Practical 6

**filename:activity\_main.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:gravity="center"

android:orientation="vertical"

android:padding="20dp">

<Button

android:id="@+id/btnStart"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Start Progress" />

<ProgressBar

android:id="@+id/progressBar"

style="@android:style/Widget.ProgressBar.Horizontal"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:max="100"

android:progress="0"

android:layout\_marginTop="20dp" />

<TextView

android:id="@+id/txtProgress"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Progress: 0%"

android:layout\_marginTop="10dp" />

<TextView

android:id="@+id/txtMessage"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text=""

android:textStyle="bold"

android:layout\_marginTop="20dp" />

</LinearLayout>

**filename:MainActivity.java**

package com.example.progressbar;

import android.os.AsyncTask;

import android.os.Bundle;

import android.widget.Button;

import android.widget.ProgressBar;

import android.widget.TextView;

import androidx.appcompat.app.AppCompatActivity;

import com.example.progressbar.R;

public class MainActivity extends AppCompatActivity {

Button btnStart;

ProgressBar progressBar;

TextView txtProgress, txtMessage;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

btnStart = findViewById(R.id.btnStart);

progressBar = findViewById(R.id.progressBar);

txtProgress = findViewById(R.id.txtProgress);

txtMessage = findViewById(R.id.txtMessage);

btnStart.setOnClickListener(v -> {

new ProgressTask().execute();

});

}

private class ProgressTask extends AsyncTask<Void, Integer, String> {

@Override

protected void onPreExecute() {

super.onPreExecute();

progressBar.setProgress(0);

txtProgress.setText("Progress: 0%");

txtMessage.setText("");

}

@Override

protected String doInBackground(Void... voids) {

int progress = 0;

while (progress <= 100) {

try {

Thread.sleep(50); // simulate time-consuming task

} catch (InterruptedException e) {

e.printStackTrace();

}

publishProgress(progress);

progress++;

}

return "✅ Task Completed Successfully!";

}

@Override

protected void onProgressUpdate(Integer... values) {

int value = values[0];

progressBar.setProgress(value);

txtProgress.setText("Progress: " + value + "%");

}

@Override

protected void onPostExecute(String result) {

txtMessage.setText(result);

}

}

}