**Program6**

**Myjson.json**

{

"City Name": "Mysore",

"Latitude" :"12.295",

"Longitude" :"76.639",

"Temperature" :"22",

"Humidity" :"90%"

}

**Myxml.xml**

<?xml version="1.0" encoding="utf-8"?>

<data>

<City\_Name>Mysore</City\_Name>

<Latitude>22.295</Latitude>

<Longitude>76.639</Longitude>

<Temperature>42</Temperature>

<Humidity>80%</Humidity>

</data**>**

**activity\_main.xml**

<?xml version="1.0" encoding="utf-8"?>

<androidx.constraintlayout.widget.ConstraintLayout

xmlns:android="http://schemas.android.com/apk/res/android"

xmlns:app="http://schemas.android.com/apk/res-auto"

xmlns:tools="http://schemas.android.com/tools"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

tools:context=".MainActivity">

<com.google.android.material.button.MaterialButton

android:id="@+id/parse\_xml"

android:layout\_width="wrap\_content"

android:layout\_height="54dp"

android:layout\_marginBottom="8dp"

android:text="Parse XML Data"

app:layout\_constraintBottom\_toTopOf="@+id/parse\_json"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintHorizontal\_bias="0.5"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toTopOf="parent"

app:layout\_constraintVertical\_bias="0.24000001"

app:layout\_constraintVertical\_chainStyle="packed" />

<com.google.android.material.button.MaterialButton

android:id="@+id/parse\_json"

android:layout\_width="wrap\_content"

android:layout\_height="54dp"

android:layout\_marginBottom="8dp"

android:text="Parse JSON Data"

app:layout\_constraintBottom\_toTopOf="@+id/data\_type"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintHorizontal\_bias="0.5"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toBottomOf="@+id/parse\_xml" />

<com.google.android.material.textview.MaterialTextView

android:id="@+id/data\_type"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_marginTop="24dp"

android:layout\_marginBottom="16dp"

android:text=""

android:textSize="24sp"

app:layout\_constraintBottom\_toTopOf="@+id/city\_name"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintHorizontal\_bias="0.5"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toBottomOf="@+id/parse\_json" />

<com.google.android.material.textview.MaterialTextView

android:id="@+id/city\_name"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_marginTop="8dp"

android:layout\_marginBottom="8dp"

android:text="City Name :"

android:textSize="24sp"

app:layout\_constraintBottom\_toTopOf="@+id/latitude"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintHorizontal\_bias="0.5"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toBottomOf="@+id/data\_type" />

<com.google.android.material.textview.MaterialTextView

android:id="@+id/latitude"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_marginTop="8dp"

android:layout\_marginBottom="8dp"

android:text="Latitude :"

android:textSize="24sp"

app:layout\_constraintBottom\_toTopOf="@+id/longitude"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintHorizontal\_bias="0.5"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toBottomOf="@+id/city\_name" />

<com.google.android.material.textview.MaterialTextView

android:id="@+id/longitude"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_marginTop="8dp"

android:layout\_marginBottom="8dp"

android:text="Longitude :"

android:textSize="24sp"

app:layout\_constraintBottom\_toTopOf="@+id/temprature"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintHorizontal\_bias="0.5"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toBottomOf="@+id/latitude" />

<com.google.android.material.textview.MaterialTextView

android:id="@+id/temprature"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_marginTop="8dp"

android:layout\_marginBottom="8dp"

android:text="Temprature :"

android:textSize="24sp"

app:layout\_constraintBottom\_toTopOf="@+id/humidity"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintHorizontal\_bias="0.5"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toBottomOf="@+id/longitude" />

<com.google.android.material.textview.MaterialTextView

android:id="@+id/humidity"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_marginTop="8dp"

android:layout\_marginBottom="8dp"

android:text="Humidity :"

android:textSize="24sp"

app:layout\_constraintBottom\_toBottomOf="parent"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintHorizontal\_bias="0.5"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toBottomOf="@+id/temprature" />

</androidx.constraintlayout.widget.ConstraintLayout>

**MainActivity.kt file**

import android.annotation.SuppressLint

import androidx.appcompat.app.AppCompatActivity

import android.os.Bundle

import android.widget.Button

import android.widget.TextView

import org.json.JSONObject

import java.io.IOException

import java.nio.charset.Charset

import javax.xml.parsers.DocumentBuilderFactory

class MainActivity : AppCompatActivity() {

private lateinit var parseXMLBtn: Button

private lateinit var parseJSONBtn: Button

private lateinit var datatype : TextView

private lateinit var cityName: TextView

private lateinit var latitude: TextView

private lateinit var longitude: TextView

private lateinit var temprature: TextView

private lateinit var humidity: TextView

override fun onCreate(savedInstanceState: Bundle?) {

super.onCreate(savedInstanceState)

setContentView(R.layout.activity\_main)

parseXMLBtn = findViewById(R.id.parse\_xml)

parseXMLBtn.setOnClickListener { parseXML() }

parseJSONBtn = findViewById(R.id.parse\_json)

parseJSONBtn.setOnClickListener { parseJSON() }

parseXMLBtn.setOnClickListener { parseXML() }

datatype = findViewById(R.id.data\_type)

cityName = findViewById(R.id.city\_name)

latitude = findViewById(R.id.latitude)

longitude = findViewById(R.id.longitude)

temprature = findViewById(R.id.temprature)

humidity = findViewById(R.id.humidity)

}

@SuppressLint("SetTextI18n")

fun parseXML(){

datatype.text = "XML Data"

try {

val iStream = assets.open("myxml.xml")

val builderFactory = DocumentBuilderFactory.newInstance()

var docBuilder = builderFactory.newDocumentBuilder()

var doc = docBuilder.parse(iStream)

cityName.text = "City Name : " +

doc.getElementsByTagName("City\_Name").item(0).getFirstChild().getNodeValue()

latitude.text = "Latitude : " +

doc.getElementsByTagName("Latitude").item(0).getFirstChild().getNodeValue()

longitude.text = "Longitude : " +

doc.getElementsByTagName("Longitude").item(0).getFirstChild().getNodeValue()

temprature.text = "Temperature : " +

doc.getElementsByTagName("Temperature").item(0).getFirstChild().getNodeValue()

humidity.text = "Humidity : " +

doc.getElementsByTagName("Humidity").item(0).getFirstChild().getNodeValue()

}

catch (ex: IOException) {

}

}

@SuppressLint("SetTextI18n")

fun parseJSON(){

datatype.text = "JSON Data"

val obj = JSONObject(loadJSONFromAsset())

cityName.text = "City Name : " + obj.getString("City Name")

latitude.text = "Latitude : " + obj.getString("Latitude")

longitude.text = "Longitude : " + obj.getString("Longitude")

temprature.text = "Temperature : " + obj.getString("Temperature")

humidity.text = "Humidity : " + obj.getString("Humidity")

}

private fun loadJSONFromAsset(): String {

val json: String?

try {

val inputStream = assets.open("myjson.json")

val size = inputStream.available()

val buffer = ByteArray(size)

val charset: Charset = Charsets.UTF\_8

inputStream.read(buffer)

inputStream.close()

json = String(buffer, charset)

}

catch (ex: IOException) {

ex.printStackTrace()

return ""

}

return json

}

}