#### PROGRAM 1: VISITCARD

## Activity\_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"</p>
  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"
  tools:context=".MainActivity">
  <TextView
    android:id="@+id/textView"
    android:layout width="wrap content"
    android:layout_height="wrap_content"
    android:layout_alignParentEnd="true"
    android:layout alignParentRight="true"
    android:layout_alignParentBottom="true"
    android:layout_marginStart="17dp"
    android:layout_marginLeft="17dp"
    android:layout_marginTop="17dp"
    android:layout marginEnd="168dp"
    android:layout marginRight="168dp"
    android:layout_marginBottom="498dp"
    android:text="SSIT"
    android:textSize="38dp" />
  <ImageView
    android:id="@+id/imageView"
    android:layout_width="290dp"
    android:layout_height="174dp"
    android:layout alignParentEnd="true"
    android:layout_alignParentRight="true"
    android:layout_alignParentBottom="true"
    android:layout marginEnd="-26dp"
    android:layout_marginRight="-26dp"
    android:layout_marginBottom="517dp"
    app:srcCompat="@drawable/ssit" />
  <View
    android:id="@+id/view"
    android:layout_width="wrap_content"
    android:layout_height="4dp"
    android:layout alignParentBottom="true"
    android:layout_marginBottom="483dp"
    android:background="#4444" />
```

#### <TextView

android:id="@+id/textView2"
android:layout\_width="wrap\_content"
android:layout\_height="wrap\_content"
android:layout\_alignParentEnd="true"
android:layout\_alignParentRight="true"
android:layout\_alignParentBottom="true"
android:layout\_marginEnd="131dp"
android:layout\_marginRight="131dp"
android:layout\_marginBottom="420dp"
android:text="Subhash C S"
android:textSize="30dp"
android:textStyle="bold" />

#### <TextView

android:id="@+id/textView3"
android:layout\_width="wrap\_content"
android:layout\_height="wrap\_content"
android:layout\_alignParentEnd="true"
android:layout\_alignParentRight="true"
android:layout\_alignParentBottom="true"
android:layout\_marginEnd="80dp"
android:layout\_marginRight="80dp"
android:layout\_marginBottom="379dp"
android:text="Assistant Professor-ISE"
android:textSize="25dp"/>

#### <TextView

android:id="@+id/textView4"
android:layout\_width="wrap\_content"
android:layout\_height="wrap\_content"
android:layout\_alignParentEnd="true"
android:layout\_alignParentRight="true"
android:layout\_alignParentBottom="true"
android:layout\_marginEnd="129dp"
android:layout\_marginRight="129dp"
android:layout\_marginBottom="342dp"
android:text="Ph No: 9988776655"
android:textSize="20dp" />

#### <TextView

android:id="@+id/textView5"
android:layout\_width="wrap\_content"
android:layout\_height="wrap\_content"
android:layout\_alignParentEnd="true"
android:layout\_alignParentRight="true"
android:layout\_alignParentBottom="true"
android:layout\_marginEnd="89dp"

```
android:layout_marginRight="89dp"
    android:layout marginBottom="300dp"
    android:text="SSIT,TUMAKURU,572105"
    android:textSize="20dp" />
  <TextView
    android:id="@+id/textView6"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentEnd="true"
    android:layout_alignParentRight="true"
    android:layout alignParentBottom="true"
    android:layout_marginEnd="75dp"
    android:layout_marginRight="75dp"
    android:layout marginBottom="262dp"
    android:text="Email: subhashcs@ssit.edu.in"
    android:textSize="20dp" />
</RelativeLayout>
```

# MainActivity.java

