## **INDRAPRASTHA COLLEGE FOR WOMEN**

**UNIVERSITY OF DELHI** 



# AP ASSIGNMENT

# **TITLE OF THE APP: - CGST APP**

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# PURPOSE OF THE APPLICATION

C-Currency Converter
G-GST Calculator
S-Stop Watch

**T-Temperature Converter** 

CGST is a multi-purpose application equipped with various features like Conversion of money or local E-Currency, GST calculator for easy and quick tax calculation, Stop Watch and Temperature converter. The general-purpose of our combined CGST app is to provide quick and easy way for the user to use.

#### (I) Currency Convertor

The purpose of this component in the CGST app is to do correct estimation of the value efficiently. It is designed to convert one currency into another in order to check its corresponding value. In order to convert one currency into another, a user enters an amount of money (e.g. '1000') and chooses the currency he/she wishes to check the monetary value of (e.g. 'United States Dollar'). After that, the user selects one, or sometimes several other currencies, he/she would like to see the result in. The application software then calculates and displays the corresponding amount of money.

#### (II) GST Calculator

The purpose of this component in the CGST app is to calculate indirect tax imposed in India which is levied on the supply of goods and services. GST calculator is a ready-to-use calculator to compute the GST payable for a month or quarter. This calculator can be used by different types of users, such as buyers, manufacturers, and wholesalers.

GST calculators is an easy to use too which can

1. determine the gross or net product price on percentage-based GST rates

2. saves time and reduces the chances of human error while computing the total cost of goods and services.

#### (III) Stop Watch

The purpose of this component in the CGST app is to measure the amount of time that elapses between its activation and deactivation.

#### (IV) Temperature Converter

The purpose of this component in the CGST app is to convert the temperature from Fahrenheit to Celsius, Celsius to Kelvin, Fahrenheit to Kelvin and vice versa.

CGST is an easy to use tool, with

- Reliability
- Efficient & Effective
- Time saving device
- Robustness

# **COMPONENTS OF THE APP**

## 1. Basic Components

## 1.1 Activity: -

The Activity class is a crucial component of an Android app, and the way activities are launched and put together is a fundamental part of the platform's application model. Unlike programming paradigms in which apps are launched with a main() method, the Android system initiates code in an Activity instance by invoking specific callback methods that correspond to specific stages of its lifecycle.

The Activity class is designed to facilitate this paradigm. When one app invokes another, the calling app invokes an activity in the other app, rather than the app as an atomic whole. In this way, the activity serves as the entry point for an app's interaction with the user. You implement an activity as a subclass of the Activity class.

Most apps contain multiple screens, which means they comprise multiple activities. Typically, one activity in an app is specified as the main activity, which is the first screen to appear when the user launches the app. Each activity can then start another activity in order to perform different actions. For example, the main activity in a simple e-mail app may provide the screen that shows an e-mail inbox.

From there, the main activity might launch other activities that provide screens for tasks like writing e-mails and opening individual e-mails.

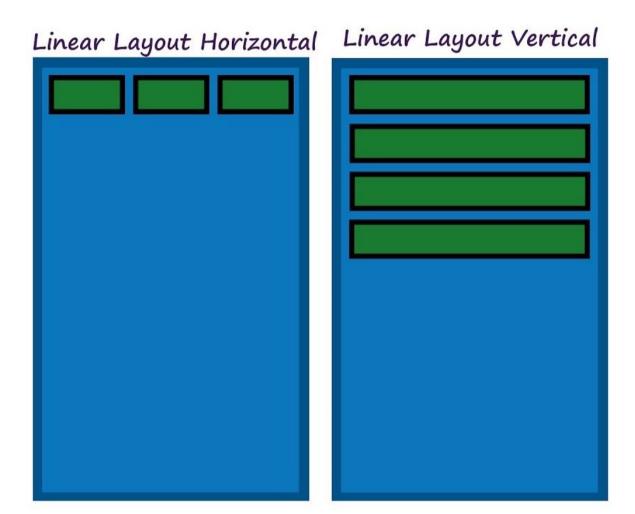
Although activities work together to form a cohesive user experience in an app, each activity is only loosely bound to the other activities; there are usually minimal dependencies among the activities in an app. In fact, activities often start up activities belonging to other apps. For example, a browser app might launch the Share activity of a social-m

For example, a browser app might launch the Share activity of a social-media app.

## 2. Additional Component

## 2.1 Linear Layout: -

The Linear Layout is the most basic layout, and it arranges its elements sequentially, either horizontally or vertically. To arrange controls within a linear layout, the following attributes are used: android:orientation—Used for arranging the controls in the container in horizontal or vertical order.



#### 2.2 Views

#### 2.2.1 Button: -

A push-button that can be pressed, or clicked, by the user to perform an action. A button consists of text or an icon (or both text and an icon) that communicates what action occurs when the user touches it. Depending on whether you want a button with text, an icon, or both, you can create the button in your layout in three ways:

- 1. With text, using the Button class
- 2. With an icon, using the ImageButton class
- 3. With text and an icon, using the Button class with the android:drawableLeft attribute.

Key classes are the following:

- 1. Button
- 2. ImageButton



#### 2.2.2 Text View: -

This control is used to display text to the user. A Text View displays text to the user and optionally allows them to edit it. A Text View is a complete text editor, however the basic class is configured to not allow editing.

#### 2.2.3 Edit Text: -

Edit Text is a predefined subclass of Text View that includes rich editing capabilities. A Edit Text is an overlay over Text View that configures itself to be editable. It is the predefined subclass of Text View that includes rich editing capabilities.

A user interface element for entering and modifying text.

Choosing the input type configures the keyboard type that is shown, acceptable characters, and appearance of the edit text. For example, if you want to accept a secret number, like a unique pin or serial number, you can set input Type to "numericPassword". An inputType of "numericPassword" results in an edit text that accepts numbers only, shows a numeric keyboard when focused, and masks the text that is entered for privacy.

Full Name		
Enter Full Name		
Email		
Age		
Password		

#### 2.3 Resources: -

#### 2.3.1 Drawable: -

A drawable resource is a general concept for a graphic that can be drawn to the screen and which you can retrieve with APIs such as getDrawable(int) or apply to another XML resource with attributes such as android:drawable and android:icon

A drawable resource is a general concept for a graphic that can be drawn to the screen. Drawables are used to define shapes, colors, borders, gradients, etc. which can then be applied to views within an Activity.

