

## PART – A

### Experiment-No:4

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.

#### Components Used:

- Buttons: To Change Wallpapper.
- TextView: To set counter Value.

#### XML Code:

```
<?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/start"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="264dp"
        android:text="Start"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <TextView
        android:id="@+id/count"
        android:layout_width="169dp"
        android:layout_height="69dp"
        android:layout_marginTop="56dp"
        android:text="0"
        android:textAlignment="center"
        android:textSize="36sp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
```

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

<Button
    android:id="@+id/stop"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Stop"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.501"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/count"
    app:layout_constraintVertical_bias="0.166" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

### Java Code:

```
package com.keshavrkaranth.counter;

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 {
    Button b_start,b_stop;
    TextView result;
    int count = 0;
    Handler customHandler = new Handler();

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

```
b_start = (Button)findViewById(R.id.start);
b_stop = (Button)findViewById(R.id.stop);
result = (TextView)findViewById(R.id.count);

b_start.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        customHandler.postDelayed(myCounter,0);

    }
});
b_stop.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        customHandler.removeCallbacks(myCounter);
    }
});
}

Runnable myCounter = new Runnable() {
    @Override
    public void run() {
        result.setText(Integer.toString(count));
        customHandler.postDelayed(this,1000);
        count++;

    }
};
}
```

**Sample Output:**