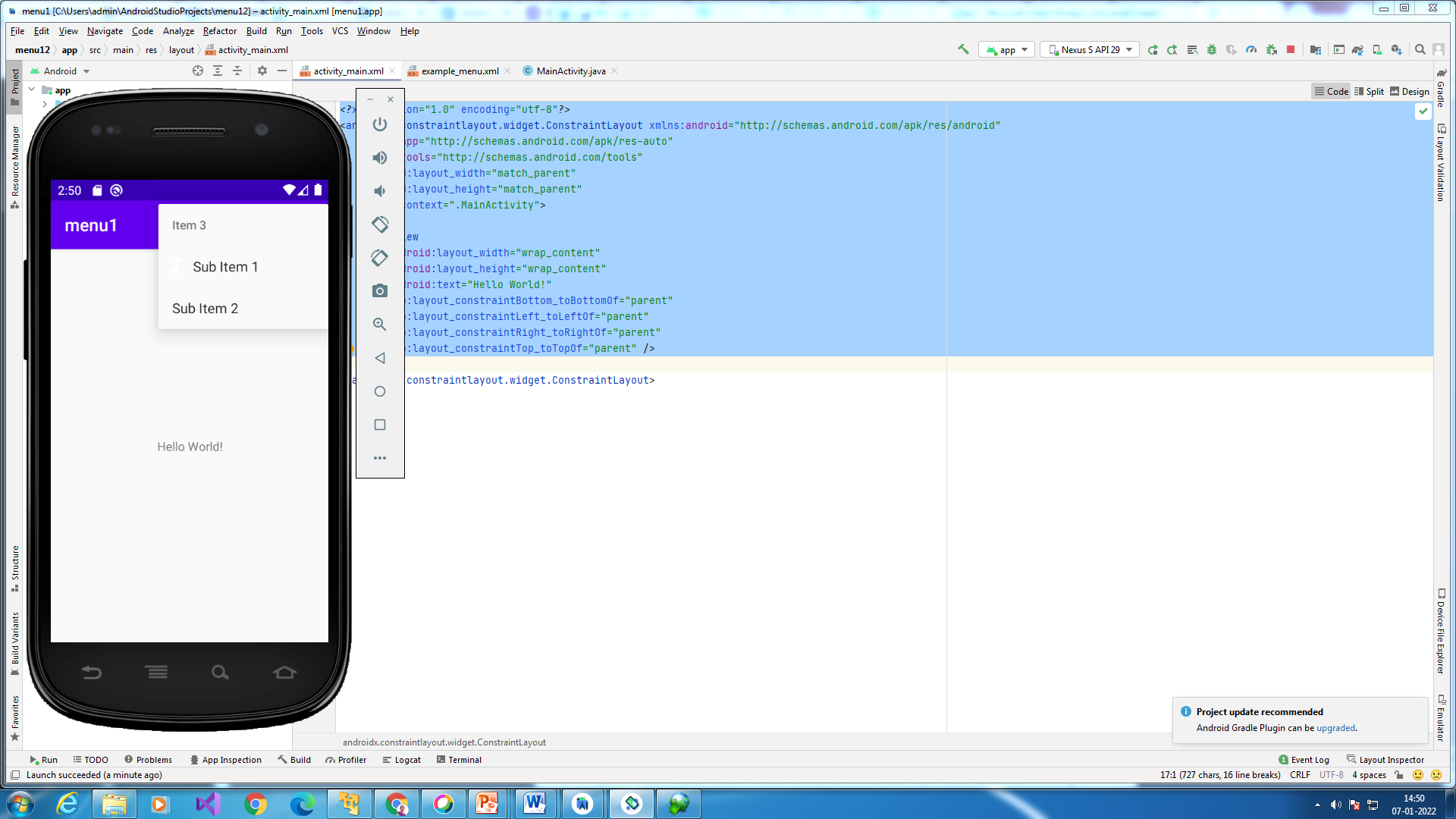
package com.example.contextmenu;  
import android.os.Bundle;  
import android.view.ContextMenu;  
import android.view.MenuInflater;  
import android.view.MenuItem;  
import android.view.View;  
import android.widget.ArrayAdapter;  
import android.widget.ListView;  
import android.widget.Toast;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
public class MainActivity extends AppCompatActivity {  
 ListView listView;  
 String contacts[]={"Ajay","Sachin","Sumit","Tarun","Yogesh"};  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 listView=(ListView)findViewById(R.id.*listView*);  
 ArrayAdapter<String> adapter=new ArrayAdapter<String>(this,android.R.layout.*simple\_list\_item\_1*,contacts);  
 listView.setAdapter(adapter);  
 *// Register the ListView for Context menu* registerForContextMenu(listView);  
 }  
 @Override  
 public void onCreateContextMenu(ContextMenu menu, View v, ContextMenu.ContextMenuInfo menuInfo)  
 {  
 super.onCreateContextMenu(menu, v, menuInfo);  
 MenuInflater inflater = getMenuInflater();  
 inflater.inflate(R.menu.*example\_menu*, menu);  
 menu.setHeaderTitle("Select The Action");  
 }  
 @Override  
 public boolean onContextItemSelected(MenuItem item){  
 if(item.getItemId()==R.id.*call*){  
 Toast.*makeText*(getApplicationContext(),"calling code",Toast.*LENGTH\_LONG*).show();  
 }  
 else if(item.getItemId()==R.id.*sms*){  
 Toast.*makeText*(getApplicationContext(),"sending sms code",Toast.*LENGTH\_LONG*).show();  
 }else{  
 return false;  
 }  
 return true;  
 }  
}