This is typically used for customizing the view graphics that are displayed within a particular view or context. Drawables tend to be defined in XML and can then be applied to a view via XML or Java.

### 2.3.2 String: -

A string resource provides text strings for your application with optional text styling and formatting. There are three types of resources that can provide your application with strings. All strings are capable of applying some styling markup and formatting arguments.

#### 2.3.3 Color: -

A color value defined in XML. The color is specified with an RGB value and alpha channel. You can use a color resource any place that accepts a hexadecimal color value. You can also use a color resource when a drawable resource is expected in XML.

A color is a simple resource that is referenced using the value provided in the name attribute (not the name of the XML file). As such, you can combine color resources with other simple resources in the one XML file, under one <resources> element.

# **USER INTERFACE OF THE APP**

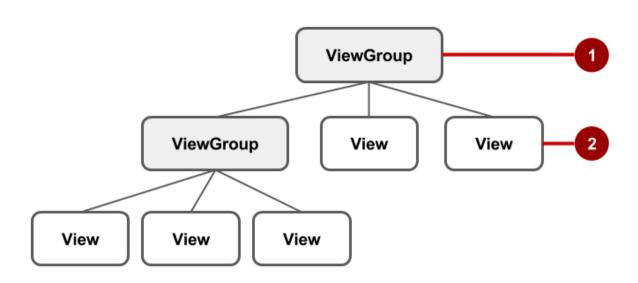
Generally, every application is combination of View and ViewGroup. As we know, an android application contains a large number of activities and we can say each activity is one page of the application. So, each activities contains multiple user interface components and those components are the instances of the View and ViewGroup.

The graphical user interface for an Android app is built using a hierarchy of View and ViewGroup objects. View objects are usually UI widgets such as buttons or text fields and ViewGroup objects are invisible view containers that define how the child views are laid out, such as in a grid or a vertical list.

Android provides an XML vocabulary that corresponds to the subclasses of View and ViewGroup so we can define UI in XML using a hierarchy of UI elements.

A View is defined as the user interface which is used to create an interactive UI components such as TextView, EditText, Radio Button, etc. and it responsible for event handling and drawing. The basic building block for user interface is a View object which is

- created from the View class and occupies a rectangular area on the screen and is responsible for drawing and event handling.
- View is the base class for widgets, which are used to create interactive UI components like buttons, text fields, etc.
- A ViewGroup act as a base class for layouts and layouts parameters which hold other Views or ViewGroups and to define the layout properties.
- The ViewGroup is a subclass of View and provides invisible container that hold other Views or other ViewGroups and define their layout properties.
- At third level we have different layouts which are subclasses of ViewGroup class and a typical layout defines the visual structure for an Android user interface and can be created either at run time using View/ViewGroup objects or you can declare your layout using simple XML file main\_layout.xml which is located in the res/layout folder of your project.



**Figure 1.** Illustration of how ViewGroup objects form branches in the layout and contain other View objects.

# CODE OF THE APP

### **Activity\_Main.Xml**

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"</pre>
   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: gravity="center"
   android: orientation="vertical"
   android:background="@drawable/muskan"
   tools:context=".MainActivity">
   <LinearLayout</pre>
       android:layout_width="wrap_content"
       android:layout height="wrap content"
       android:orientation="horizontal">
       <Button
           android:id="@+id/button1"
           android:layout width="wrap content"
           android:layout_height="wrap_content"
           android:text="CURRENCY CONVERTER"
           android:textSize="20dp"/>
   </LinearLayout>
   <LinearLayout</pre>
       android:layout width="wrap content"
       android:layout height="wrap_content"
       android:orientation="horizontal">
       <Button
           android:id="@+id/button2"
           android:layout width="wrap content"
           android:layout height="wrap content"
           android:text="GST CALCULATOR"
           android:layout marginTop="20dp"
           android:textSize="20dp"/>
   </LinearLayout>
   <LinearLayout</pre>
       android:layout width="wrap content"
       android:layout height="wrap content"
       android:orientation="horizontal">
       <Button
           android:id="@+id/button3"
           android:layout width="wrap content"
           android: layout height="wrap_content"
           android:text="STOP WATCH"
           android:layout marginTop="20dp"
           android:textSize="20dp"/>
   </LinearLayout>
   <LinearLayout</pre>
       android:layout width="wrap content"
```

```
android:layout_height="wrap_content"
android:orientation="horizontal">

<Button
    android:id="@+id/button4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="TEMPERATURE CONVERTER"
    android:layout_marginTop="20dp"
    android:textSize="20dp"/>
</LinearLayout>
```

## **MainActivity.java**

```
package com.example.currencyconverter;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity {
   public Button b1,b2,b3,b4;
   @Override
   protected void onCreate(Bundle savedInstanceState) {
       super.onCreate(savedInstanceState);
       setContentView(R.layout.activity main);
       b1 = findViewById(R.id.button1);
       b2 = findViewById(R.id.button2);
       b3 = findViewById(R.id.button3);
       b4 = findViewById(R.id.button4);
       b1.setOnClickListener(new View.OnClickListener() {
           @Override
           public void onClick(View view) {
               openActivity();
       });
       b2.setOnClickListener(new View.OnClickListener() {
           @Override
           public void onClick(View view) {
               openActivity2();
       });
       b3.setOnClickListener(new View.OnClickListener() {
           @Override
           public void onClick(View view) {
               openActivity3();
       });
       b4.setOnClickListener(new View.OnClickListener() {
           @Override
           public void onClick(View view) {
               openActivity4();
```

