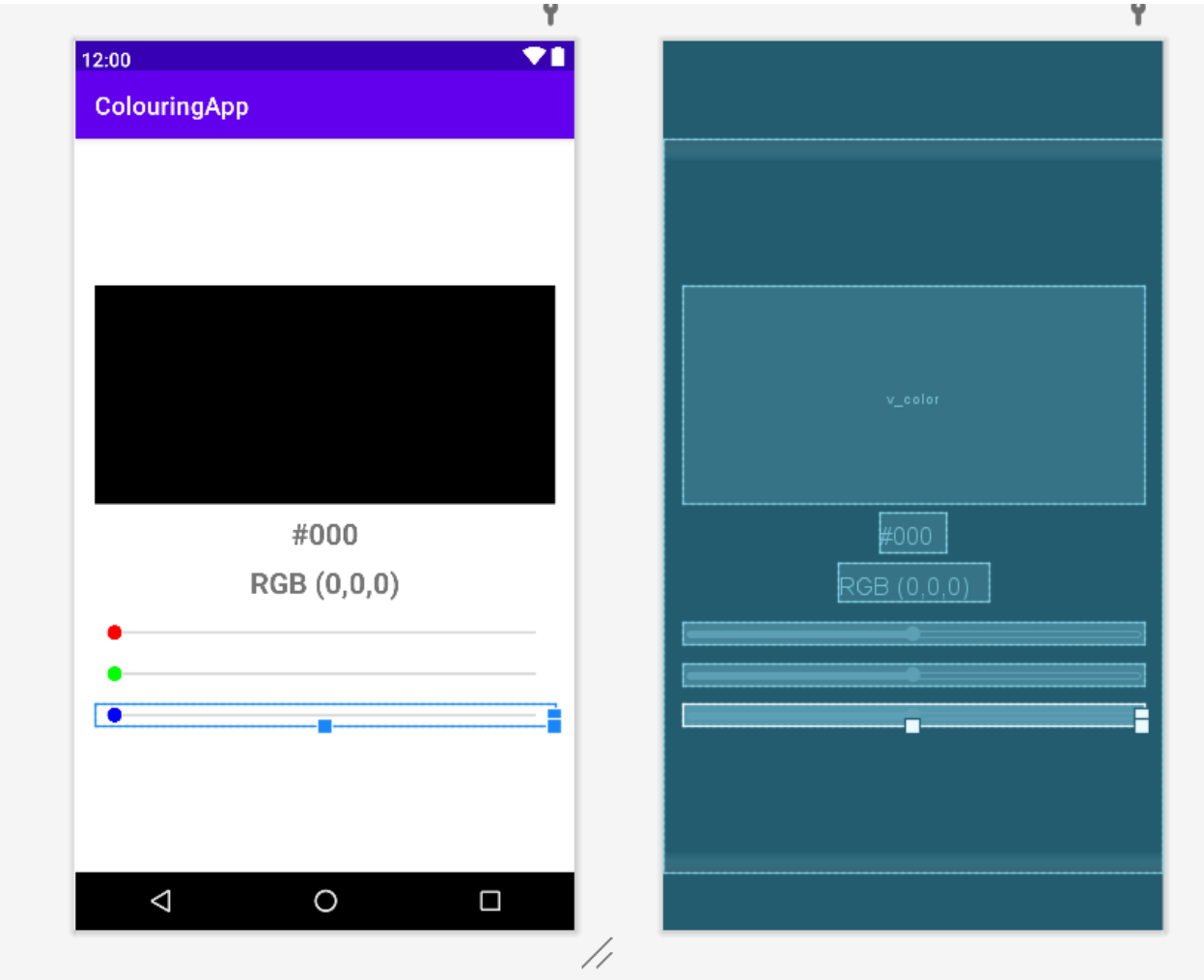
Date:
Lab Session No.: 07

Aim:
Develop an android application to implement user interface by using User Interface (UI) or input controls available in android.
Example: Develop an android application that sets various color code.