```
package com.example.visit;
```

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

public class MainActivity extends AppCompatActivity {

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



#### PROGRAM 2: SIMPLE CALCULATOR

## Activity main.xml

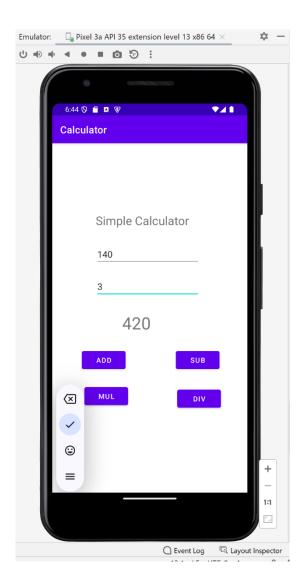
```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"</p>
  xmlns:app="http://schemas.android.com/apk/res-auto"
  xmlns:tools="http://schemas.android.com/tools"
  android:layout_width="match_parent"
  android:layout_height="match_parent"
  tools:context=".MainActivity">
  <TextView
    android:id="@+id/textView"
    android:layout width="wrap content"
    android:layout_height="wrap_content"
    android:layout_alignParentEnd="true"
    android:layout alignParentBottom="true"
    android:layout_marginEnd="117dp"
    android:layout_marginBottom="532dp"
    android:text="Simple Calculator"
    android:textSize="24sp" />
  <EditText
    android:id="@+id/editText1"
    android:layout_width="wrap_content"
    android:layout height="wrap content"
    android:layout_alignParentEnd="true"
    android:layout alignParentBottom="true"
    android:layout marginEnd="95dp"
    android:layout_marginBottom="457dp"
    android:ems="10"
    android:hint="Enter the Number1"
    android:inputType="textPersonName"
    android:text=""/>
  <EditText
    android:id="@+id/editText2"
    android:layout width="wrap content"
    android:layout_height="wrap_content"
    android:layout alignParentEnd="true"
    android:layout alignParentBottom="true"
    android:layout_marginEnd="95dp"
    android:layout_marginBottom="392dp"
    android:ems="10"
    android:hint="Enter the Number2"
    android:inputType="textPersonName"
    android:text=""/>
```

```
<TextView
  android:id="@+id/textView1"
  android:layout_width="129dp"
  android:layout height="wrap content"
  android:layout alignParentEnd="true"
  android:layout_alignParentBottom="true"
  android:layout_marginEnd="123dp"
  android:layout_marginBottom="319dp"
  android:text="0"
  android:textSize="34sp" />
<Button
  android:id="@+id/button"
  android:layout width="wrap content"
  android:layout_height="wrap_content"
  android:layout alignParentEnd="true"
  android:layout_alignParentBottom="true"
  android:layout_marginEnd="245dp"
  android:layout_marginBottom="243dp"
  android:onClick="add"
  android:text="ADD" />
<Button
  android:id="@+id/button2"
  android:layout_width="wrap_content"
  android:layout height="wrap content"
  android:layout_alignParentEnd="true"
  android:layout_alignParentBottom="true"
  android:layout marginEnd="56dp"
  android:layout_marginBottom="243dp"
  android:onClick="sub"
  android:text="SUB" />
<Button
  android:id="@+id/button3"
  android:layout_width="wrap_content"
  android:layout_height="wrap_content"
  android:layout alignParentEnd="true"
  android:layout_alignParentBottom="true"
  android:layout_marginEnd="240dp"
  android:layout marginBottom="170dp"
  android:onClick="mul"
  android:text="MUL" />
<Button
  android:id="@+id/button4"
  android:layout width="wrap content"
```

```
android:layout_height="wrap_content"
    android:layout alignParentEnd="true"
    android:layout_alignParentBottom="true"
    android:layout_marginEnd="53dp"
    android:layout marginBottom="165dp"
    android:onClick="div"
    android:text="DIV" />
</RelativeLayout>
```

```
MainActivity.java
package com.example.calculator;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
import android.widget.TextView;
public class MainActivity extends AppCompatActivity {
  EditText e1,e2;
  TextView tv1;
  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    e1=(EditText)findViewById(R.id.editText1);
    e2=(EditText)findViewById(R.id.editText2);
    tv1=(TextView)findViewById(R.id.textView1);
  }
  public void add(View view){
    int a1 = Integer.parseInt(e1.getText().toString());
    int a2 = Integer.parseInt(e2.getText().toString());
    int result= a1+a2;
    tv1.setText(""+result);
  }
  public void sub(View view){
    int a1 = Integer.parseInt(e1.getText().toString());
    int a2 = Integer.parseInt(e2.getText().toString());
    int result= a1-a2;
    tv1.setText(""+result);
  }
  public void mul(View view){
    int a1 = Integer.parseInt(e1.getText().toString());
    int a2 = Integer.parseInt(e2.getText().toString());
    int result= a1*a2;
```