```
});
   }
       public void openActivity(){
           Intent intent = new Intent(this,Activity1.class);
           startActivity(intent);
       public void openActivity2(){
           Intent intent = new Intent(this,Activity2.class);
           startActivity(intent);
  public void openActivity3(){
       Intent intent = new Intent(this,Activity3.class);
       startActivity(intent);
  public void openActivity4(){
       Intent intent = new Intent(this,Activity4.class);
       startActivity(intent);
   }
}
```

## Activity\_1.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"</pre>
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:gravity="center"
android:orientation="vertical"
   android:background="@drawable/muskan"
tools:context=".MainActivity">
<LinearLayout</pre>
   android:layout width="wrap content"
   android:layout height="wrap content"
   android:orientation="horizontal">
   <TextView
       android:layout width="wrap content"
       android:layout height="wrap_content"
       android:textSize="40dp"
       android:text="Currency Converter"
       android:textColor="@color/black"
       android: textStyle="bold"/>
</LinearLayout>
<LinearLayout</pre>
   android:layout_width="wrap_content"
   android:layout height="wrap content"
   android:layout marginTop="20dp"
   android:orientation="horizontal">
   <TextView
       android:layout width="wrap content"
       android:layout height="wrap content"
       android:text="Enter The Amount :"
       android:textSize="20dp"
       android:textStyle="bold"
```

```
android:textColor="@color/black"/>
   <EditText
       android:id="@+id/txtamount"
       android:layout width="wrap_content"
       android: layout height="wrap content"
       android:hint="****"
       android:textColor="@color/black"
       android:ems="10"/>
</LinearLayout>
<LinearLayout</pre>
   android:layout width="wrap content"
   android:layout height="wrap content"
   android: orientation="horizontal">
   <TextView
       android:layout width="wrap content"
       android: layout height="wrap content"
       android:text="From :"
       android:textColor="@color/black"
       android: textSize="20dp"
       android:textStyle="bold"/>
   <Spinner
       android:id="@+id/spFrom"
       android:layout width="wrap content"
       android:layout height="wrap content"
       android:ems="10"/>
</LinearLayout>
<LinearLayout</pre>
   android:layout width="wrap content"
   android:layout height="wrap content"
   android:orientation="horizontal">
   <TextView
       android:layout_width="wrap_content"
       android:layout height="wrap content"
       android:text="To:"
       android:textColor="@color/black"
       android:textSize="20dp"
       android:textStyle="bold"/>
   <Spinner
       android:id="@+id/spTo"
       android:layout_width="wrap_content"
       android:layout height="wrap content"
       android:ems="10"/>
</LinearLayout>
<LinearLayout</pre>
   android:layout width="wrap content"
   android:layout height="wrap content"
   android:orientation="horizontal">
   <Button
       android:id="@+id/button"
       android:layout_width="wrap_content"
       android:layout height="wrap content"
       android: text="Convert"
       android:background="@color/teal 200"/>
</LinearLayout>
```

