

### COMP 4958: Assignment 3

In this assignment, you are asked to write a program in Go to retrieve data from OpenWeather & display certain information in the data.

Refer to assignment 2 for information on OpenWeather. You'll need to sign up with OpenWeather (which presumably you have already done) & you'll need to consult their documentation.

We'll call our program `wthr`. The program takes the names of cities as command-line argument. For example

```
./wthr london,uk vancouver,ca "New York City,US"
```

asks the program to retrieve weather information from OpenWeather for the 3 listed cities.

Although it is possible to retrieve the weather information of multiple cities in one request, for this assignment, you are asked to create one goroutine to retrieve the information for one city. For the above example, you'll need to create 3 worker goroutines, each making an HTTPS request. The main goroutine coordinates the workers. When all workers have finished, the main routine sorts the successful results (in ascending order of city names) before displaying them to standard output. Unsuccessful requests are then printed to standard error.

The output will need to display the city & country, the (current) temperature (in degree Celsius), the humidity & the weather description. For example

```
Vancouver CA: 19.40 deg C, 82%, clear sky
```

Again, as with your previous assignment, instead of hard-coding your API key in your program, have the program read it from a file named `key.txt` in the same directory as the executable program. This file should just contain the API key on the first line. (If you submitted your API key in the previous assignment, please do so again for this assignment.)

Use Go modules in your implementation. There should be a package named `weather` (in a directory named `weather`). Your program should be in a separate directory named `wthr`.

This assignment is due in 2 weeks. Exact details will be announced in class.