CS325: Final project

A weather web-page

Deadline: 06/28 (But if you want you can show the live demo on Sunday (06/30) between 3:00 to 4:00 PM, this is hard deadline)

Description:

This project is about understanding 3 components.

- How to download (crawl) data from the internet
- How to parse a JSON file for a specific information
- How to inject content into a webpage

Steps to create your weather webpage

1. Create a program to accept the longitude and latitude of a place
2. Use the above coordinates to download a forecast for the given coordinate:
    A. Go to this NOAA website (https://www.weather.gov/documentation/services-web-api) and click the example tab, read it. You will find a way to call their weather api with longitude and latitude. It will download a JSON file.
    B. Parse the above JSON file for the property called “forecast”, an example:


```
"properties": {
    "@id": "https://api.weather.gov/points/39.7456,-97.0892",
    "@type": "wx:Point",
    "cwa": "TOP",
    "forecastOffice": "https://api.weather.gov/offices/TOP",
    "gridId": "TOP",
    "gridX": 32,
    "gridY": 81,
    "forecast": "https://api.weather.gov/gridpoints/TOP/32,81/forecast",
    "forecastHourly": "https://api.weather.gov/gridpoints/TOP/32,81/forecast/hourly",
    "forecastGridData": "https://api.weather.gov/gridpoints/TOP/32,81",
    "observationStations": "https://api.weather.gov/gridpoints/TOP/32,81/stations",
    "relativeLocation": {
        "type": "Feature",
```


Programmatically copy the forecast URL, here in this example it is: https://api.weather.gov/gridpoints/TOP/32,81/forecast

    C. Download the JSON file given in the above URL. In that JSON file you will find a daily forecast. Extract: date, time, temperature and shortForecast properties for all the days given in the JSON file.
    D. Save the extracted information in a text file

3. Now you have a text file that contains forecasts for a particular longitude and latitude. Use this information to create a HTML file in which the information will be shown in a tabular HTML format. Create this HTML page dynamically. You cannot copy paste the extracted data into the HTML file code.

Rubric:

Evaluation will be done online, you have to show the software to me live. Inability to do so means 70% of the points getting deducted (rest of the 30% points will be given by evaluating your github repo). If you are able to show a live demo then the following rubric holds:

Ability to parse two JSON files automatically and copy the final forecast data into a file 50% of the points

Ability to read the text file with forecast information and create a HTML page with a HTML table showing the forecast 35%

Ability to create a YAML file and a good readme file for your project github repo, so that people can use the software without any hassle 15%. Please write the readme in a detailed manner.

Please submit Github repo link in Moodle.

If you have any questions please ask me during the class.