#### </LinearLayout>

### <u>Activity1.java</u>

```
package com.example.currencyconverter;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.ArrayAdapter;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Spinner;
import android.widget.Toast;
import java.util.Collections;
public class Activity1 extends AppCompatActivity {
   Spinner sp1, sp2;
   Button b1;
   EditText e1;
   @Override
   protected void onCreate(Bundle savedInstanceState) {
       super.onCreate(savedInstanceState);
       setContentView(R.layout.activity 1);
       e1 = findViewById(R.id.txtamount);
       b1 = findViewById(R.id.button);
       sp1 = findViewById(R.id.spFrom);
       sp2 = findViewById(R.id.spTo);
       String[] from = {"INR", "USD", "SriLankan Rupees", "Euro", "Japanese
Yen", "British Pound"};
       ArrayAdapter ad = new
ArrayAdapter<String>(this, R.layout.support simple spinner dropdown item, fro
m);
       sp1.setAdapter(ad);
       String[] to1 = {"INR", "USD", "SriLankan Rupees", "Euro", "Japanese
Yen", "British Pound"};
       ArrayAdapter ad1 = new
ArrayAdapter<String>(this,R.layout.support_simple_spinner_dropdown item,tol
       sp2.setAdapter(ad1);
       b1.setOnClickListener(new View.OnClickListener() {
           @Override
           public void onClick(View v) {
               Double tot;
               Double amount = Double.parseDouble(e1.getText().toString());
               if(sp1.getSelectedItem().toString() == "INR" &&
sp2.getSelectedItem().toString() == "USD"){
                   tot = amount * 0.013;
                   Toast.makeText(getApplicationContext(),tot.toString(),To
ast. LENGTH LONG) . show();
               if(sp1.getSelectedItem().toString() == "INR" &&
sp2.getSelectedItem().toString() == "SriLankan Rupees") {
                   tot = amount * 2.59;
```

```
Toast.makeText(getApplicationContext(),tot.toString(),To
ast. LENGTH LONG) . show();
               if(sp1.getSelectedItem().toString() == "INR" &&
sp2.getSelectedItem().toString() == "Euro"){
                   tot = amount * 0.011;
                   Toast.makeText(getApplicationContext(),tot.toString(),To
ast. LENGTH LONG) . show();
               if(sp1.getSelectedItem().toString() == "INR" &&
sp2.getSelectedItem().toString() == "Japanese Yen"){
                   tot = amount * 1.45;
                   Toast.makeText(getApplicationContext(), tot.toString(), To
ast. LENGTH LONG) . show();
               if(sp1.getSelectedItem().toString() == "INR" &&
sp2.getSelectedItem().toString() == "British Pound"){
                   tot = amount * 0.0096;
                   Toast.makeText(getApplicationContext(),tot.toString(),To
ast. LENGTH LONG) . show();
               if(sp1.getSelectedItem().toString() == "USD" &&
sp2.getSelectedItem().toString() == "British Pound"){
                   tot = amount * 0.72;
                   Toast.makeText(getApplicationContext(),tot.toString(),To
ast. LENGTH LONG) . show();
               if(sp1.getSelectedItem().toString() == "USD" &&
sp2.getSelectedItem().toString() == "INR"){
                   tot = amount * 74.93;
                   Toast.makeText(getApplicationContext(),tot.toString(),To
ast. LENGTH LONG) . show();
               if(sp1.getSelectedItem().toString() == "USD" &&
sp2.getSelectedItem().toString() == "Euro"){
                   tot = amount * 0.83;
                   Toast.makeText(getApplicationContext(),tot.toString(),To
ast. LENGTH LONG) . show();
               if(sp1.getSelectedItem().toString() == "USD" &&
sp2.getSelectedItem().toString() == "SriLankan Rupees") {
                   tot = amount * 193;
                   Toast.makeText(getApplicationContext(),tot.toString(),To
ast. LENGTH LONG) . show();
               if(sp1.getSelectedItem().toString() == "USD" &&
sp2.getSelectedItem().toString() == "Japanese Yen"){
                   tot = amount * 108.79;
                   Toast.makeText(getApplicationContext(),tot.toString(),To
ast. LENGTH LONG) . show();
               if(sp1.getSelectedItem().toString() == "SriLankan Rupees" &&
sp2.getSelectedItem().toString() == "Japanese Yen") {
                   tot = amount * 0.56;
                   Toast.makeText(getApplicationContext(),tot.toString(),To
ast. LENGTH LONG) . show();
               if(sp1.getSelectedItem().toString() == "SriLankan Rupees" &&
sp2.getSelectedItem().toString() == "Euro"){
                   tot = amount * 0.0043;
```

```
Toast.makeText(getApplicationContext(),tot.toString(),To
ast. LENGTH LONG) . show();
               if(sp1.getSelectedItem().toString() == "SriLankan Rupees" &&
sp2.getSelectedItem().toString() == "INR"){
                   tot = amount * 0.39;
                   Toast.makeText(getApplicationContext(),tot.toString(),To
ast. LENGTH LONG) . show();
               if(sp1.getSelectedItem().toString() == "SriLankan Rupees" &&
sp2.getSelectedItem().toString() == "USD"){
                   tot = amount * 0.0052;
                   Toast.makeText(getApplicationContext(),tot.toString(),To
ast. LENGTH LONG) . show();
               if(sp1.getSelectedItem().toString() == "SriLankan Rupees" &&
sp2.getSelectedItem().toString() == "British Pound"){
                   tot = amount * 0.0038;
                   Toast.makeText(getApplicationContext(),tot.toString(),To
ast. LENGTH LONG) . show();
               if(sp1.getSelectedItem().toString() == "British Pound" &&
sp2.getSelectedItem().toString() == "SriLankan Rupees"){
                   tot = amount * 266.66;
                   Toast.makeText(getApplicationContext(),tot.toString(),To
ast. LENGTH LONG) . show();
               if(sp1.getSelectedItem().toString() == "British Pound" &&
sp2.getSelectedItem().toString() == "INR"){
                   tot = amount * 103.04;
                   Toast.makeText(getApplicationContext(),tot.toString(),To
ast. LENGTH LONG) . show();
               if(sp1.getSelectedItem().toString() == "British Pound" &&
sp2.getSelectedItem().toString() == "USD"){
                   tot = amount * 1.38;
                   Toast.makeText(getApplicationContext(),tot.toString(),To
ast. LENGTH LONG) . show();
               if(sp1.getSelectedItem().toString() == "British Pound" &&
sp2.getSelectedItem().toString() == "Euro"){
                   tot = amount * 1.15;
                   Toast.makeText(getApplicationContext(),tot.toString(),To
ast. LENGTH LONG) . show();
               if(sp1.getSelectedItem().toString() == "British Pound" &&
sp2.getSelectedItem().toString() == "Japanese Yen") {
                   tot = amount * 150.38;
                   Toast.makeText(getApplicationContext(),tot.toString(),To
ast. LENGTH LONG) . show();
               if(sp1.getSelectedItem().toString() == "Euro" &&
sp2.getSelectedItem().toString() == "Japanese Yen") {
                   tot = amount * 130.33;
                   Toast.makeText(getApplicationContext(),tot.toString(),To
ast. LENGTH LONG) . show();
               if(sp1.getSelectedItem().toString() == "Euro" &&
sp2.getSelectedItem().toString() == "INR"){
                   tot = amount * 89.22;
```

```
Toast.makeText(getApplicationContext(),tot.toString(),To
ast. LENGTH LONG) . show();
               if(sp1.getSelectedItem().toString() == "Euro" &&
sp2.getSelectedItem().toString() == "USD"){
                   tot = amount * 1.20;
                   Toast.makeText(getApplicationContext(),tot.toString(),To
ast. LENGTH LONG) . show();
               if(sp1.getSelectedItem().toString() == "Euro" &&
sp2.getSelectedItem().toString() == "British Pound"){
                   tot = amount * 0.87;
                   Toast.makeText(getApplicationContext(), tot.toString(), To
ast. LENGTH LONG) . show();
               if(sp1.getSelectedItem().toString() == "Euro" &&
sp2.getSelectedItem().toString() == "SriLankan Rupees") {
                   tot = amount * 231.20;
                   Toast.makeText(getApplicationContext(), tot.toString(), To
ast. LENGTH LONG) . show();
               if(sp1.getSelectedItem().toString() == "Japanese Yen" &&
sp2.getSelectedItem().toString() == "SriLankan Rupees"){
                   tot = amount * 1.77;
                   Toast.makeText(getApplicationContext(),tot.toString(),To
ast. LENGTH LONG) . show();
               if(sp1.getSelectedItem().toString() == "Japanese Yen" &&
sp2.getSelectedItem().toString() == "INR"){
                   tot = amount * 0.68;
                   Toast.makeText(getApplicationContext(),tot.toString(),To
ast. LENGTH LONG) . show();
               if(sp1.getSelectedItem().toString() == "Japanese Yen" &&
sp2.getSelectedItem().toString() == "USD"){
                   tot = amount * 0.0092;
                   Toast.makeText(getApplicationContext(), tot.toString(), To
ast. LENGTH LONG) . show();
               if(sp1.getSelectedItem().toString() == "Japanese Yen" &&
sp2.getSelectedItem().toString() == "British Pound"){
                   tot = amount * 0.0067;
                   Toast.makeText(getApplicationContext(),tot.toString(),To
ast. LENGTH LONG) . show();
               if(sp1.getSelectedItem().toString() == "Japanese Yen" &&
sp2.getSelectedItem().toString() == "Euro"){
                   tot = amount * 0.0077;
                   Toast.makeText(getApplicationContext(), tot.toString(), To
ast. LENGTH LONG) . show();
       });
   }
```

