6.parser

File name:layoutinfo

App.new.folder.assets.[citydata.json,file.xml]

Citydata.json

{  
 "CityDetails": [  
 {  
 "City\_Name": "Mysore",  
 "Latitude": "12.295",  
 "Longitude":"76.639",  
 "Temperature":"22",  
 "Humidity":"90%"  
 },  
 {  
 "City\_Name": "Banglore",  
 "Latitude": "14.295",  
 "Longitude":"85.639",  
 "Temperature":"20",  
 "Humidity":"60%"  
 }  
 ]  
}

File.xml

<?*xml version*="1.0" ?>  
<records>  
 <CityDetails>  
 <City\_name>Mysore</City\_name>  
 <Latitude>12.295</Latitude>  
 <Longitude>76.639</Longitude>  
 <Temperature>22</Temperature>  
 <Humidity>90%</Humidity>  
 </CityDetails>  
 <CityDetails>  
 <City\_name>Banglore</City\_name>  
 <Latitude>14.295</Latitude>  
 <Longitude>85.639</Longitude>  
 <Temperature>20</Temperature>  
 <Humidity>60%</Humidity>  
 </CityDetails>  
</records>

Layout.xml file creation

Layout.new.layout resourcefile : filename:layout.xml

<?*xml version*="1.0" *encoding*="utf-8"?>  
<LinearLayout *xmlns:android*="http://schemas.android.com/apk/res/android"  
 *xmlns:tools*="http://schemas.android.com/tools"  
 *android:layout\_width*="match\_parent"  
 *android:layout\_height*="match\_parent">  
  
 <LinearLayout  
 *android:layout\_width*="match\_parent"  
 *android:layout\_height*="match\_parent"  
 *android:orientation*="vertical">  
  
 <LinearLayout  
 *android:layout\_width*="match\_parent"  
 *android:layout\_height*="42dp"  
 *android:orientation*="vertical">  
  
 <LinearLayout  
 *android:layout\_width*="match\_parent"  
 *android:layout\_height*="50dp"  
 *android:orientation*="horizontal">  
  
 <TextView  
 *android:id*="@+id/textView7"  
 *android:layout\_width*="wrap\_content"  
 *android:layout\_height*="49dp"  
 *android:layout\_weight*="1"  
 *android:text*="City Name :" />  
  
 <TextView  
 *android:id*="@+id/City\_Name"  
 *android:layout\_width*="wrap\_content"  
 *android:layout\_height*="wrap\_content" />  
 </LinearLayout>  
 </LinearLayout>  
  
 <LinearLayout  
 *android:layout\_width*="match\_parent"  
 *android:layout\_height*="49dp"  
 *android:orientation*="horizontal">  
  
 <TextView  
 *android:id*="@+id/textView8"  
 *android:layout\_width*="wrap\_content"  
 *android:layout\_height*="match\_parent"  
 *android:layout\_weight*="1"  
 *android:text*="Latitude :" />  
  
 <TextView  
 *android:id*="@+id/Latitude"  
 *android:layout\_width*="wrap\_content"  
 *android:layout\_height*="wrap\_content" />  
 </LinearLayout>  
  
 <LinearLayout  
 *android:layout\_width*="match\_parent"  
 *android:layout\_height*="49dp"  
 *android:orientation*="horizontal">  
  
 <TextView  
 *android:id*="@+id/textView9"  
 *android:layout\_width*="wrap\_content"  
 *android:layout\_height*="49dp"  
 *android:layout\_weight*="1"  
 *android:text*="Longitude" />  
  
 <TextView  
 *android:id*="@+id/Longitude"  
 *android:layout\_width*="wrap\_content"  
 *android:layout\_height*="wrap\_content" />  
 </LinearLayout>  
  
 <LinearLayout  
 *android:layout\_width*="match\_parent"  
 *android:layout\_height*="49dp"  
 *android:orientation*="horizontal">  
  
 <TextView  
 *android:id*="@+id/textView10"  
 *android:layout\_width*="wrap\_content"  
 *android:layout\_height*="49dp"  
 *android:layout\_weight*="1"  
 *android:text*="Temperature :" />  
  
 <TextView  
 *android:id*="@+id/Temperature"  
 *android:layout\_width*="wrap\_content"  
 *android:layout\_height*="wrap\_content" />  
 </LinearLayout>  
  
 <LinearLayout  
 *android:layout\_width*="match\_parent"  
 *android:layout\_height*="49dp"  
 *android:orientation*="horizontal">  
  