# /res/menu

# example\_menu.xml

*<?*xml version="1.0" encoding="utf-8"*?>*<menu xmlns:android="http://schemas.android.com/apk/res/android">  
 <item android:id="@+id/call"  
 android:title="Call" />  
 <item android:id="@+id/sms"  
 android:title="SMS" />  
</menu>

Menu



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:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Hello World!"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintLeft\_toLeftOf="parent"  
 app:layout\_constraintRight\_toRightOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent" />  
  
</androidx.constraintlayout.widget.ConstraintLayout>

# Res/menu/example\_menu.xml

*<?*xml version="1.0" encoding="utf-8"*?>*<menu xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto">  
 <item  
 android:id="@+id/item1"  
 android:icon="@drawable/ic\_baseline\_attachment\_24"  
 android:title="Item 1"  
 app:showAsAction="ifRoom" />  
 <item  
 android:id="@+id/item2"  
 android:title="Item 2"  
 app:showAsAction="never" />  
 <item  
 android:id="@+id/item3"  
 android:title="Item 3"  
 android:icon="@drawable/audio"  
 app:showAsAction="ifRoom"  
 >  
 <menu>  
 <item  
 android:id="@+id/subitem1"  
 android:icon="@drawable/audio"  
 app:showAsAction="ifRoom"  
 android:title="Sub Item 1" />  
 <item  
 android:id="@+id/subitem2"  
 android:title="Sub Item 2" />  
 </menu>  
 </item>  
</menu>

# Mainactivity.java

package com.example.menu1;  
import androidx.appcompat.app.AppCompatActivity;  
import android.os.Bundle;  
import android.view.Menu;  
import android.view.MenuInflater;  
import android.view.MenuItem;  
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 onCreateOptionsMenu(Menu menu) {  
 MenuInflater inflater = getMenuInflater();  
 inflater.inflate(R.menu.*example\_menu*, menu);  
 return true;  
 }  
 @Override  
 public boolean onOptionsItemSelected(MenuItem item) {  
 switch (item.getItemId()) {  
 case R.id.*item1*:  
 Toast.*makeText*(this, "Item 1 selected", Toast.*LENGTH\_SHORT*).show();  
 return true;  
 case R.id.*item2*:  
 Toast.*makeText*(this, "Item 2 selected", Toast.*LENGTH\_SHORT*).show();  
 return true;  
 case R.id.*item3*:  
 Toast.*makeText*(this, "Item 3 selected", Toast.*LENGTH\_SHORT*).show();  
 return true;  
 case R.id.*subitem1*:  
 Toast.*makeText*(this, "Sub Item 1 selected", Toast.*LENGTH\_SHORT*).show();  
 return true;  
 case R.id.*subitem2*:  
 Toast.*makeText*(this, "Sub Item 2 selected", Toast.*LENGTH\_SHORT*).show();  
 return true;  
 default:  
 return super.onOptionsItemSelected(item);  
 }  
 }  
}