### **Activity 2.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout</pre>
   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:background="@drawable/muskan"
   tools:context=".MainActivity">
   <TextView
       android:layout width="match parent"
       android:layout height="wrap content"
       android: textColor="@color/black"
       android:text="GST CALCULATOR APP"
       android:textStyle="bold"
       android:layout marginTop="20sp"
       android:gravity="center horizontal"
       android:textSize="30sp"
       app:layout_constraintBottom_toBottomOf="parent"
       app:layout_constraintLeft_toLeftOf="parent"
       app:layout_constraintRight_toRightOf="parent"
       app:layout constraintTop toTopOf="parent" />
  <TextView
       android:layout width="match parent"
       android:layout height="50dp"
       android:id="@+id/txtView1"
       android:text="Enter the amount"
       android: textColor="@color/black"
       android:layout marginTop="30sp"
       android:gravity="center horizontal"
       android:textSize="25sp"
       app:layout constraintBottom toBottomOf="parent"
       app:layout constraintLeft toLeftOf="parent"
       app:layout constraintRight toRightOf="parent"
       app:layout constraintTop toTopOf="parent" />
   <EditText
       android:id="@+id/txt amount"
       android:layout width="match parent"
       android:layout height="50dp"
       android:hint="Amount"
       android:textColor="@color/black"
       android:gravity="center horizontal"
       android:textSize="25sp"
       android:layout below="@+id/txtView1"
  </EditText>
   <TextView
       android:id="@+id/txtView2"
       android:layout_width="match_parent"
       android:layout height="50dp"
       android:layout below="@+id/txt amount"
       android:textColor="@color/black"
```

```
android:layout marginTop="40sp"
       android:gravity="center horizontal"
       android:text="Enter the GST Percent"
       android:textSize="25sp" />
   <EditText
       android:id="@+id/txt gst percent"
       android:layout width="match parent"
       android:layout height="50dp"
       android:hint="GST %"
       android:textColor="@color/black"
       android:layout below="@+id/txtView2"
       android:gravity="center horizontal"
       android:textSize="25sp">
   </EditText>
   <TextView
       android:layout marginTop="15sp"
       android:id="@+id/txt gst amount"
       android:layout width="match parent"
       android:layout height="50dp"
       android: textColor="@color/black"
       android:layout below="@+id/txt_gst_percent"
       android:textSize="20sp" />
   <TextView
       android:id="@+id/txt_total_amount"
       android:layout_width="match_parent"
       android:layout_height="50dp"
       android:textColor="@color/black"
       android:layout below="@+id/txt gst amount"
       android:textSize="20sp" />
   <Button
       android:id="@+id/btn_calculate"
       android:layout width="wrap content"
       android:layout height="50dp"
       android:layout below="@+id/txt total amount"
       android:layout marginLeft="100dp"
       android: text="Calculate"
       android:textAlignment="center"
       android:textSize="20sp" />
</LinearLayout>
Activity2.java
package com.example.currencyconverter;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
```

import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;

```
public class Activity2 extends AppCompatActivity {
   TextView txt gst amount, txt total amount;
   EditText txt amount, txt gst percent;
   Button btn calculate;
   @Override
   protected void onCreate(Bundle savedInstanceState) {
       super.onCreate(savedInstanceState);
       setContentView(R.layout.activity 2);
       txt amount=findViewById(R.id.txt amount);
       txt gst amount=findViewById(R.id.txt gst amount);
       txt gst percent=findViewById(R.id.txt gst percent);
       txt total amount=findViewById(R.id.txt total amount);
       btn calculate=findViewById(R.id.btn calculate);
       btn calculate.setOnClickListener(new View.OnClickListener() {
           public void onClick(View v) {
total=Float.parseFloat(txt amount.getText().toString());
               float
gst_percent=Float.parseFloat(txt_gst_percent.getText().toString());
               float gst_amount=(gst_percent / 100)*total;
               txt gst amount.setText("GST Amount is: " + gst amount);
               float total amount=total+gst amount;
               txt total amount.setText("The Net Total Amount: " +
total amount);
       });
   }
}
```

## **Activity 3.Xml**

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout</pre>
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="@drawable/muskan"
   tools:context=".MainActivity">
   <RelativeLayout
       android:layout width="match parent"
       android:layout height="match parent">
       <TextView
           android:id="@+id/text1"
           android:layout width="wrap content"
           android:layout_height="wrap_content"
           android: text="0:00:00"
           android:textColor="@color/black"
           android:textSize="60sp"
           android:layout centerHorizontal="true"
           android:layout marginTop="200dp"/>
```

```
<com.google.android.material.floatingactionbutton.FloatingActionButt</pre>
on
           android:id="@+id/stop"
           android:layout width="wrap content"
           android:layout height="wrap content"
           android:src="@drawable/stop"
           android:layout margin="72dp"
           android:layout alignParentStart="true"
           android:layout alignParentBottom="true"
           android:onClick="onStop"/>
       <com.google.android.material.floatingactionbutton.FloatingActionButt</pre>
on
           android:id="@+id/start"
           android:layout width="wrap content"
           android:layout height="wrap content"
           android:src="@drawable/play"
           android:layout margin="72dp"
           android:layout centerInParent="true"
           android:layout alignParentBottom="true"
           android:onClick="onStart"/>
       <com.google.android.material.floatingactionbutton.FloatingActionButt</pre>
on
           android:id="@+id/reset"
           android:layout width="wrap content"
           android:layout height="wrap content"
           android: src="@drawable/refresh"
           android:layout margin="72dp"
           android:layout alignParentEnd= "true"
           android:layout alignParentBottom="true"
           android:onClick="onReset"/>
   </RelativeLayout>
</androidx.constraintlayout.widget.ConstraintLayout>
```

## **Activity3.java**

```
package com.example.currencyconverter;
import androidx.annotation.NonNull;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.os.Handler;
import android.os.PersistableBundle;
import android.view.View;
import android.widget.TextView;
import java.util.Locale;
public class Activity3 extends AppCompatActivity {
  private int seconds;
  private boolean running;
  private boolean wasRunning;
   @Override
   protected void onCreate(Bundle savedInstanceState) {
       super.onCreate(savedInstanceState);
```

```
setContentView(R.layout.activity 3);
    if (savedInstanceState!=null) {
        savedInstanceState.getInt("seconds");
        savedInstanceState.getBoolean("running");
        savedInstanceState.getBoolean("wasRunning");
    runTimer();
public void onStart(View view) {
    running=true;
public void onStop(View view) {
    running=false;
public void onReset(View view) {
    running=false;
    seconds=0;
@Override
protected void onPause() {
    super.onPause();
    wasRunning=running;
    running=false;
}
@Override
protected void onResume() {
    super.onResume();
    if (wasRunning) {
        running=true;
    }
}
@Override
public void onSaveInstanceState(@NonNull Bundle outState) {
    super.onSaveInstanceState(outState);
    outState.putInt("seconds", seconds);
    outState.putBoolean("running", running);
    outState.putBoolean("wasRunning", wasRunning);
private void runTimer() {
    TextView timeView=findViewById(R.id.text1);
    Handler handler=new Handler();
    handler.post(new Runnable() {
        @Override
        public void run() {
            int hours=seconds / 3600;
            int minutes=(seconds % 36000) / 60;
            int secs=seconds%60;
            String time=String.format(Locale.getDefault(),
                    "%d:%02d:%02d",
                    hours, minutes, secs);
            timeView.setText(time);
            if(running){
                seconds++;
            }
```

```
handler.postDelayed(this,1000);
}
});
}
```

### **Activity 4.Xml:**

<Button

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout</pre>
  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:background="@drawable/muskan"
   tools:context=".MainActivity">
  <TextView
       android:id="@+id/textView"
       android:layout width="match parent"
       android:layout height="wrap content"
       android:text="Temperature Convertor"
       android: textSize="30dp"
       android:textColor="@color/black"
       android:textStyle="bold"
       android: textAlignment="center"
       android:layout marginTop="20dp"/>
  <EditText
       android:id="@+id/enterTemp"
       android:layout width="250dp"
       android:layout height="wrap content"
       android:layout gravity="center"
       android:ems="10"
       android:inputType="numberDecimal"
       android:textColorHint="@color/black"
       android:hint="Enter Temperature"
       android: textAlignment="center"
       android: textSize="20dp"
       android:layout marginTop="10dp"/>
  <Button
       android:id="@+id/cToF"
       android:layout width="325dp"
       android:layout height="wrap_content"
       android:text="Celsius To Fahrenheit"
       android:textAlignment="center"
       android: textSize="10dp"
       android:layout gravity="center"
       android:layout marginTop="10dp"
       android: textAllCaps="false"/>
```

```
android:id="@+id/fToC"
    android:layout width="325dp"
    android:layout height="wrap content"
    android:text="Fahrenheit To Celsius"
    android: textAlignment="center"
    android:textSize="10dp"
    android:layout gravity="center"
    android:layout marginTop="5dp"
    android: textAllCaps="false"/>
<Button
    android:id="@+id/cToK"
    android:layout width="325dp"
    android:layout height="wrap content"
    android:text="Celcius To Kelvin"
    android: textAlignment="center"
    android:textSize="10dp"
    android:layout gravity="center"
    android:layout marginTop="5dp"
    android: textAllCaps="false"/>
<Button
    android:id="@+id/kToC"
    android:layout_width="325dp"
    android:layout_height="wrap_content"
    android:text="Kelvin To Celcius"
    android:textAlignment="center"
    android: textSize="10dp"
    android:layout gravity="center"
    android:layout marginTop="5dp"
    android:textAllCaps="false"/>
<Button
    android:id="@+id/fToK"
    android:layout_width="325dp"
    android:layout height="wrap content"
    android:text="Fehrenheit To Kelvin"
    android: textAlignment="center"
    android:textSize="10dp"
    android:layout gravity="center"
    android:layout marginTop="5dp"
    android:textAllCaps="false"/>
<Button
    android:id="@+id/kToF"
    android:layout width="325dp"
    android:layout height="wrap content"
    android:text="Kelvin To Fehrenheit"
    android: textAlignment="center"
    android:textSize="10dp"
    android:layout gravity="center"
    android:layout marginTop="5dp"
    android:textAllCaps="false"/>
<TextView
    android:id="@+id/result"
    android:layout width="wrap content"
    android:layout_height="wrap_content"
    android:text="0 Degrees"
    android:textAlignment="center"
```

```
android:textColor="@color/black"
android:textSize="25dp"
android:layout_gravity="center"
android:layout_marginTop="15dp"/>
</LinearLayout>
```

## **Activity4.java**

```
package com.example.currencyconverter;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.widget.*;
import android.view.View;
public class Activity4 extends AppCompatActivity {
   private Button cToF, fToC, cToK, kToC, fToK, kToF;
   private TextView result;
   private EditText enterTemp;
   double result0;
   @Override
   protected void onCreate(Bundle savedInstanceState) {
       super.onCreate(savedInstanceState);
       setContentView(R.layout.activity 4);
       cToF = findViewById(R.id.cToF);
       fToC = findViewById(R.id.fToC);
       cToK = findViewById(R.id.cToK);
       kToC = findViewById(R.id.kToC);
       kToF = findViewById(R.id.kToF);
       fToK = findViewById(R.id.fToK);
       result = findViewById(R.id.result);
       enterTemp = findViewById(R.id.enterTemp);
       cToF.setOnClickListener(new View.OnClickListener() {
           @Override
           public void onClick(View v) {
               double temp =
Double.parseDouble(enterTemp.getText().toString());
               result0 = (temp *1.8) + 32;
               result.setText(String.valueOf(result0));
       });
       fToC.setOnClickListener(new View.OnClickListener() {
           @Override
           public void onClick(View v) {
               double temp =
Double.parseDouble(enterTemp.getText().toString());
               result0 = (temp - 32) / 1.8;
               result.setText(String.valueOf(result0));
           }
       });
       cToK.setOnClickListener(new View.OnClickListener() {
```

```
@Override
           public void onClick(View v) {
               double temp =
Double.parseDouble(enterTemp.getText().toString());
               result0 = temp + 273.15;
               result.setText(String.valueOf(result0));
       });
       kToC.setOnClickListener(new View.OnClickListener() {
           @Override
           public void onClick(View v) {
               double temp =
Double.parseDouble(enterTemp.getText().toString());
               result0 = temp - 273.15;
               result.setText(String.valueOf(result0));
           }
       });
       fToK.setOnClickListener(new View.OnClickListener() {
           public void onClick(View v) {
               double temp =
Double.parseDouble(enterTemp.getText().toString());
               result0 = ((temp - 32)*5) / 9 + 273.15;
               result.setText(String.valueOf(result0));
           }
       });
       kToF.setOnClickListener(new View.OnClickListener() {
           @Override
           public void onClick(View v) {
               double temp =
Double.parseDouble(enterTemp.getText().toString());
               result0 = ((temp - 273.15)*9) / 5 + 32;
               result.setText(String.valueOf(result0));
           }
       });
   }
```

## ic launcher background.xml

