**package com.joonho.util;**

**import org.json.JSONException;**

**import org.json.JSONObject;**

**import java.io.BufferedInputStream;**

**import java.io.BufferedReader;**

**import java.io.IOException;**

**import java.io.InputStream;**

**import java.io.InputStreamReader;**

**import java.net.HttpURLConnection;**

**import java.net.MalformedURLException;**

**import java.net.URL;**

**public class OpenWeatherAPIClient {**

**final static String openWeatherURL = "http://api.openweathermap.org/data/2.5/weather";**

**public Weather getWeather(int lat,int lon){**

**Weather w = new Weather();**

**String urlString = openWeatherURL + "?lat="+lat+"&lon="+lon;**

**try {**

**// call API by using HTTPURLConnection**

**URL url = new URL(urlString);**

**HttpURLConnection urlConnection = (HttpURLConnection) url.openConnection();**

**//            urlConnection.setConnectTimeout(CONNECTION\_TIMEOUT);**

**//            urlConnection.setReadTimeout(DATARETRIEVAL\_TIMEOUT);**

**InputStream in = new BufferedInputStream(urlConnection.getInputStream());**

**JSONObject json = new JSONObject(getStringFromInputStream(in));**

**// parse JSON**

**w = parseJSON(json);**

**w.setIon(lon);**

**w.setLat(lat);**

**}catch(MalformedURLException e){**

**System.err.println("Malformed URL");**

**e.printStackTrace();**

**return null;**

**}catch(JSONException e) {**

**System.err.println("JSON parsing error");**

**e.printStackTrace();**

**return null;**

**}catch(IOException e){**

**System.err.println("URL Connection failed");**

**e.printStackTrace();**

**return null;**

**}**

**// set Weather Object**

**return w;**

**}**

**private Weather parseJSON(JSONObject json) throws JSONException {**

**Weather w = new Weather();**

**w.setTemprature(json.getJSONObject("main").getInt("temp"));**

**w.setCity(json.getString("name"));**

**//w.setCloudy();**

**return w;**

**}**

**private static String getStringFromInputStream(InputStream is) {**

**BufferedReader br = null;**

**StringBuilder sb = new StringBuilder();**

**String line;**

**try {**

**br = new BufferedReader(new InputStreamReader(is));**

**while ((line = br.readLine()) != null) {**

**sb.append(line);**

**}**

**} catch (IOException e) {**

**e.printStackTrace();**

**} finally {**

**if (br != null) {**

**try {**

**br.close();**

**} catch (IOException e) {**

**e.printStackTrace();**

**}**

**}**

**}**

**return sb.toString();**

**}**

**}**