

PRACTICAL: 7

AIM: Create an application that will change color of the screen, based on selected options from the menu.

THEORY: About elements used:

Menus: Menus are a common user interface component in many types of applications. To provide a familiar and consistent user experience, you should use the Menu APIs to present user actions and other options in your activities. For all menu types, Android provides a standard XML format to define menu items. Instead of building a menu in your activity's code, you should define a menu and all its items in an XML menu resource. You can then inflate the menu resource (load it as a Menu object) in your activity or fragment. When the user selects an item from the options menu (including action items in the app bar), the system calls your activity's `onOptionsItemSelected()` method.

CODE:

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:id="@+id/constraint_layout"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Colorful Practical!!"
        android:textSize="20dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

menu.xml

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

    <item
        android:id="@+id/red"
        android:title="RED" />
    <item
        android:id="@+id/green"
        android:title="GREEN" />
```

```

<item
    android:id="@+id/blue"
    android:title="BLUE" />
</menu>

```

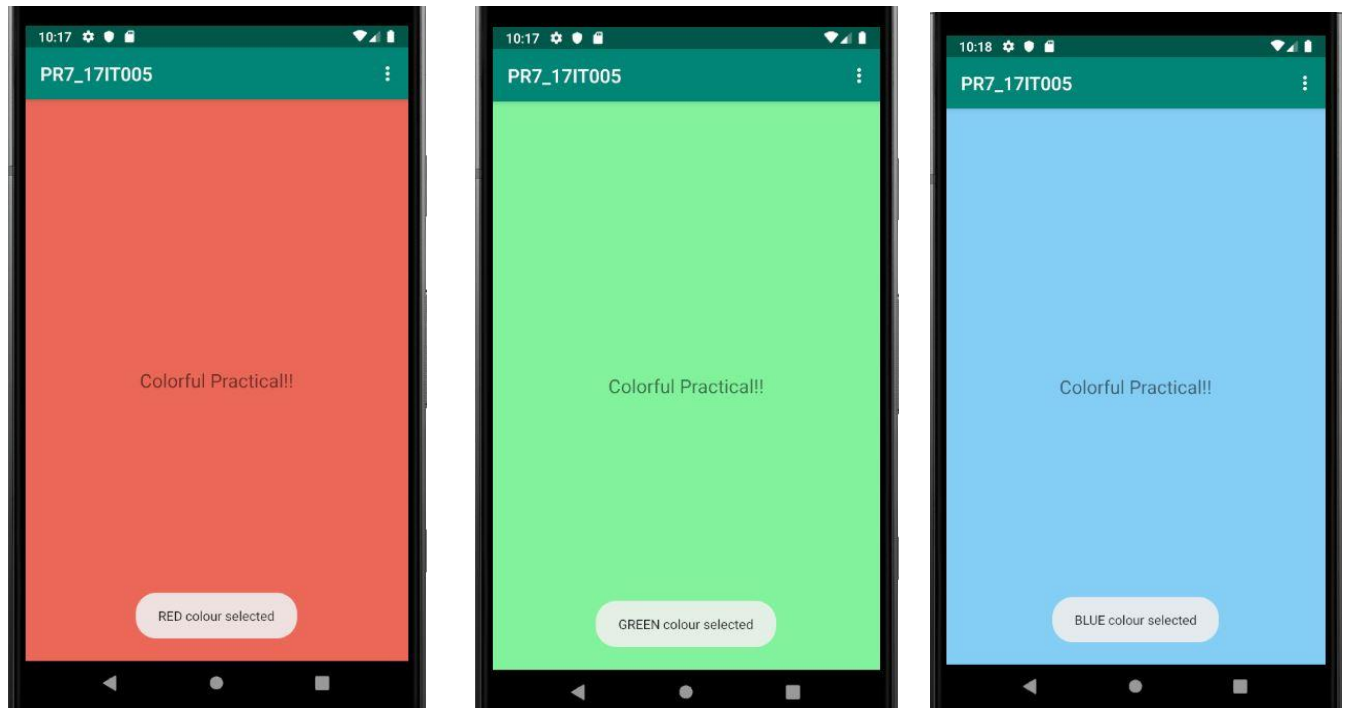
MainActivity.java

```

package com.example.pr7_17it005;
import androidx.appcompat.app.AppCompatActivity;
import androidx.constraintlayout.widget.ConstraintLayout;
import android.graphics.Color;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuInflater;
import android.view.MenuItem;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
    private ConstraintLayout constraintlayout;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        constraintlayout = findViewById(R.id.constraint_layout);
    }
    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        MenuInflater inflater = getMenuInflater();
        inflater.inflate(R.menu.menu, menu);
        return true;
    }
    @Override
    public boolean onOptionsItemSelected(MenuItem item) {
        // Handle item selection
        switch (item.getItemId()) {
            case R.id.red:
                this.constraintlayout.setBackgroundColor(Color.rgb(235, 104, 87));
                Toast.makeText(getApplicationContext(),"RED colour
selected",Toast.LENGTH_LONG).show();
                return true;
            case R.id.green:
                this.constraintlayout.setBackgroundColor(Color.rgb(131, 242, 157));
                Toast.makeText(getApplicationContext(),"GREEN colour
selected",Toast.LENGTH_LONG).show();
                return true;
            case R.id.blue:
                this.constraintlayout.setBackgroundColor(Color.rgb(132, 205, 245));
                Toast.makeText(getApplicationContext(),"BLUE colour
selected",Toast.LENGTH_LONG).show();
                return true;
            default: return false;
        }
    }
}

```

OUTPUT:

LATEST APPLICATIONS: Menus are used in many latest applications be it any informative application like government DigiLock application or any entertainment application like Netflix and Prime Video.

LEARNING OUTCOME: To add a menu, we have to make a new android resource xml file and then inflate it with our activity main file. We use `onOptionsItemSelected()` and use switch case to perform different actions on different option selection.