```
tv1.setText(""+result);
}
public void div(View view){
  int a1 = Integer.parseInt(e1.getText().toString());
  int a2 = Integer.parseInt(e2.getText().toString());
  float result= a1/a2;
  tv1.setText(""+result);
}
```



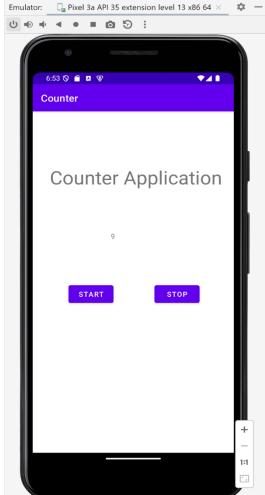
#### PROGRAM 3: COUNTER APPLICATION

## Activity\_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout 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"
  tools:context=".MainActivity">
  <TextView
    android:layout_width="378dp"
    android:layout_height="68dp"
    android:layout_alignParentEnd="true"
    android:layout_alignParentBottom="true"
    android:layout_marginEnd="18dp"
    android:layout_marginBottom="602dp"
    android:text="Counter Application"
    android:textSize="38dp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintLeft_toLeftOf="parent"
    app:layout_constraintRight_toRightOf="parent"
    app:layout constraintTop toTopOf="parent" />
  <TextView
    android:id="@+id/textView"
    android:layout width="121dp"
    android:layout_height="32dp"
    android:layout alignParentEnd="true"
    android:layout_alignParentBottom="true"
    android:layout_marginEnd="145dp"
    android:layout_marginBottom="478dp"
    android:text="Counter Value" />
  <Button
```

```
android:id="@+id/btn_start"
    android:layout width="wrap content"
    android:layout_height="wrap_content"
    android:layout_alignParentEnd="true"
    android:layout alignParentBottom="true"
    android:layout_marginEnd="297dp"
    android:layout marginBottom="295dp"
    android:text="Start" />
  <Button
    android:id="@+id/btn stop"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout alignParentEnd="true"
    android:layout alignParentBottom="true"
    android:layout_marginEnd="74dp"
    android:layout marginBottom="292dp"
    android:text="Stop" />
</RelativeLayout>
MainActivity.java
package com.example.counter;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.os.Handler;
import android.view.View;
import android.widget.Button;
import android.widget.TextView;
public class MainActivity extends AppCompatActivity {
  Button btnstart, btnstop;
  TextView txtcounter;
  int i=1:
  Handler customHandler=new Handler();
  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    btnstart=findViewById(R.id.btn start);
    btnstop=findViewById(R.id.btn_stop);
```

```
txtcounter=findViewById(R.id.textView);
  btnstart.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
      customHandler.postDelayed(updateTimerThread,0);
    }
  });
  btnstop.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
      customHandler.removeCallbacks(updateTimerThread);
    }
  });
}
private final Runnable updateTimerThread=new Runnable() {
  @Override
  public void run() {
    txtcounter.setText(""+i);
    customHandler.postDelayed(this,1000);
    i++;
  }
};
```



