

Experiment-5:

Write a program to create an activity with two buttons START and STOP. On Pressing of the START button, the activity must start the counter by displaying the numbers from One and the counter must keep on counting until the STOP button is pressed. Display the counter value in a TextView control

Program:

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/main"

    android:layout_width="match_parent"

    android:layout_height="match_parent"

    tools:context=".MainActivity">

    <Button

        android:id="@+id/button"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginTop="48dp"

        android:text="START"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintStart_toStartOf="parent"
```

```
app:layout_constraintTop_toBottomOf="@+id/textView" />
```

```
<Button
```

```
    android:id="@+id/button2"
```

```
    android:layout_width="wrap_content"
```

```
    android:layout_height="wrap_content"
```

```
    android:layout_marginTop="96dp"
```

```
    android:text="STOP"
```

```
    app:layout_constraintBottom_toBottomOf="parent"
```

```
    app:layout_constraintEnd_toEndOf="parent"
```

```
    app:layout_constraintStart_toStartOf="parent"
```

```
    app:layout_constraintTop_toBottomOf="@+id/button"
```

```
    app:layout_constraintVertical_bias="0.065" />
```

```
<TextView
```

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

```
    android:layout_width="238dp"
```

```
    android:layout_height="44dp"
```

```
    android:text="0"
```

```
    android:textAlignment="center"
```

```
    android:textSize="30sp"
```

```
    app:layout_constraintBottom_toBottomOf="parent"
```

```
    app:layout_constraintEnd_toEndOf="parent"
```

```
    app:layout_constraintHorizontal_bias="0.497"
```

```
    app:layout_constraintStart_toStartOf="parent"
```

```
        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.299"

        android:gravity="center_horizontal" />

<TextView

    android:id="@+id/textView2"

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:text="COUNTER APPLICATION"

    android:textSize="34sp"

    app:layout_constraintBottom_toBottomOf="parent"

    app:layout_constraintEnd_toEndOf="parent"

    app:layout_constraintHorizontal_bias="0.498"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintTop_toTopOf="parent"

    app:layout_constraintVertical_bias="0.058" />

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

ActivityMain.java:

```
package com.example.myapplication;

import android.os.Bundle;

import android.os.Handler;

import android.view.View;

import android.widget.Button;

import android.widget.TextView;
```

```
import androidx.activity.EdgeToEdge;

import androidx.appcompat.app.AppCompatActivity;

import androidx.core.graphics.Insets;

import androidx.core.view.ViewCompat;

import androidx.core.view.WindowInsetsCompat;


public class MainActivity extends AppCompatActivity {

    Button btnstart, btnstop;

    TextView txtcounter;

    int i=1;

    Handler customHandler=new Handler();

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);

        btnstart=findViewById(R.id.button);

        btnstop=findViewById(R.id.button2);

        txtcounter=findViewById(R.id.textView);

        btnstart.setOnClickListener(new View.OnClickListener() {

            @Override

            public void onClick(View v) {

                customHandler.postDelayed(updateTimerThread,0);

            }

        });

        btnstop.setOnClickListener(new View.OnClickListener() {

            @Override
```

```
    public void
        onClick(View v) {
            i=1;
            customHandler.removeCallbacks(updateTimerThread);
        } }); }

private final Runnable updateTimerThread=new
    Runnable() { @Override
        public void run() {
            txtcounter.setText(""+i);
            customHandler.postDelayed(th
                is,1000);i++;
        } });
}
```