Software's /IDE Tools:
Android Development Kit / Android Studio

Application User interface design:



Application Programming Interface:

API / PACKAGES	CLASSES / INTERFACES	METHODS	DESCRIPTION
import androidx.appcompat.app.AppCompatActivity;	AppCompatActivity	protected void onCreate(Bundle savedInstanceState)	onCreate(Bundle) is where you initialize your activity. When Activity is started and application is not loaded, then both onCreate() methods will be called.
import android.widget.EditText;	EditText	getText()	Determines the minimum type that getText() will return. If set, specifies that this TextView has a textual input method and should automatically capitalize what the user types.

Code/Implementation:

// Develop an android application to demonstrate the Implicit and Explicit Intent.
// Project Name : ColouringApp
/*

Lab Session No. : 07
Author : Tellakula Avinash
Date :
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Description : Colour based on Color code
Softwares required :
Android Studio
Topics Covered :
UI Input Controls

*/

MainAcitivity.java

```
package com.avinash.colouringapp;

import androidx.appcompat.app.AppCompatActivity;

import android.graphics.Color;
import android.os.Bundle;
import android.view.View;
```

```
import android.widget.SeekBar;
import android.widget.TextView;

import java.util.Locale;

public class MainActivity extends AppCompatActivity implements
SeekBar.OnSeekBarChangeListener {
    View vColor;
    TextView tvCode,tvValue;
    SeekBar sbRed,sbGreen,sbBlue;
    int red=0,green=0,blue=0;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        vColor=findViewById(R.id.v_color);
        tvCode=findViewById(R.id.tv_code);
        tvValue=findViewById(R.id.tv_value);
        sbRed=findViewById(R.id.sb_red);
        sbGreen=findViewById(R.id.sb_green);
        sbBlue=findViewById(R.id.sb_blue);
        sbRed.setOnSeekBarChangeListener(this);
        sbGreen.setOnSeekBarChangeListener(this);
        sbBlue.setOnSeekBarChangeListener(this);
    }
    @Override
    public void onProgressChanged(SeekBar seekBar, int progress, boolean
fromUser) {
        switch(seekBar.getId()){
            case R.id.sb_red:
                red=progress;
                break;
            case R.id.sb_green:
                green=progress;
                break;
            case R.id.sb_blue:
                blue=progress;
                break;

        }
        vColor.setBackgroundColor(Color.rgb(red,green,blue));
        String code=HexCode(red,green,blue);
        tvCode.setText(code.toUpperCase());
        tvValue.setText(String.format("RGB (%d, %d, %d)",red,green,blue));
    }

    private String HexCode(int red, int green, int blue) {
        String code;
        code="#";
        code+=Integer.toHexString(red);
        code+=Integer.toHexString(green);
        code+=Integer.toHexString(blue);
        return code;
    }



    @Override
    public void onStartTrackingTouch(SeekBar seekBar) {
```

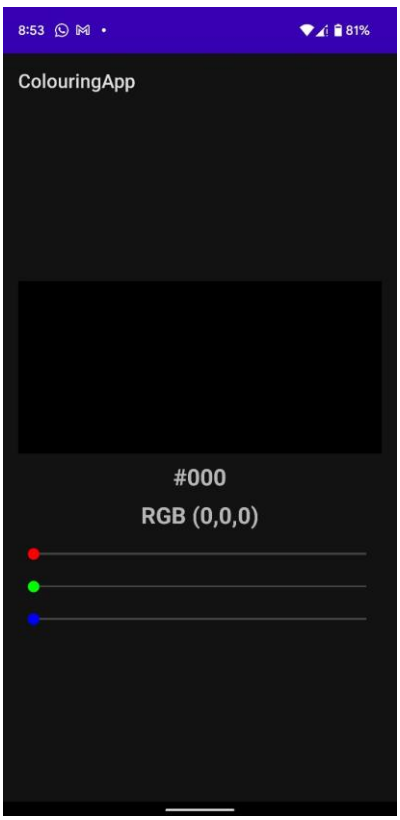
```
    }

    @Override
    public void onStopTrackingTouch(SeekBar seekBar) {

    }
}
```

