

6 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.

## XML Part– 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"
tools:context=".MainActivity">
<TextView
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:text="XML and JSON Parser"
android:textSize="30sp"
android:textAlignment="center"
/>
<Button
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:onClick="XMLParser"
android:text="XML PARSER"
android:textAlignment="center"
/>
<Button
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:onClick="JSONParser"
android:text="JSON PARSER"
android:textAlignment="center"
/>
<LinearLayout
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:orientation="horizontal"
android:layout_gravity="center">
<TextView
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:id="@+id/resxml"
android:textSize="15sp"
android:textAlignment="center"
android:paddingLeft="10dp"
android:paddingRight="40dp"
/>
```

```
<TextView
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:id="@+id/resjson"
android:textSize="15sp"
android:textAlignment="center"
android:paddingLeft="40dp"
/>
</LinearLayout>
</LinearLayout>
```

## Java Code – MainActivity.java

```
package com.example.json123;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.TextView;
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 org.xml.sax.SAXException;
import java.io.IOException;
import java.io.InputStream;
import javax.xml.parsers.DocumentBuilder;
import javax.xml.parsers.DocumentBuilderFactory;
import javax.xml.parsers.ParserConfigurationException;
public class MainActivity extends AppCompatActivity {
    TextView resxml,resjson;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        resxml=findViewById(R.id.resxml);
        resjson=findViewById(R.id.resjson);
    }
    public void XMLParser(View v)
    {
        try {
            InputStream is=getAssets().open("city.xml");
            DocumentBuilderFactory
            dbFactory=DocumentBuilderFactory.newInstance();
            DocumentBuilder
            dBuilder=dbFactory.newDocumentBuilder();
            Document doc=dBuilder.parse(is);
            Element element=doc.getDocumentElement();
            element.normalize();
            NodeList nList= doc.getElementsByTagName("place");
            resxml.setText("XML DATA");
            for(int i=0;i<nList.getLength();i++)
            {
```

```

Node node=nList.item(i);
if(node.getNodeType()==Node.ELEMENT_NODE)
{
    Element element2=(Element)node;
    resxml.setText(resxml.getText()+"\n City
Name:"+getValue("cityname",element2)+"\n");
    resxml.setText(resxml.getText()+"\n
Lat:"+getValue("lat",element2)+"\n");
    resxml.setText(resxml.getText()+"\n
Long:"+getValue("long",element2)+"\n");
    resxml.setText(resxml.getText()+"\n
Temperature:"+getValue("temp",element2)+"\n");
    resxml.setText(resxml.getText()+"\n
Humidity:"+getValue("humidity",element2)+"\n");
    resxml.setText(resxml.getText()+"\n -----");
}
}
}
catch (IOException | ParserConfigurationException |
SAXException e) {
    e.printStackTrace();
}
}
private static String getValue(String tag, Element element)
{
    NodeList
nodeList=element.getElementsByTagName(tag).item(0).ge
tChildNodes();
    Node node=nodeList.item(0);
    return node.getNodeValue();
}
public void JSONParser(View v)
{
    String json;
    try {
        InputStream is=getAssets().open("city1.json");
        int size=is.available();
        byte[] buffer=new byte[size];
        is.read(buffer);
        is.close();
        json=new String(buffer, "UTF-8");
        JSONArray jsonArray=new JSONArray(json);
        resjson.setText("JSON DATA");
        for(int i=0; i<jsonArray.length();i++)
        {
            JSONObject obj=jsonArray.getJSONObject(i);
            resjson.setText(resjson.getText()+"\n City
Name:"+obj.getString("name")+"\n");
            resjson.setText(resjson.getText()+"\n
Lat:"+obj.getString("lat")+"\n");
            resjson.setText(resjson.getText()+"\n
Long:"+obj.getString("long")+"\n");
            resjson.setText(resjson.getText()+"\n
Temperature:"+obj.getString("temp")+"\n");
            resjson.setText(resjson.getText()+"\n
Humidity:"+obj.getString("humidity")+"\n");

```

```

resjson.setText(resjson.getText()+"\n -----");
}
}
catch (IOException | JSONException e) {
    e.printStackTrace();
}
}
}

```