

Ex. No. : 01

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GUI Components

Aim

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 : File -> NewProject

Provide the application name and Click "Next"

Step 2 : Select the target android devices

Select the minimum SDK to run the application. Click "Next".

Step 3 : Choose the activity for the application (By default choose "Blank Activity").

Click "Next".

Step 4 : Enter activity name and click "Finish".

Step 5 : Edit the program.

Step 6 : Run the application, 2-ways to run the application.

1. Running through emulator
2. Running through mobile device

AndroidManifest.xml

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools">

    <application
        android:allowBackup="true"
        android:dataExtractionRules="@xml/data_extraction_rules"
        android:fullBackupContent="@xml/backup_rules"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.Ex02"
        tools:targetApi="31">
        <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"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/layout"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    tools:context=".MainActivity">
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="horizontal"    >

    </LinearLayout>

    <TextView
        android:id="@+id/tvText"
        android:paddingTop="20dp"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="RAJALAKSHMI ENGINEERING COLLEGE"
        android:textAlignment="center" />

    <Button
        android:id="@+id/btSize"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="CHANGESIZE" />

    <Button
        android:id="@+id/btColor"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="CHANGECOLOR" />

    <Button
        android:id="@+id/btBGColor"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="CHANGEBACKCOLOR" />
</LinearLayout>
```

MainActivity.kt

```
package com.example.ex02
```

```
import android.graphics.Color
```

```
import androidx.appcompat.app.AppCompatActivity
```

```
import android.os.Bundle
```

```
import android.widget.Button
```

```
import android.widget.LinearLayout
```

```
import android.widget.TextView
```

```
import androidx.activity.enableEdgeToEdge
```

```
class MainActivity : AppCompatActivity() {  
    override fun onCreate(savedInstanceState: Bundle?) {  
        super.onCreate(savedInstanceState)  
        enableEdgeToEdge()  
        setContentView(R.layout.activity_main)  
        val tvText: TextView = findViewById(R.id.tvText)  
        val btSize: Button = findViewById(R.id.btSize)  
        val btColor: Button = findViewById(R.id.btColor)  
        val btBGColor: Button = findViewById(R.id.btBGColor)  
        val layout: LinearLayout = findViewById(R.id.layout)  
  
        var size: Float = 5f  
        var fontColor: Int = 0  
        var bgColor: Int = 0  
        btSize.setOnClickListener {  
            tvText.setTextSize(size)  
            size = (size + 5) % 50  
        }  
    }  
}
```

```

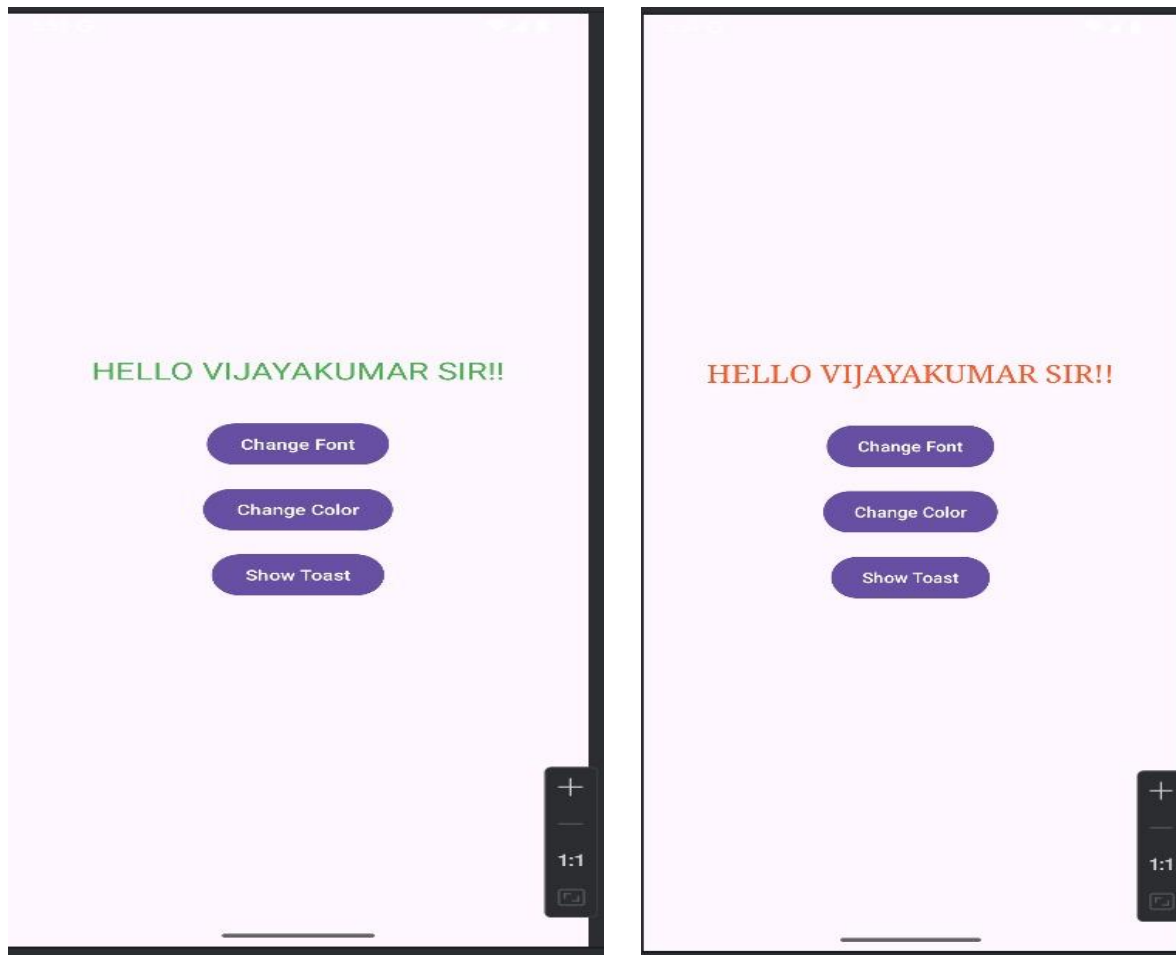
    }

    btColor.setOnClickListener {
        when (fontColor % 3) {
            0 -> tvText.setTextColor(Color.RED)
            1 -> tvText.setTextColor(Color.GREEN)
            2 -> tvText.setTextColor(Color.BLUE)
        }
        fontColor++
    }

    btBGColor.setOnClickListener {
        when (bgColor % 3) {
            0 -> layout.setBackgroundColor(Color.RED)
            1 -> layout.setBackgroundColor(Color.GREEN)
            2 -> layout.setBackgroundColor(Color.BLUE)
        }
        bgColor++
    }
}
}
}

```

Output



Result:

The Application developed using Android Studio was done.