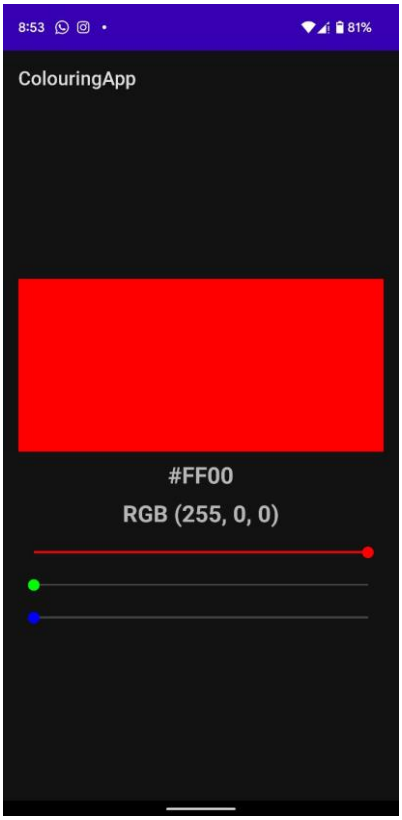
activity_main.xml

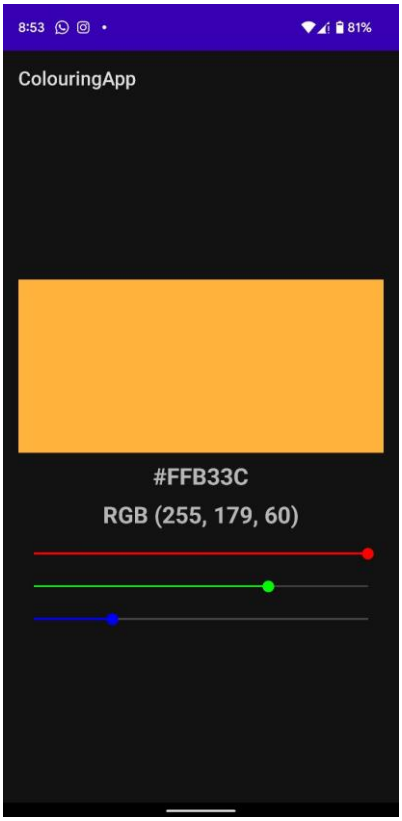
```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:gravity="center"
    android:padding="16dp"
    tools:context=".MainActivity">

    <View
        android:layout_height="180dp"
        android:layout_width="match_parent"
        android:id="@+id/v_color"
        android:background="#000"
        />
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/tv_code"
        android:text="#000"
        android:textSize="24sp"
        android:textStyle="bold"
        android:layout_marginTop="8dp"
        />
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/tv_value"
        android:text="RGB (0,0,0)"
        android:textSize="24sp"
        android:textStyle="bold"
        android:layout_marginTop="8dp"
        />
    <SeekBar
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/sb_red"
        android:layout_marginTop="16dp"
        android:max="255"
        android:progressTint="#FF0000"
        android:thumbTint="#FF0000"
        />
    <SeekBar
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
```

```
        android:id="@+id/sb_green"
        android:layout_marginTop="16dp"
        android:max="255"
        android:progressTint="#00FF00"
        android:thumbTint="#00FF00"
        />
    <SeekBar
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/sb_blue"
        android:layout_marginTop="16dp"
        android:max="255"
        android:progressTint="#0000FF"
        android:thumbTint="#0000FF"
        />
</LinearLayout>
```

Output:







Result:

Demonstration input controls available in android were done successfully.