

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:supportRtl="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
```

```

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

```

```
onCreate(savedInstanceState: Bundle?) {
```

```
    super.onCreate(savedInstanceState)
```

```
    setContentView(R.layout.activity_main)
```

```
    textView =  
        findViewById(R.id.textView)  
}
```

```
    buttonChangeColor =  
        findViewById(R.id.buttonChangeColor)
```

```
    buttonChangeFontSize =  
        findViewById(R.id.buttonChangeFontSize)
```

```
    // Change text color  
    when button is clicked
```

```
    buttonChangeColor.setOnClickListener {
```

```
        currentIndex  
        = (currentIndex + 1)  
        % colors.size
```

```
        textView.setTextColor(colors[currentIndex])
```

```
        Toast.makeText(this,
```

```

"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 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  
DHANUSH!"
```

```
        android:textSize="20sp"
```

```
android:textColor="#000000"
0"
```

```
android:textStyle="bold"
```

```
android:padding="20dp" />
```

```
<Button
```

```
android:id="@+id/buttonChangeColor"
```

```
android:layout_width="wrap_content"
```

```
android:layout_height="wrap_content"
```

```
    android:text="Change Color"
```

```
android:layout_marginTop="20dp" />
```

```
<Button
```

```
android:id="@+id/buttonChangeFontSize"
```

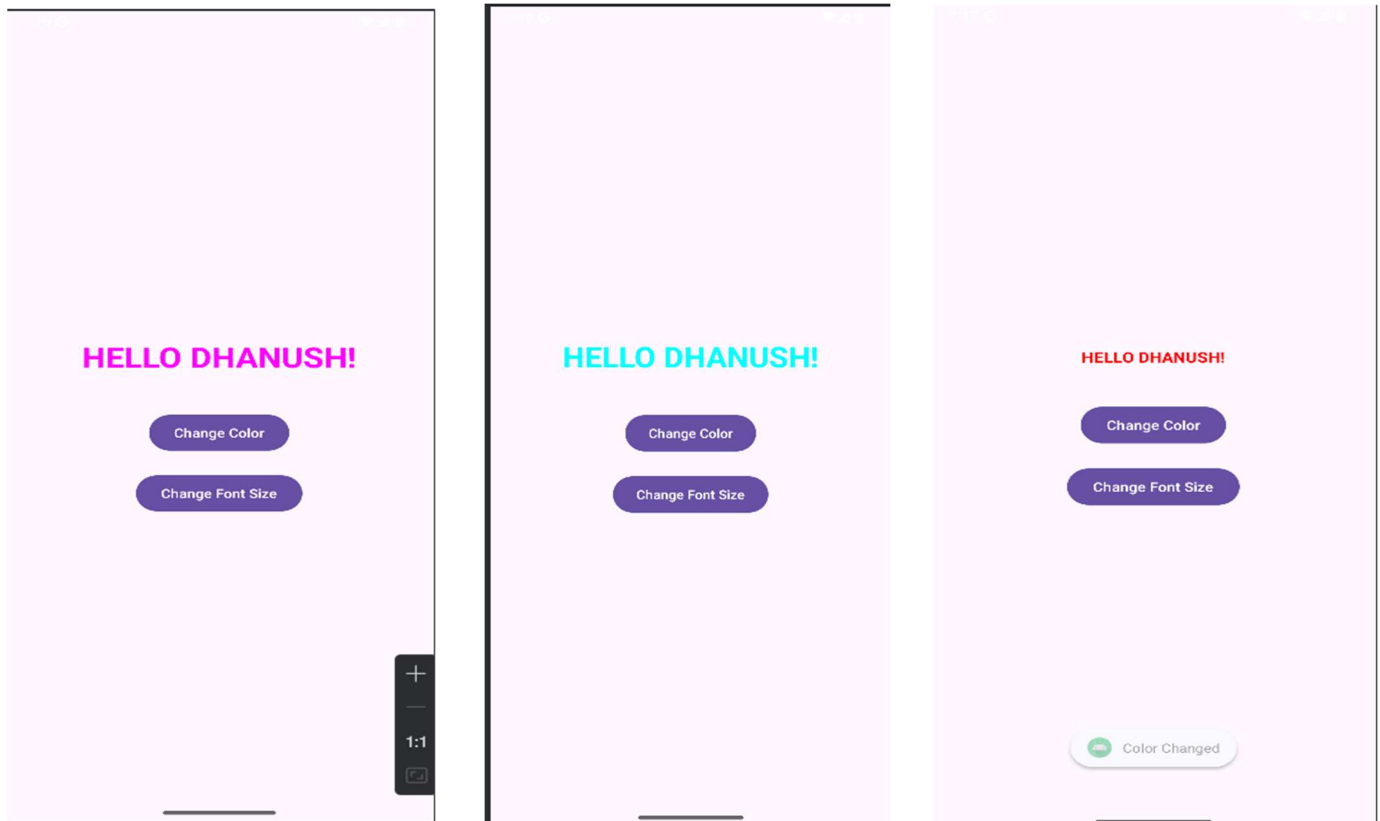
```
android:layout_width="wrap_content"
```

```
android:layout_height="wrap_content"
```

```
        android:text="Change  
Font Size"
```

```
        android:layout_marginTop  
        ="20dp" />  
</LinearLayout>
```

Output :



Result:

The Application developed using Android Studio was done.