 <TextView  
 *android:id*="@+id/textView11"  
 *android:layout\_width*="wrap\_content"  
 *android:layout\_height*="match\_parent"  
 *android:layout\_weight*="1"  
 *android:text*="Humidity :" />  
  
 <TextView  
 *android:id*="@+id/Humidity"  
 *android:layout\_width*="wrap\_content"  
 *android:layout\_height*="wrap\_content" />  
 </LinearLayout>  
  
 <TextView  
 *android:id*="@+id/textView12"  
 *android:layout\_width*="match\_parent"  
 *android:layout\_height*="2dp"  
 *android:layout\_marginBottom*="20dp"  
 *android:background*="#DCC81E"  
 *android:text*="TextView" />  
  
 </LinearLayout>  
</LinearLayout>

Actiivity\_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:layout\_width*="match\_parent"  
 *android:layout\_height*="match\_parent"  
 *tools:context*=".MainActivity">  
  
 <LinearLayout  
 *android:layout\_width*="match\_parent"  
 *android:layout\_height*="match\_parent"  
 *android:orientation*="vertical"  
 *tools:layout\_editor\_absoluteX*="46dp"  
 *tools:layout\_editor\_absoluteY*="188dp">  
  
 <TextView  
 *android:id*="@+id/textView5"  
 *android:layout\_width*="match\_parent"  
 *android:layout\_height*="40sp"  
 *android:gravity*="center"  
 *android:text*="PARSING XML AND JSON DATA"  
 *android:textColor*="#201C1C"  
 *android:textSize*="25sp"  
 *android:textStyle*="bold" />  
  
 <LinearLayout  
 *android:layout\_width*="match\_parent"  
 *android:layout\_height*="match\_parent"  
 *android:background*="#A12E2E"  
 *android:orientation*="horizontal" >  
  
 <LinearLayout  
 *android:layout\_width*="194dp"  
 *android:layout\_height*="match\_parent"  
 *android:layout\_marginTop*="150dp"  
 *android:orientation*="vertical">  
  
 <Button  
 *android:id*="@+id/b1"  
 *android:layout\_width*="match\_parent"  
 *android:layout\_height*="wrap\_content"  
 *android:text*="Parse XML Data" />  
  
 <ListView  
 *android:id*="@+id/xmlList"  
 *android:layout\_width*="match\_parent"  
 *android:layout\_height*="match\_parent"  
 *android:paddingLeft*="20dp"  
 *android:paddingRight*="20dp" />  
  
 </LinearLayout>  
  
 <LinearLayout  
 *android:layout\_width*="match\_parent"  
 *android:layout\_height*="match\_parent"  
 *android:layout\_marginTop*="150dp"  
 *android:orientation*="vertical">  
  
 <Button  
 *android:id*="@+id/b2"  
 *android:layout\_width*="match\_parent"  
 *android:layout\_height*="wrap\_content"  
 *android:text*="Parse JSON Data" />  
  
 <ListView  
 *android:id*="@+id/jsonList"  
 *android:layout\_width*="match\_parent"  
 *android:layout\_height*="match\_parent"  
 *android:paddingLeft*="20dp"  
 *android:paddingRight*="20dp" />  
  
 </LinearLayout>  
 </LinearLayout>  
  
 </LinearLayout>  
</androidx.constraintlayout.widget.ConstraintLayout>

Main activity.java

*package* com.example.layoutinfo;  
  
*import* androidx.appcompat.app.AppCompatActivity;  
  
*import* android.content.res.AssetManager;  
*import* android.os.Bundle;  
*import* android.util.Log;  
*import* android.view.View;  
*import* android.widget.Button;  
*import* android.widget.*ListAdapter*;  
*import* android.widget.ListView;  
*import* android.widget.SimpleAdapter;  
*import* android.widget.TextView;  
  
*import* com.example.layoutinfo.R;  
  
*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.util.ArrayList;  
*import* java.util.HashMap;  
  
*import* javax.xml.parsers.DocumentBuilder;  
*import* javax.xml.parsers.DocumentBuilderFactory;  
  
*public class* MainActivity *extends* AppCompatActivity {  
  
 @Override  
 *protected void* onCreate(Bundle savedInstanceState) {  
 *super*.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 Button xmlparse,json;  
  
 xmlparse=findViewById(R.id.*b1*);  
 json=findViewById(R.id.*b2*);  
 json.setOnClickListener(*new* View.OnClickListener() {  
 @Override  
 *public void* onClick(View v) {  
 String json\_city = getListData();  
  
 *try* {  
  
 ArrayList<HashMap<String, String>> userList = *new* ArrayList<>();  
 ListView listview = findViewById(R.id.*jsonList*);  
  