```
<?xml version="1.0" encoding="utf-8"?>
<vector xmlns:android="http://schemas.android.com/apk/res/android"
    android:width="108dp"
    android:viewportWidth="108"
    android:viewportHeight="108">
    <path
        android:fillColor="#3DDC84"
        android:pathData="M0,0h108v108h-108z" />
    <path
        android:fillColor="#00000000"
        android:strokeWidth="0.8"</pre>
```

```
android:strokeColor="#33FFFFFF" />
<path
    android:fillColor="#00000000"
    android:pathData="M19,0L19,108"
    android:strokeWidth="0.8"
    android:strokeColor="#33FFFFFF" />
<path
    android:fillColor="#00000000"
    android:pathData="M29,0L29,108"
    android:strokeWidth="0.8"
    android:strokeColor="#33FFFFFF" />
<path
    android:fillColor="#00000000"
    android:pathData="M39,0L39,108"
    android:strokeWidth="0.8"
    android:strokeColor="#33FFFFFF" />
<path
    android:fillColor="#00000000"
    android:pathData="M49,0L49,108"
    android:strokeWidth="0.8"
    android:strokeColor="#33FFFFFF" />
<path
    android:fillColor="#00000000"
    android:pathData="M59,0L59,108"
    android:strokeWidth="0.8"
    android:strokeColor="#33FFFFFF" />
<path</pre>
    android:fillColor="#00000000"
    android:pathData="M69,0L69,108"
    android:strokeWidth="0.8"
    android:strokeColor="#33FFFFFF" />
<path
    android:fillColor="#00000000"
    android:pathData="M79,0L79,108"
    android:strokeWidth="0.8"
    android:strokeColor="#33FFFFFF" />
    android:fillColor="#00000000"
    android:pathData="M89,0L89,108"
    android:strokeWidth="0.8"
    android:strokeColor="#33FFFFFF" />
<path
    android:fillColor="#00000000"
    android:pathData="M99,0L99,108"
    android:strokeWidth="0.8"
    android:strokeColor="#33FFFFFF" />
<path
    android:fillColor="#00000000"
    android:pathData="M0,9L108,9"
    android:strokeWidth="0.8"
    android:strokeColor="#33FFFFFF" />
<path</pre>
    android:fillColor="#00000000"
    android:pathData="M0,19L108,19"
    android:strokeWidth="0.8"
    android:strokeColor="#33FFFFFF" />
<path</pre>
    android:fillColor="#00000000"
    android:pathData="M0,29L108,29"
    android:strokeWidth="0.8"
    android:strokeColor="#33FFFFFF" />
```

```
<path
    android:fillColor="#00000000"
    android:pathData="M0,39L108,39"
    android:strokeWidth="0.8"
    android:strokeColor="#33FFFFFF" />
<path
    android:fillColor="#00000000"
    android:pathData="M0,49L108,49"
    android:strokeWidth="0.8"
    android:strokeColor="#33FFFFFF" />
<path
    android:fillColor="#00000000"
    android:pathData="M0,59L108,59"
    android:strokeWidth="0.8"
    android:strokeColor="#33FFFFFF" />
<path
    android:fillColor="#00000000"
    android:pathData="M0,69L108,69"
    android:strokeWidth="0.8"
    android:strokeColor="#33FFFFFF" />
<path
    android:fillColor="#00000000"
    android:pathData="M0,79L108,79"
    android:strokeWidth="0.8"
    android:strokeColor="#33FFFFFF" />
<path</pre>
    android:fillColor="#00000000"
    android:pathData="M0,89L108,89"
    android:strokeWidth="0.8"
    android:strokeColor="#33FFFFFF" />
<path
    android:fillColor="#00000000"
    android:pathData="M0,99L108,99"
    android:strokeWidth="0.8"
    android:strokeColor="#33FFFFFF" />
<path
    android:fillColor="#00000000"
    android:pathData="M19,29L89,29"
    android:strokeWidth="0.8"
    android:strokeColor="#33FFFFFF" />
<path
    android:fillColor="#00000000"
    android:pathData="M19,39L89,39"
    android:strokeWidth="0.8"
    android:strokeColor="#33FFFFFF" />
<path</pre>
    android:fillColor="#00000000"
    android:pathData="M19,49L89,49"
    android:strokeWidth="0.8"
    android:strokeColor="#33FFFFFF" />
<path</pre>
    android:fillColor="#00000000"
    android:pathData="M19,59L89,59"
    android:strokeWidth="0.8"
    android:strokeColor="#33FFFFFF" />
<path
    android:fillColor="#00000000"
    android:pathData="M19,69L89,69"
    android:strokeWidth="0.8"
    android:strokeColor="#33FFFFFF" />
<path</pre>
```

```
android:fillColor="#00000000"
       android:pathData="M19,79L89,79"
       android:strokeWidth="0.8"
       android:strokeColor="#33FFFFFF" />
   <path
       android:fillColor="#00000000"
       android:pathData="M29,19L29,89"
       android:strokeWidth="0.8"
       android:strokeColor="#33FFFFFF" />
   <path
       android:fillColor="#00000000"
       android:pathData="M39,19L39,89"
       android:strokeWidth="0.8"
       android:strokeColor="#33FFFFFF" />
   <path
       android:fillColor="#00000000"
       android:pathData="M49,19L49,89"
       android:strokeWidth="0.8"
       android:strokeColor="#33FFFFFF" />
   <path
       android:fillColor="#00000000"
       android:pathData="M59,19L59,89"
       android:strokeWidth="0.8"
       android:strokeColor="#33FFFFFF" />
   <path
       android:fillColor="#00000000"
       android:pathData="M69,19L69,89"
       android:strokeWidth="0.8"
       android:strokeColor="#33FFFFFF" />
   <path
       android:fillColor="#00000000"
       android:pathData="M79,19L79,89"
       android:strokeWidth="0.8"
       android:strokeColor="#33FFFFFF" />
</re>
```

## ic launcher foreground.xml

```
<vector xmlns:android="http://schemas.android.com/apk/res/android"</pre>
   xmlns:aapt="http://schemas.android.com/aapt"
   android:width="108dp"
   android:height="108dp"
   android:viewportWidth="108"
   android:viewportHeight="108">
   <path android:pathData="M31,63.928c0,0 6.4,-11 12.1,-13.1c7.2,-2.6 26,-</pre>
1.4 26,-1.4138.1,38.1L107,108.9281-32,-1L31,63.928z">
       <aapt:attr name="android:fillColor">
           <gradient
               android:endX="85.84757"
               android:endY="92.4963"
               android:startX="42.9492"
               android:startY="49.59793"
               android: type="linear">
                   android:color="#44000000"
                   android:offset="0.0" />
                   android:color="#00000000"
                   android:offset="1.0" />
```

