**EXPERIMENT-1 GUI COMPONENTS**

**AIM:**

To Develop an application to change the font and color of the text and display toast message when the user presses the button

**PROCEDURE:**

* Go to File → New Project.
* Provide the Application Name and click Next.
* Select the Target Android Devices.
* Choose the Minimum SDK required.
* Choose the activity (Blank Activity by default).
* Enter the Activity Name.
* Click Finish.
* Edit the program (design layout and write Kotlin code).
* Run the Application in 2 ways:
  1. Using an Emulator.
  2. Using a Real Mobile Device (via USB debugging).

**PROGRAM:**

**AndroidManifest.xml:**

<?xml version="1.0" encoding="utf-8"?>

<manifest xmlns:android="<http://schemas.android.com/apk/res/android>">

<application android:allowBackup="true" android:icon="@mipmap/ic\_launcher" android:label="@string/app\_name"

android:roundIcon="@mipmap/ic\_launcher\_round" android:supportsRtl="true" android:theme="@style/Theme.ExampleApp">

<activity android:name=".MainActivity" android:exported="true">

<intent-filter>

<action android:name="android.intent.action.MAIN"/>

<category android:name="android.intent.category.LAUNCHER"/>

</intent-filter>

</activity>

</application>

</manifest>

# **Activity\_main.xml:**

<?xml version="1.0" encoding="utf-8"?>

<LinearLayout xmlns:android="[http://schemas.android.com/apk/res/android"](http://schemas.android.com/apk/res/android) android:layout\_width="match\_parent" android:layout\_height="match\_parent" android:orientation="vertical"

android:gravity="center" android:padding="20dp">

<TextView android:id="@+id/textView"

android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:text="Welcome to the App!" android:textSize="26sp" android:textColor="#000000"/>

<Button

android:id="@+id/buttonFont" android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:text="Toggle Font" android:layout\_marginTop="30dp"/>

<Button

android:id="@+id/buttonColor" android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:text="Change Color" android:layout\_marginTop="16dp"/>

</LinearLayout>

# **MainActivity.kt:**

package com.example.exampleapp

import android.graphics.Color import android.graphics.Typeface import android.os.Bundle

import android.widget.Button import android.widget.TextView import android.widget.Toast

import androidx.appcompat.app.AppCompatActivity

class MainActivity : AppCompatActivity() {

private lateinit var textView: TextView private lateinit var fontButton: Button private lateinit var colorButton: Button

private var isBoldItalic = false private var currentColor = 0

private val colorList = listOf(

Color.RED, Color.GREEN, Color.BLUE,

Color.MAGENTA, Color.CYAN, Color.parseColor("#FFA500") // Orange

)

override fun onCreate(savedInstanceState: Bundle?) { super.onCreate(savedInstanceState) setContentView(R.layout.activity\_main)

setupViews() setupListeners()

}

private fun setupViews() {

textView = findViewById(R.id.textView) fontButton = findViewById(R.id.buttonFont) colorButton = findViewById(R.id.buttonColor)

}

private fun setupListeners() { fontButton.setOnClickListener {

toggleFontStyle()

}

colorButton.setOnClickListener {

changeTextColor()

}

}

private fun toggleFontStyle() { if (isBoldItalic) {

textView.setTypeface(null, Typeface.NORMAL)

} else {

textView.setTypeface(null, Typeface.BOLD\_ITALIC)

}

isBoldItalic = !isBoldItalic Toast.makeText(this, "Font style toggled!",

Toast.LENGTH\_SHORT).show()

}

private fun changeTextColor() { textView.setTextColor(colorList[currentColor]) currentColor = (currentColor + 1) % colorList.size

Toast.makeText(this, "Color changed!", Toast.LENGTH\_SHORT).show()

}