

Experiment 13

1.

activity_main.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
    <ProgressBar
        android:id="@+id/circularProgressbar"
        style="?android:attr/progressBarStyleHorizontal"
        android:layout_width="300dp"
        android:layout_height="300dp"
        android:indeterminate="false"
        android:max="100"
        android:progress="50"
        android:layout_centerInParent="true"
        android:progressDrawable="@drawable/circular"
        android:secondaryProgress="100" />
    <ImageView
        android:layout_width="100dp"
        android:layout_height="100dp"
        android:background="@drawable/whitecircle"
        android:layout_centerInParent="true"/>
    <TextView
        android:id="@+id/t1"
        android:layout_width="250dp"
        android:layout_height="250dp"
        android:gravity="center"
        android:text="25%"
        android:layout_centerInParent="true"
        android:textColor="@color/purple_700"
        android:textSize="20sp" />
</RelativeLayout>
```

circular.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<layer-list xmlns:android="http://schemas.android.com/apk/res/android">
    <item android:id="@android:id/secondaryProgress">
        <shape
            android:innerRadiusRatio="6"
            android:shape="ring"
            android:thicknessRatio="20.0"
```

```

android:useLevel="true">
<gradient
android:centerColor="#999999"
android:endColor="#999999"
android:startColor="#999999"
android:type="sweep" />
</shape>
</item>
<item android:id="@android:id/progress">
<rotate
android:fromDegrees="270"
android:pivotX="50%"
android:pivotY="50%"
android:toDegrees="270">
<shape
android:innerRadiusRatio="6"
android:shape="ring"
android:thicknessRatio="20.0"
android:useLevel="true">
<rotate
android:fromDegrees="0"
android:pivotX="50%"
android:pivotY="50%"
android:toDegrees="360" />
<gradient
android:centerColor="#00FF00"
android:endColor="#00FF00"
android:startColor="#00FF00"
android:type="sweep" />
</shape>
</rotate>
</item>
</layer-list>

```

MainActivity.java:

```

package com.example.exp13_1;
import androidx.appcompat.app.AppCompatActivity;
import android.content.res.Resources;
import android.graphics.drawable.Drawable;
import android.os.Bundle;
import android.os.Handler;
import android.widget.ProgressBar;
import android.widget.TextView;
public class MainActivity extends AppCompatActivity {
    private ProgressBar progressBar;
    private TextView progressText;
    int i = 0;

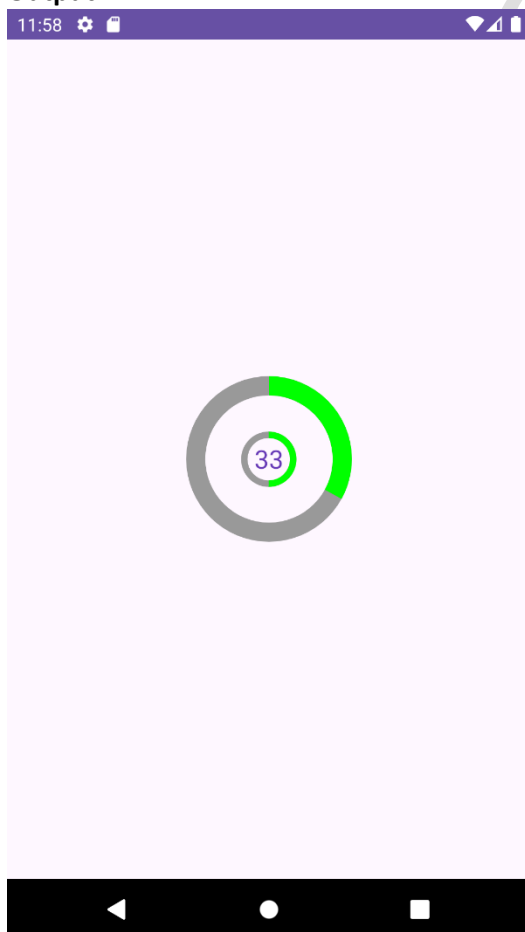
```

```

@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    progressBar = findViewById(R.id.circularProgressbar);
    progressText = findViewById(R.id.t1);
    final Handler handler = new Handler();
    handler.postDelayed(new Runnable() {
        @Override
        public void run() {
            if (i <= 100) {
                progressText.setText("" + i);
                progressBar.setProgress(i);
                i++;
                handler.postDelayed(this, 200);
            } else {
                handler.removeCallbacks(this);
            }
        }, 200);
    }
}

```

Output:



2.

activity_main.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:gravity="center"
    tools:context=".MainActivity">
    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/b1"
        android:id="@+id/button"
        android:layout_alignParentBottom="true"
        android:layout_centerHorizontal="true" />
</RelativeLayout>
```

MainActivity.java:

```
package com.example.exp13_2;
import androidx.appcompat.app.AppCompatActivity;
import android.app.ProgressDialog;
import android.os.Bundle;
import android.os.Handler;
import android.view.View;
import android.widget.Button;
public class MainActivity extends AppCompatActivity {
    Button btnStartProgress;
    ProgressDialog progressBar;
    private int progressBarStatus = 0;
    private Handler progressBarHandler = new Handler();
    private long fileSize = 0;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        addListenerOnButtonClick();
    }
    public void addListenerOnButtonClick() {
        btnStartProgress = findViewById(R.id.button);
        btnStartProgress.setOnClickListener(new View.OnClickListener(){
            @Override
            public void onClick(View v) {
                progressBar = new ProgressDialog(v.getContext());
                progressBar.setCancelable(true);
                progressBar.setMessage("File downloading ...");
```

```
progressBar.setProgressStyle(ProgressDialog.STYLE_HORIZONTAL);
progressBar.setProgress(0);
progressBar.setMax(100);
progressBar.show();
progressBarStatus = 0;
fileSize = 0;
new Thread(new Runnable() {
    public void run() {
        while (progressBarStatus < 100) {
            progressBarStatus = doOperation();
            try {
                Thread.sleep(1000);
            } catch (InterruptedException e) {
                e.printStackTrace();
            }
            progressBarHandler.post(new Runnable() {
                public void run() {
                    progressBar.setProgress(progressBarStatus);
                }
            });
        }
        if (progressBarStatus >= 100) {
            try {
                Thread.sleep(1000);
            } catch (InterruptedException e) {
                e.printStackTrace();
            }
            progressBar.dismiss();
        }
    }
}).start();
});
}

public int doOperation() {
    while (fileSize <= 10000) {
        fileSize++;
        if (fileSize == 1000) {
            return 10;
        } else if (fileSize == 2000) {
            return 20;
        } else if (fileSize == 3000) {
            return 30;
        } else if (fileSize == 4000) {
            return 40;
        } else if (fileSize == 5000) {
            return 50;
        } else if (fileSize == 6000) {
            return 60;
        }
    }
}
```

```
} else if (fileSize == 7000) {  
  return 70;  
} else if (fileSize == 8000) {  
  return 80;  
} else if (fileSize == 9000) {  
  return 90;  
}  
}  
return 100;  
}  
}
```

Output:

