MOBILE APPLICATION & DEVELOPMENT ASSIGNMENT

EX-01 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:

Step 1:

- Go to File → New Project.
- Provide the Application Name and click Next.

Step 2:

- Select the Target Android Devices.
- Choose the Minimum SDK required.
- Click Next.

Step 3:

- Choose the activity (Blank Activity by default).
- Click Next.

Step 4:

- Enter the Activity Name.
- Click Finish.

Step 5:

- Edit the program (design layout and write Kotlin code).

Step 6:

- Run the Application in 2 ways:
    1. Using an Emulator.
    2. Using a Real Mobile Device (via USB debugging).

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EX-01 GUI COMPONENTS

CODE:

AndroidManifest.xml:

```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>
```

EX-01 GUI COMPONENTS

Activity_main.xml:

```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: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
```

EX-01 GUI COMPONENTS

```
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:

```kotlin
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
```

EX-01 GUI COMPONENTS

```kotlin
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 {
```

```kotlin
        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()

    }

}
```
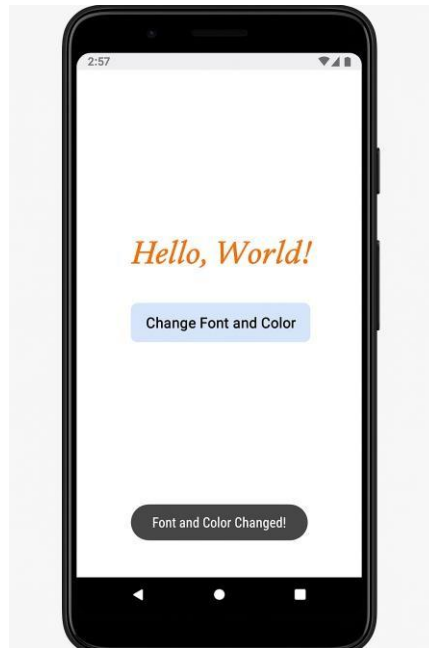
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EX-01 GUI COMPONENTS

OUTPUT IMAGE:

RESULT:

The application has been successfully developed using Kotlin and android studio.