Java OpenWeatherMap GUI Eclipse

Contents

Time required: 60 minutes

- Comment each line of code as shown in the tutorials and other code examples.
- Follow all directions carefully and accurately.
- Think of the directions as minimum requirements.
- Please read all the directions before beginning the assignment.

www.OpenWeatherMap.org provides access to current weather data for any location on Earth including over 200,000 cities! They collect and process weather data from different sources such as global and local weather models, satellites, radars and vast network of weather stations. Data is available in JSON, XML, or HTML format.

Our application is going to call current weather data for one location.

Openweathermap.org API ID

The first step in using openweathermap.org is to get an API key.

NOTE: You can skip this step if you already have an API key.

1. Go to www.openweathermap.org.
2. Create a free account.
3. Choose a free plan.

4. OpenWeatherMap will send you your API key in the confirmation email. You can also access your key from your account.

Create Application

1. In **Eclipse →** Copy and paste your **OpenWeatherMapAPI** tutorial project to create a second copy. You will be asked to name this Project: **OpenWeatherMapGUI**
2. Right click the **Apps** folder, **New** → **Other** → **WindowBuilder** → **Swing Designer** → **JFrame**. Click **Next**.
3. Name: **WeatherAppGUI** Click **Finish**. The file opens automatically in **Source** View.

Program Requirements

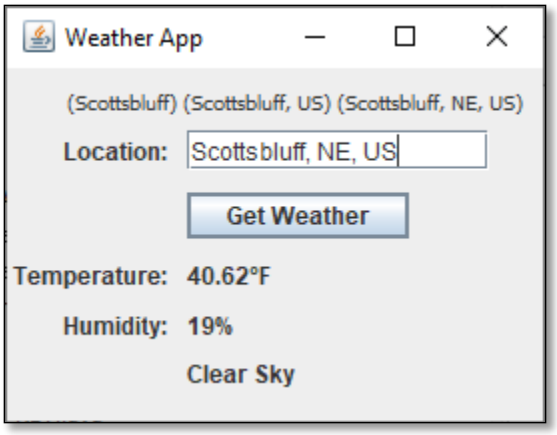
Convert the code in the console application to work with the GUI version.

1. Add **implements API_KEY** to the class declaration as we did in the console program.
```
public class WeatherGUI extends JFrame implements API_KEY{
```
2. In the **WeatherAppGUI** class, use the Design tab to create an interface like the example below.
3. Double Click the **Get Weather** button.
4. Copy and paste the main WeatherApp program code into the Get Weather ActionListener. The imports should be created automatically.
5. Delete the WeatherApp.java file.
6. The catch handlers will have to be modified. Rename the e parameters error
7. Modify the code to display the weather information in your location in the GUI as shown below.

Current Weather

Time to run your new application.

Example run:



Final Steps

Add 3 or more weather items to your program. You might add wind speed, feels like temperature, or whatever you choose.

Whatever you choose, convert the measure to a standard measurement. Mph, F, etc.

Export to a JAR File

1. Go to **File → Export → Java → Runnable JAR file**. Click **Next**.
2. Launch Configuration: **WeatherAppGUI – OpenWeatherMapGUI.**
3. Browse and save the JAR file somewhere you can find it as **OpenWeatherMap**.
4. Library handling: **Package required libraries into generated JAR.**
5. Double click the resulting JAR file to ensure it works properly.

Assignment Submission

1. Zip up the **OpenWeatherMapGUI** folder under your Eclipse workspace.
2. Include the JAR file.
3. Attach the zip file to the assignment in Blackboard.