Exp.1 GUI COMPONENTS, FONTS AND COLORS Date:

AIM:
To develop an application that uses GUI components, Font and Colours.

ALGORITHM:
1. Open ANDROID STUDIO.
2. Click File->new->New Project.
3. Give the File name->Choose the Empty Activity and Package name and then click Finish button.
4. Go to res folder and select layout. Double click the activity_main.xml file.
5. Now you can see the Graphical layout window
6. Drag and drop the following components:
    - One TextView with text Hello world
    - Three Buttons with labeled as Change Text Size, Change Text Color and Change Text Style
7. Go to java folder. Double click the MainActivity.java file.
8. In java file write the activities done by the application such as, actions of buttons.
9. Finally run the android application.

PROGRAM:

activity_main.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
   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:layout_width="match_parent"
   android:layout_height="match_parent"
   android:background="@color/purple_200"
   tools:context=".MainActivity">


   <TextView
      android:id="@+id/textView"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:layout_marginTop="76dp"
      android:text="Hello World!"
      android:textSize="15sp"
      app:layout_constraintEnd_toEndOf="parent"
      app:layout_constraintStart_toStartOf="parent"
      app:layout_constraintTop_toTopOf="parent" />

   <Button
      android:id="@+id/button1"
      android:layout_width="match_parent"
      android:layout_height="wrap_content"
      android:layout_marginBottom="80dp"
      android:text="Change Text Size"
      app:layout_constraintBottom_toTopOf="@+id/button2"
      app:layout_constraintEnd_toEndOf="parent"
      app:layout_constraintStart_toStartOf="parent" />


<Button
      android:id="@+id/button2"
      android:layout_width="match_parent"
```

```
        android:layout_height="wrap_content"
        android:layout_marginBottom="80dp"
        android:text="Change Text Style"
        app:layout_constraintBottom_toTopOf="@+id/button3"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent" />

    <Button
        android:id="@+id/button3"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginBottom="160dp"
        android:text="Change Text Color"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.0"
        app:layout_constraintStart_toStartOf="parent" />


</androidx.constraintlayout.widget.ConstraintLayout>
```

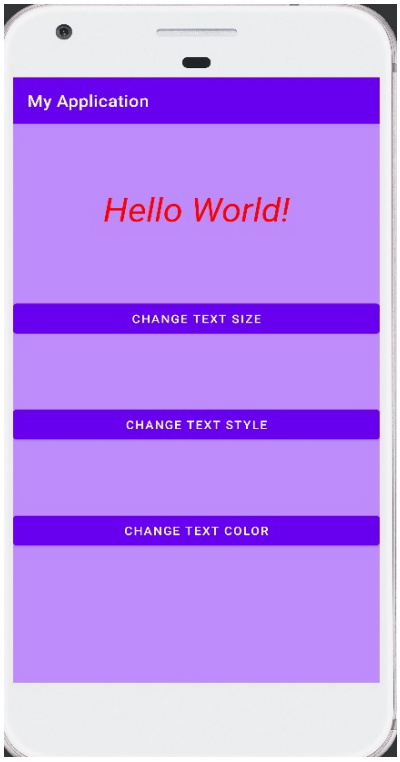
MainActivity.java:

```
package com.cse.myapplication;

import androidx.appcompat.app.AppCompatActivity;

import android.graphics.Color;
import android.graphics.Typeface;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity {

    int font=20;
    TextView v;
    Button b,b1,b2;


    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);


        v=findViewById(R.id.textView);
        b=findViewById(R.id.button1);
        b1=findViewById(R.id.button2);
        b2=findViewById(R.id.button3);


        b.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                font = font + 5;
                v.setTextSize(font);
                if(font == 40){
                    font = 20;
```

```
        }

    }
});


b1.setOnClickListener(new View.OnClickListener() {
    int count=1;
    @Override
    public void onClick(View view) {

        switch(count){
            case 1:
                v.setTypeface(Typeface.MONOSPACE,Typeface.BOLD);
                break;
            case 2:
                v.setTypeface(Typeface.DEFAULT,Typeface.BOLD);
                break;
            case 3:
                v.setTypeface(Typeface.SANS_SERIF,Typeface.ITALIC);
                break;
            case 4:
                v.setTypeface(Typeface.MONOSPACE,Typeface.ITALIC);
                break;
            case 5:
                v.setTypeface(Typeface.DEFAULT,Typeface.BOLD_ITALIC);
                break;
        }
        count++;
        if(count==6){
            count=1;
        }

    }
});


b2.setOnClickListener(new View.OnClickListener() {
    int count = 1;

    @Override
    public void onClick(View view) {

        switch(count){
            case 1:
                v.setTextColor(Color.RED);
                break;
            case 2:
                v.setTextColor(Color.GREEN);
                break;
            case 3:
                v.setTextColor(Color.YELLOW);
                break;
            case 4:
                v.setTextColor(Color.MAGENTA);
                break;
            case 5:
                v.setTextColor(Color.BLACK);
                break;
            case 6:
                v.setTextColor(Color.BLUE);
```

```
                break;
            case 7:
                v.setTextColor(Color.GRAY);
                break;
        }
        count++;
        if(count == 8){
            count = 1;
        }

      }
   });


  }
}
```

OUTPUT:



RESULT:

Thus an application that uses GUI components, Font and Colours is developed.