#### PROGRAM 4: TEXT-TO-SPEECH

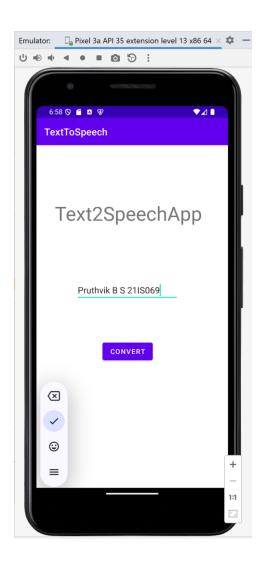
## Activity\_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"</p>
  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"
  tools:context=".MainActivity">
  <TextView
    android:id="@+id/textView"
    android:layout width="wrap content"
    android:layout_height="wrap_content"
    android:layout_alignParentEnd="true"
    android:layout_alignParentRight="true"
    android:layout_alignParentBottom="true"
    android:layout_marginEnd="53dp"
    android:layout_marginRight="53dp"
    android:layout_marginBottom="537dp"
    android:text="Text2SpeechApp"
    android:textSize="40dp" />
  <EditText
    android:id="@+id/editText"
    android:layout_width="wrap_content"
    android:layout height="wrap content"
    android:layout alignParentEnd="true"
    android:layout_alignParentRight="true"
    android:layout_alignParentBottom="true"
    android:layout marginEnd="101dp"
    android:layout_marginRight="101dp"
    android:layout_marginBottom="383dp"
    android:ems="10"
    android:hint="Enter the text to be converted"
    android:inputType="textPersonName"
    android:text=""/>
  <Button
    android:id="@+id/button"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout alignParentEnd="true"
    android:layout_alignParentRight="true"
    android:layout alignParentBottom="true"
    android:layout marginEnd="154dp"
```

```
android:layout_marginRight="154dp"
android:layout_marginBottom="256dp"
android:onClick="convert"
android:text="Convert" />
</RelativeLayout>
```

# MainActivity.java

```
package com.example.texttospeech;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.speech.tts.TextToSpeech;
import android.view.View;
import android.widget.EditText;
import android.widget.Toast;
import java.util.Locale;
public class MainActivity extends AppCompatActivity {
  TextToSpeech t1;
  EditText e1;
  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    e1 = findViewById(R.id.editText);
    t1 = new TextToSpeech(getApplicationContext(), new
        TextToSpeech.OnInitListener() {
          @Override
          public void onInit(int status) {
             if (status!=TextToSpeech.ERROR){
               t1.setLanguage(Locale.UK);
             }
          }
        });
  }
  public void convert(View view){
    String tospeak = e1.getText().toString();
    t1.speak(tospeak,TextToSpeech.QUEUE_FLUSH,null);
  }
}
```



## Prgm: 05 Wallpaper Changing App

# MainActivity.java

```
package com.example.wallapaper;
import androidx.appcompat.app.AppCompatActivity;
import android.app.WallpaperManager;
import android.graphics.Bitmap;
import android.graphics.drawable.BitmapDrawable;
import android.graphics.drawable.Drawable;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import java.io.IOException;
import java.util.Timer;
import java.util.TimerTask;
public class MainActivity extends AppCompatActivity {
  Button changewallpaper;
  Timer mytimer;
  Drawable drawable;
  WallpaperManager wpm;
  int prev = 1;
  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    mytimer = new Timer();
    wpm = WallpaperManager.getInstance(this);
    changewallpaper = findViewById(R.id.button);
    changewallpaper.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View view) {
        setWallpaper();
      }
    });
  }
  private void setWallpaper() {
    mytimer.schedule(new TimerTask() {
      @Override
      public void run() {
        if (prev == 1) {
          drawable = getResources().getDrawable(R.drawable.one);
```

```
prev = 2;
         } else if (prev == 2) {
           drawable = getResources().getDrawable(R.drawable.two);
           prev = 3;
         } else if (prev == 3) {
           drawable = getResources().getDrawable(R.drawable.three);
           prev = 4;
         } else if (prev == 4) {
           drawable = getResources().getDrawable(R.drawable.four);
           prev = 5;
         } else if (prev == 5) {
           drawable = getResources().getDrawable(R.drawable.five);
           prev = 1;
        }
         Bitmap wallpaper = ((BitmapDrawable) drawable).getBitmap();
           wpm.setBitmap(wallpaper);
         } catch (IOException e) {
           e.printStackTrace();
        }
      }
    }, 0, 30000);
  }
}
```

# activity\_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
  android:layout_width="match_parent"
  android:layout_height="match_parent"
  android:padding="16dp"
  android:background="@android:color/white">
  <TextView
    android:layout width="395dp"
    android:layout height="54mm"
    android:layout_alignParentEnd="true"
    android:layout_alignParentBottom="true"
    android:layout_marginEnd="3dp"
    android:layout_marginBottom="178dp"
    android:text="Wallpaper Changing Application"
    android:textSize="38dp" />
  <Button
    android:id="@+id/button"
    android:layout width="wrap content"
    android:layout_height="wrap_content"
```

android:text="Change Wallpaper"
android:layout\_centerInParent="true"
android:padding="16dp"
android:background="@android:color/holo\_blue\_light"
android:textColor="@android:color/white"
android:textStyle="bold" />

