8.

Xml code:

*<?*xml version="1.0" encoding="utf-8"*?>*<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".MainActivity">  
 <TextView  
 android:id="@+id/textView1"  
 android:layout\_width="332dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_alignParentStart="true"  
 android:layout\_alignParentLeft="true"  
 android:layout\_alignParentEnd="true"  
 android:layout\_alignParentRight="true"  
 android:layout\_alignParentBottom="true"  
 android:layout\_marginStart="41dp"  
 android:layout\_marginLeft="41dp"  
 android:layout\_marginEnd="38dp"  
 android:layout\_marginRight="38dp"  
 android:layout\_marginBottom="516dp"  
 android:text="Counter Application"  
 android:textSize="36sp"  
 android:textStyle="bold" />  
 <Button  
 android:id="@+id/button1"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_alignParentEnd="true"  
 android:layout\_alignParentRight="true"  
 android:layout\_alignParentBottom="true"  
 android:layout\_marginEnd="236dp"  
 android:layout\_marginRight="236dp"  
 android:layout\_marginBottom="89dp"  
 android:text="Start"  
 android:textSize="30sp"  
 app:backgroundTint="#4CAF50" />  
 <Button  
 android:id="@+id/button2"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_alignParentEnd="true"  
 android:layout\_alignParentRight="true"  
 android:layout\_alignParentBottom="true"  
 android:layout\_marginEnd="55dp"  
 android:layout\_marginRight="55dp"  
 android:layout\_marginBottom="92dp"  
 android:text="STOP"  
 android:textSize="30sp"  
 app:backgroundTint="#EC5449" />  
 <TextView  
 android:id="@+id/textView2"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_alignParentEnd="true"  
 android:layout\_alignParentRight="true"  
 android:layout\_alignParentBottom="true"  
 android:layout\_marginEnd="165dp"  
 android:layout\_marginRight="165dp"  
 android:layout\_marginBottom="434dp"  
 android:text="counter value"  
 android:textSize="18sp"  
 android:textStyle="bold" />  
</RelativeLayout>

Java code:

package com.example.program5;  
  
import androidx.appcompat.app.AppCompatActivity;  
import android.os.Bundle;  
import android.os.Handler;  
import android.view.View;  
import android.widget.Button;  
import android.widget.TextView;  
public class MainActivity extends AppCompatActivity {  
 TextView txtCounter;  
 Button btn\_start,btn\_stop;  
 int count=0;  
 Handler customHandler=new Handler();  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 txtCounter= (TextView)findViewById(R.id.*textView2*);  
 btn\_start =(Button)findViewById(R.id.*button1*);  
 btn\_stop=(Button)findViewById(R.id.*button2*);  
 btn\_start.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 customHandler.postDelayed(updateTimerThread,0);  
 }  
 });  
 btn\_stop.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 customHandler.removeCallbacks(updateTimerThread);  
 }  
 });  
 }  
 private final Runnable updateTimerThread =new Runnable() {  
 @Override  
 public void run() {  
 txtCounter.setText(""+count);  
 customHandler.postDelayed(this,1000);  
 count++;  
 }  
 };  
}