```
</gradient>
       </aapt:attr>
   </path>
   <path
       android:fillColor="#FFFFFF"
       android: fillType="nonZero"
       android:pathData="M65.3,45.82813.8,-6.6c0.2,-0.4 0.1,-0.9 -0.3,-
1.1c-0.4, -0.2 -0.9, -0.1 -1.1, 0.31-3.9, 6.7c-6.3, -2.8 -13.4, -2.8 -19.7, 01-
3.9,-6.7c-0.2,-0.4 -0.7,-0.5 -1.1,-0.3C38.8,38.328 38.7,38.828
38.9,39.22813.8,6.6C36.2,49.428 31.7,56.028 31,63.928h46C76.3,56.028
71.8,49.428 65.3,45.828zM43.4,57.328c-0.8,0 -1.5,-0.5 -1.8,-1.2c-0.3,-0.7 -
0.1, -1.5 \ 0.4, -2.1 \\ c0.5, -0.5 \ 1.4, -0.7 \ 2.1, -0.4 \\ c0.7, 0.3 \ 1.2, 1
1.2,1.8C45.3,56.528 44.5,57.328 43.4,57.328L43.4,57.328zM64.6,57.328c-0.8,0
-1.5, -0.5 -1.8, -1.2s - 0.1, -1.5 0.4, -2.1c0.5, -0.5 1.4, -0.7 2.1, -0.4c0.7, 0.3
1.2,1 1.2,1.8C66.5,56.528 65.6,57.328 64.6,57.328L64.6,57.328z"
       android:strokeWidth="1"
       android:strokeColor="#00000000" />
</re>
```

## play.xml

```
<vector android:height="24dp" android:tint="#49C646"
    android:viewportHeight="24" android:viewportWidth="24"
    android:width="24dp"

xmlns:android="http://schemas.android.com/apk/res/android">
    <path android:fillColor="@android:color/white"
android:pathData="M12,2C6.48,2 2,6.48 2,12s4.48,10 10,10 10,-4.48 10,-
10S17.52,2 12,2zM10,16.5v-916,4.5 -6,4.5z"/>
</vector>
```

### refresh.xml

```
<vector android:height="24dp" android:tint="#49C646"
    android:viewportHeight="24" android:viewportWidth="24"
    android:width="24dp"

xmlns:android="http://schemas.android.com/apk/res/android">
        <path android:fillColor="@android:color/white"
android:pathData="M17.65,6.35C16.2,4.9 14.21,4 12,4c-4.42,0 -7.99,3.58 -
7.99,8s3.57,8 7.99,8c3.73,0 6.84,-2.55 7.73,-6h-2.08c-0.82,2.33 -3.04,4 -
5.65,4 -3.31,0 -6,-2.69 -6,-6s2.69,-6 6,-6c1.66,0 3.14,0.69
4.22,1.78L13,11h7V41-2.35,2.35z"/>
</vector>
```

### stop.xml

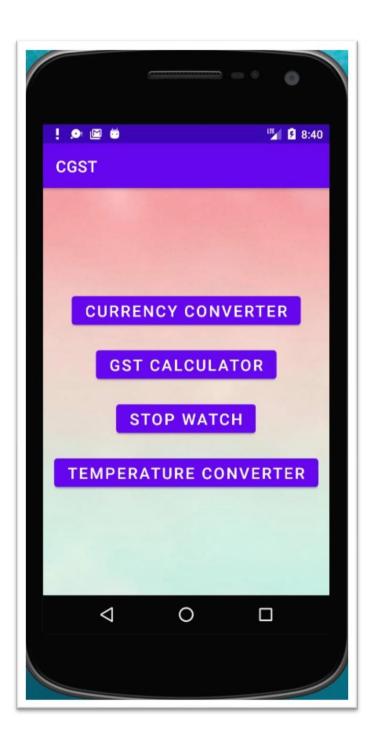
#### colors.xml

### **AndroidManifest.xml**

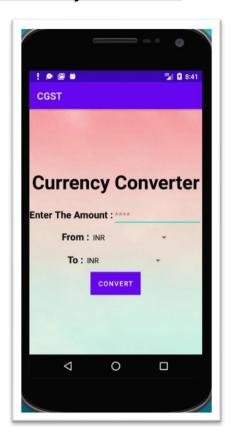
```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"</pre>
   package="com.example.currencyconverter">
   <application
       android:allowBackup="true"
       android:icon="@mipmap/ic launcher"
       android:label="@string/app_name"
       android:roundIcon="@mipmap/ic_launcher_round"
       android:supportsRtl="true"
       android: theme="@style/Theme.CurrencyConverter">
       <activity android:name=".Activity4" />
       <activity android:name=".Activity3" />
       <activity android:name=".Activity2" />
       <activity android:name=".Activity1" />
       <activity android:name=".MainActivity">
           <intent-filter>
               <action android:name="android.intent.action.MAIN" />
               <category android:name="android.intent.category.LAUNCHER" />
           </intent-filter>
       </activity>
   </application>
</manifest>
```

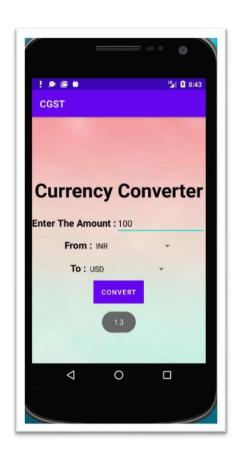
# **OUTPUTS**

# 1. Homepage



## 2. Currency Converter





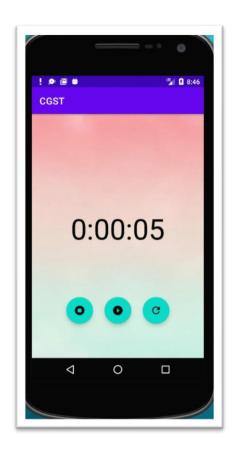
#### 3. GST Calculator





## 4. Stop Watch





# 5. Temperature Converter