</RelativeLayout>

# OUTPUT: Wallpaper changes for every 30000ms







## Program 06: phone dialler

# MainActivity.java

```
package com.example.phonekey;
import android.content.Intent;
import android.net.Uri;
import android.os.Bundle;
import android.provider.ContactsContract;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import androidx.appcompat.app.AppCompatActivity;
public class MainActivity extends AppCompatActivity {
  EditText phoneNumberEditText;
  Button clearBtn, callBtn, saveBtn;
  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    phoneNumberEditText = findViewById(R.id.phoneNumberEditText);
    clearBtn = findViewById(R.id.clearBtn);
    callBtn = findViewById(R.id.callBtn);
    saveBtn = findViewById(R.id.saveBtn);
    // Clear button functionality
    clearBtn.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View v) {
        phoneNumberEditText.setText("");
      }
    });
    // Call button functionality
    callBtn.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View v) {
        String phoneNumber = phoneNumberEditText.getText().toString();
        Intent intent = new Intent(Intent.ACTION_DIAL);
        intent.setData(Uri.parse("tel:" + phoneNumber));
        startActivity(intent);
      }
    });
```

```
// Save button functionality
    saveBtn.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View v) {
        String phoneNumber = phoneNumberEditText.getText().toString();
        Intent intent = new Intent(Intent.ACTION INSERT);
        intent.setType(ContactsContract.Contacts.CONTENT_TYPE);
        intent.putExtra(ContactsContract.Intents.Insert.PHONE, phoneNumber);
        startActivity(intent);
      }
    });
  }
 // Method to append input number when number buttons are clicked
  public void inputNumber(View v) {
    Button btn = (Button) v;
    String digit = btn.getText().toString();
    String phoneNumber = phoneNumberEditText.getText().toString();
    phoneNumberEditText.setText(phoneNumber + digit);
  }
}
```

# activitymain.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"</p>
  android:layout width="match parent"
  android:layout height="match parent"
  android:orientation="vertical"
  android:padding="16dp"
  android:gravity="center">
  <EditText
    android:id="@+id/phoneNumberEditText"
    android:layout width="match parent"
    android:layout_height="wrap_content"
    android:hint="Enter phone number"
    android:inputType="phone"
    android:gravity="center"
    android:textSize="18sp"
    android:padding="10dp"
    android:layout marginBottom="16dp"/>
  <!-- Clear, Call, and Save buttons -->
  <GridLayout
```

```
android:layout_width="match_parent"
android:layout height="222dp"
android:layout_marginBottom="16dp"
android:columnCount="3"
android:rowCount="4">
<!-- Buttons for number input -->
<Button
 style="@style/ButtonNumber"
 android:onClick="inputNumber"
 android:text="1"/>
<Button
 style="@style/ButtonNumber"
 android:onClick="inputNumber"
 android:text="2"/>
<Button
 style="@style/ButtonNumber"
 android:onClick="inputNumber"
 android:text="3"/>
<Button
 style="@style/ButtonNumber"
 android:onClick="inputNumber"
 android:text="4"/>
<Button
  style="@style/ButtonNumber"
 android:onClick="inputNumber"
 android:text="5"/>
<Button
 style="@style/ButtonNumber"
 android:onClick="inputNumber"
 android:text="6"/>
<Button
  style="@style/ButtonNumber"
  android:onClick="inputNumber"
 android:text="7" />
<Button
  style="@style/ButtonNumber"
```

