



**SIDDAGDDAGANGA INSTITUTE OF TECHNOLOGY, TUMKUR-572103**  
**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**  
**MOBILE APPLICATION DEVELOPMENT LABORATORY( 6RCSL02)**

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## Program 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 Text View control.**



## FrontEnd - UI Code:

### In activity\_main.xml

```
<?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:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
        android:layout_marginTop="40dp"
        android:id="@+id/heading"
        android:text="COUNTER APPLICATION"
        android:textAlignment="center"
        android:textSize="36sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        android:gravity="center_horizontal" />

    <LinearLayout
        android:id="@+id/layout"
        android:layout_width="match_parent"
```

---

```
android:layout_height="wrap_content"
android:layout_alignParentTop="true"
android:layout_marginTop="300dp"
android:orientation="horizontal">
```

```
<TextView
    android:id="@+id/textView3"
    android:layout_width="52dp"
    android:layout_height="wrap_content"
    android:layout_weight="1"
    android:gravity="center_horizontal"
    android:text="Counter"
    android:textAlignment="center"
    android:textSize="30sp"
    android:textStyle="bold" />
```

```
<TextView
    android:id="@+id/display"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_weight="1"
    android:gravity="center_horizontal"
    android:text="Value"
    android:textAlignment="center"
    android:textSize="30sp"
    android:textStyle="bold" />
```

```
</LinearLayout>
```

```
<Button
    android:id="@+id/start"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@id/layout"
    android:layout_alignParentTop="true"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="500dp"
    android:text="START" />
```

```
<Button
    android:id="@+id/stop"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@id/start"
    android:layout_alignParentTop="true"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="600dp"
    android:text="STOP" />
```

```
</RelativeLayout>
```

---

## BackEnd - Java Code:

### In MainActivity.java

```
package com.example.counter_1si19cs090;

import androidx.appcompat.app.AppCompatActivity;
import androidx.core.content.ContextCompat;

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

public class MainActivity extends AppCompatActivity {

    TextView display;
    Button start, stop;
    int counter=0;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        display = findViewById(R.id.display);
        start= findViewById(R.id.start);
        stop= findViewById(R.id.stop);

        start.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                new Thread(new Runnable() {
                    @Override
                    public void run() {
                        while (stop.isPressed()!==false) {
                            try
                            {
                                Thread.sleep(1000);
                            } catch (Exception e) {
                                e.printStackTrace();
                            }
                            display.post(new Runnable() {
                                @Override
                                public void run() {
                                    display.setText("" + counter);
                                    counter++;
                                }
                            });
                        }
                    }
                }).start();
            }
        });

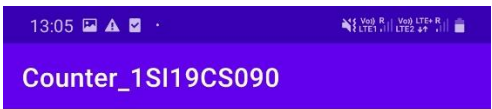
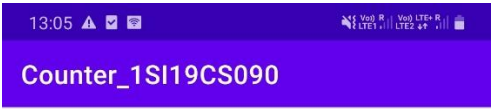
        stop.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                try
                {
```

---

```
        Thread.sleep(1000);
        Thread.interrupted();
    } catch (Exception e) {
        e.printStackTrace();
    }
}
});
}
```

---

# Output - Snapshots :



COUNTER  
APPLICATION

COUNTER  
APPLICATION

Counter      Value

Counter      4

START

START

STOP

STOP

