# 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
<?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.EX1"
        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>
```

### MainActivity.kt package

```
package com.example.ex1

import android.graphics.Color

import android.os.Bundle

import android.widget.Button

import android.widget.TextView

import
```

```kotlin
android.widget.Toast
import
androidx.appcompat.app.A
ppCompatActivity

class MainActivity :
AppCompatActivity() {

    private lateinit var
textView: TextView
    private lateinit var
buttonChangeColor:
Button
    private lateinit var
buttonChangeFontSize:
Button

    private val colors =
arrayOf(Color.RED,
Color.BLUE,
Color.GREEN,
Color.MAGENTA,
Color.CYAN)
    private val fontSizes =
arrayOf(16f, 20f, 24f, 28f,
32f)

    private var
currentColorIndex = 0
    private var
currentFontSizeIndex = 0

    override fun
```

```kotlin
onCreate(savedInstanceSta
te: Bundle?) {

super.onCreate(savedInsta
nceState)

setContentView(R.layout.a
ctivity_main)

    textView =
findViewById(R.id.textView
)
    buttonChangeColor =
findViewById(R.id.buttonC
hangeColor)

buttonChangeFontSize =
findViewById(R.id.buttonC
hangeFontSize)

    // Change text color
when button is clicked

buttonChangeColor.setOn
ClickListener {
        currentColorIndex
= (currentColorIndex + 1)
% colors.size

textView.setTextColor(colo
rs[currentColorIndex])

Toast.makeText(this,
```

```kotlin
            "Color           Changed",
Toast.LENGTH_SHORT).s
how()
    }

    // Change text size
when button is clicked

buttonChangeFontSize.set
OnClickListener {

currentFontSizeIndex    =
(currentFontSizeIndex + 1)
% fontSizes.size
        textView.textSize =
fontSizes[currentFontSizeI
ndex]

Toast.makeText(this, "Font
Size Changed",
Toast.LENGTH_SHORT).s
how()
    }
  }
}
```

**Activivty_main.XML**

```xml
<?xml version="1.0"
encoding="utf-8"?>
<LinearLayout
xmlns:android="http://sche
```

```
mas.android.com/apk/res/a
ndroid"

xmlns:tools="http://schema
s.android.com/tools"

android:layout_width="mat
ch_parent"

android:layout_height="ma
tch_parent"
    android:gravity="center"

android:orientation="vertic
al"

tools:context=".MainActivit
y">

    <TextView

android:id="@+id/textView"

android:layout_width="wra
p_content"

android:layout_height="wr
ap_content"
        android:text="HELLO
HARSHATH"

android:textSize="20sp"
```

```xml
android:textColor="#00000
0"

android:textStyle="bold"

android:padding="20dp" />

    <Button

android:id="@+id/buttonCh
angeColor"

android:layout_width="wra
p_content"

android:layout_height="wr
ap_content"
        android:text="Change
Color"

android:layout_marginTop
="20dp" />

    <Button

android:id="@+id/buttonCh
angeFontSize"

android:layout_width="wra
p_content"

android:layout_height="wr
ap_content"
```
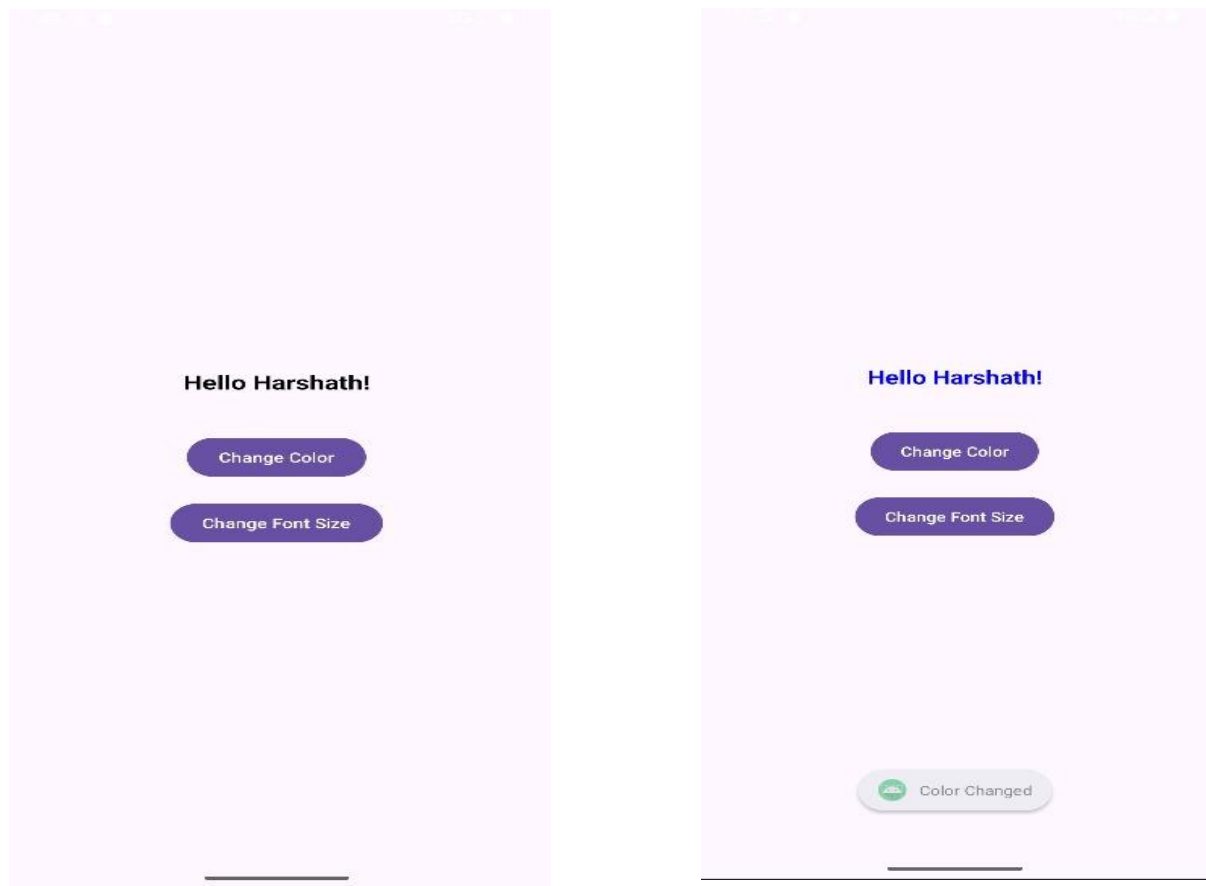
android:text="Change

Font Size"

android:layout_marginTop

="20dp" />

</LinearLayout>


*Output :*



**Result**:

        The Application developed using Android Studio was done.