```
android:onClick="inputNumber"
    android:text="8"/>
  <Button
    style="@style/ButtonNumber"
    android:onClick="inputNumber"
    android:text="9"/>
  <View
    android:layout_width="0dp"
    android:layout height="0dp"
    android:layout_columnSpan="1" />
  <Button
    style="@style/ButtonNumber"
    android:onClick="inputNumber"
    android:text="0"/>
  <View
    android:layout width="0dp"
    android:layout_height="0dp"
    android:layout columnSpan="1" />
</GridLayout>
<LinearLayout
  android:layout_width="match_parent"
  android:layout_height="wrap_content"
  android:orientation="horizontal"
  android:gravity="center">
  <Button
    android:id="@+id/clearBtn"
    android:layout width="0dp"
    android:layout_height="wrap_content"
    android:layout weight="1"
    android:text="Clear"
    android:textSize="16sp" />
  <Button
    android:id="@+id/callBtn"
    android:layout width="0dp"
    android:layout_height="wrap_content"
    android:layout weight="1"
```

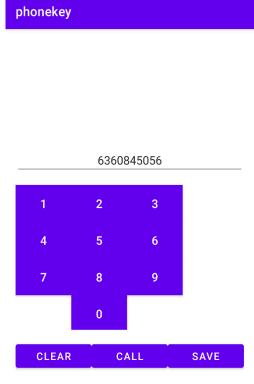
```
android:text="Call"
android:textSize="16sp" />

<Button
android:id="@+id/saveBtn"
android:layout_width="0dp"
android:layout_height="wrap_content"
android:layout_weight="1"
android:text="Save"
android:textSize="16sp" />
</LinearLayout>
```

# In res/values/style.xml add this.

```
<?xml version="1.0" encoding="utf-8"?>
<resources>
    <!-- Define the ButtonNumber style -->
    <style name="ButtonNumber">
        <item name="android:layout_width">wrap_content</item>
        <item name="android:layout_height">wrap_content</item>
        <item name="android:textColor">#FFFFFF</item>
        <item name="android:background">#FF9800</item>
        <item name="android:padding">10dp</item>
        <item name="android:textSize">18sp</item>
        </style>
</resources>
```

## **Output:**



4:59 🛇 🔲 🦱

**Prg 07:** Create two files of XML and JSON type with values for City\_Name, Latitude, Longitude, Temperature, and Humidity. Develop an application to create an activity with two buttons to parse the XML and JSON files which when clicked should display the data in their respective layouts side by side.

#### MainActivity.java

```
package com.example.jsonxmlparsing;
import android.os.Bundle;
import android.util.Log;
import android.view.View;
import android.widget.Button;
import android.widget.TextView;
import android.widget.Toast;
import androidx.appcompat.app.AppCompatActivity;
import org.json.JSONArray;
import org.json.JSONException;
import org.json.JSONObject;
import org.w3c.dom.Document;
import org.w3c.dom.Element;
import org.w3c.dom.Node;
import org.w3c.dom.NodeList;
import java.io.IOException;
import java.io.InputStream;
import java.nio.charset.StandardCharsets;
import javax.xml.parsers.DocumentBuilder;
import javax.xml.parsers.DocumentBuilderFactory;
public class MainActivity extends AppCompatActivity {
  Button parseXmlBtn, parseJsonBtn;
  TextView displayTextView;
  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity main);
    parseJsonBtn = findViewById(R.id.parseJsonBtn);
    parseXmlBtn = findViewById(R.id.parseXmlBtn);
    displayTextView = findViewById(R.id.displayTextView);
    // Parsing XML
    parseXmlBtn.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View v) {
        try {
```