 JSONObject jsObj = *new* JSONObject(json\_city);  
 JSONArray jsArray = jsObj.getJSONArray("CityDetails");  
 *for* (*int* i = 0; i < jsArray.length(); i++) {  
 HashMap<String, String> city = *new* HashMap<>();  
 JSONObject obj = jsArray.getJSONObject(i);  
 city.put("City\_Name", obj.getString("City\_Name"));  
 city.put("Latitude", obj.getString("Latitude"));  
 city.put("Longitude", obj.getString("Longitude"));  
 city.put("Temperature", obj.getString("Temperature"));  
 city.put("Humidity", obj.getString("Humidity"));  
 userList.add(city);  
 }  
 findViewById(R.id.*b2*).setVisibility(View.*GONE*);  
 *//findViewById(R.id.resultJSON).setVisibility(View.VISIBLE);  
 ListAdapter* simpleAdapter = *new* SimpleAdapter(getApplicationContext(), userList, R.layout.*layout*, *new* String[]{"City\_Name", "Latitude", "Longitude","Temperature","Humidity"}, *new int*[]{R.id.*City\_Name*, R.id.*Latitude*, R.id.*Longitude*,R.id.*Temperature*,R.id.*Humidity*});  
 listview.setAdapter(simpleAdapter);  
  
 } *catch* (JSONException ex) {  
 Log.*e*("JsonParser ", "Exception", ex);  
 }  
 }  
  
  
 *public* String getListData() {  
 String jsonString = *null*;  
 *try* {  
 AssetManager manager = getApplicationContext().getAssets();  
 InputStream is = manager.open("citydata.json");  
 *int* size = is.available();  
 *byte*[] buffer = *new byte*[size];  
 is.read(buffer);  
 is.close();  
 jsonString = *new* String(buffer, "UTF-8");  
 *//return new String(buffer, "UTF-8");* } *catch* (IOException e) {  
 e.printStackTrace();  
 Log.*e*("JSONPARSER", "Failed to read asset file: ", e);  
 *return null*;  
 }  
 *return* jsonString;  
 }  
 });  
 xmlparse.setOnClickListener(*new* View.OnClickListener() {  
 @Override  
 *public void* onClick(View v) {  
  
 *try* {  
  
 ArrayList<HashMap<String, String>> userList = *new* ArrayList<>();  
 ListView xmllistview = findViewById(R.id.*xmlList*);  
  
  
 InputStream is = getAssets().open("file.xml");  
  
 DocumentBuilderFactory dbFactory = DocumentBuilderFactory.*newInstance*();  
 DocumentBuilder dBuilder = dbFactory.newDocumentBuilder();  
 *Document* doc = dBuilder.parse(is);  
  
 *Element* element=doc.getDocumentElement();  
 element.normalize();  
  
 *NodeList* nList = doc.getElementsByTagName("CityDetails");  
  
 *for* (*int* i=0; i<nList.getLength(); i++) {  
  
 HashMap<String, String> city = *new* HashMap<>();  
 *Node* node = nList.item(i);  
  
 *if* (node.getNodeType() == *Node*.*ELEMENT\_NODE*) {  
 *Element* element2 = (*Element*) node;  
 city.put("City\_Name", getValue("City\_name", element2));  
 city.put("Latitude", getValue("Latitude", element2));  
 city.put("Longitude", getValue("Longitude", element2));  
 city.put("Temperature", getValue("Temperature", element2));  
 city.put("Humidity", getValue("Humidity", element2));  
 userList.add(city);  
 }  
  
 }  
 findViewById(R.id.*b1*).setVisibility(View.*GONE*);  
 *// findViewById(R.id.resultXML).setVisibility(View.VISIBLE);  
 ListAdapter* simpleAdapter = *new* SimpleAdapter(getApplicationContext(), userList, R.layout.*layout*, *new* String[]{"City\_Name", "Latitude", "Longitude","Temperature","Humidity"}, *new int*[]{R.id.*City\_Name*, R.id.*Latitude*, R.id.*Longitude*,R.id.*Temperature*,R.id.*Humidity*});  
 xmllistview.setAdapter(simpleAdapter);  
 } *catch* (Exception e) {e.printStackTrace();}  
  
  
  
 }  
 *private* String getValue(String tag, *Element* element) {  
 *NodeList* nodeList = element.getElementsByTagName(tag).item(0).getChildNodes();  
 *Node* node = nodeList.item(0);  
 *return* node.getNodeValue();  
 }  
  
 });  
  
 }  
}