```
InputStream is = getAssets().open("city.xml");
          DocumentBuilderFactory documentBuilderFactory =
DocumentBuilderFactory.newInstance();
          DocumentBuilder documentBuilder = documentBuilderFactory.newDocumentBuilder();
          Document document = documentBuilder.parse(is);
          StringBuilder stringBuilder = new StringBuilder();
          stringBuilder.append("XML Data");
          stringBuilder.append("\n----");
           NodeList nodeList = document.getElementsByTagName("place");
          for (int i = 0; i < nodeList.getLength(); i++) {
             Node node = nodeList.item(i);
             if (node.getNodeType() == Node.ELEMENT_NODE) {
               Element element = (Element) node;
               stringBuilder.append("\nName: ").append(getValue("name", element));
               stringBuilder.append("\nLatitude: ").append(getValue("lat", element));
               stringBuilder.append("\nLongitude: ").append(getValue("long", element));
               stringBuilder.append("\nTemperature: ").append(getValue("temperature", element));
               stringBuilder.append("\nHumidity: ").append(getValue("humidity", element));
               stringBuilder.append("\n----");
            }
          displayTextView.setText(stringBuilder.toString());
        } catch (Exception e) {
          e.printStackTrace();
          Toast.makeText(MainActivity.this, "Error Parsing XML", Toast.LENGTH_SHORT).show();
        }
    });
    // Parsing JSON
    parseJsonBtn.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View v) {
        String json;
        StringBuilder stringBuilder = new StringBuilder();
        try {
          InputStream is = getAssets().open("city.json");
          int size = is.available();
          byte[] buffer = new byte[size];
          is.read(buffer);
          json = new String(buffer, StandardCharsets.UTF_8);
          JSONArray jsonArray = new JSONArray(json);
          stringBuilder.append("JSON Data");
          stringBuilder.append("\n----");
```

```
for (int i = 0; i < jsonArray.length(); i++) {
             JSONObject jsonObject = jsonArray.getJSONObject(i);
             stringBuilder.append("\nName: ").append(jsonObject.getString("name"));
             stringBuilder.append("\nLatitude: ").append(jsonObject.getString("lat"));
             stringBuilder.append("\nLongitude: ").append(jsonObject.getString("long"));
             stringBuilder.append("\nTemperature: ").append(jsonObject.getString("temperature"));
             stringBuilder.append("\nHumidity: ").append(jsonObject.getString("humidity"));
             stringBuilder.append("\n----");
          }
          displayTextView.setText(stringBuilder.toString());
          is.close();
        } catch (IOException | JSONException e) {
          e.printStackTrace();
          Toast.makeText(MainActivity.this, "Error Parsing JSON Data",
Toast.LENGTH_SHORT).show();
        }
      }
    });
  }
  // Helper method to extract XML element value
  private String getValue(String tag, Element element) {
    return element.getElementsByTagName(tag).item(0).getTextContent();
  }
}
activitymain.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"
  tools:context=".MainActivity"
  android:padding="16dp">
  <TextView
    android:id="@+id/titleTextView"
    android:layout width="wrap content"
    android:layout_height="wrap_content"
    android:text="PARSING XML AND JSON DATA"
    android:textSize="18sp"
    android:textStyle="bold"
    android:textColor="#000"
    android:layout marginBottom="20dp"
```

```
app:layout_constraintTop_toTopOf="parent"
    app:layout constraintStart toStartOf="parent"
    app:layout_constraintEnd_toEndOf="parent" />
  <Button
    android:id="@+id/parseXmlBtn"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Parse XML Data"
    android:layout_marginBottom="20dp"
    android:backgroundTint="@android:color/holo_blue_light"
    app:layout constraintTop toBottomOf="@id/titleTextView"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintEnd_toEndOf="parent" />
  <Button
    android:id="@+id/parseJsonBtn"
    android:layout width="wrap content"
    android:layout_height="wrap_content"
    android:text="Parse JSON Data"
    android:backgroundTint="@android:color/holo green light"
    app:layout_constraintTop_toBottomOf="@id/parseXmlBtn"
    app:layout_constraintStart_toStartOf="parent"
    app:layout constraintEnd toEndOf="parent" />
  <TextView
    android:id="@+id/displayTextView"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text=""
    android:layout_marginTop="20dp"
    app:layout_constraintTop_toBottomOf="@id/parseJsonBtn"
    app:layout constraintStart toStartOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    android:textColor="#000"
    android:textSize="16sp" />
</androidx.constraintlayout.widget.ConstraintLayout>
City.xml
<?xml version="1.0" encoding="utf-8"?>
<places>
  <place>
    <name>Mysore</name>
    <lat>12.295</lat>
    <long>76.639</long>
```

<temperature>22</temperature>

```
<humidity>90%</humidity>
</place>
</places>

City.json

[
{
    "name": "Mysore",
    "lat": "12.295",
    "long": "76.639",
    "temperature": "22",
    "humidity": "90%"
}
]
```

