CSC 202, Installing Python and Related Tools

<u>Overview</u>

In this class we will use several tools for developing and running Python programs. In particular, we will work with the following:

1. *Python* (https://www.python.org/), a general purpose programming language
2. *Jupyter Notebook*s and *Jupyter Lab* (https://jupyter.org/), web-based platforms for creating, explaining, and sharing code. *Jupyter Lab* is the "next generation" of Jupyter Notebooks. For us, the main advantage of *Jupyter Lab* is the availability of a console so that we do not have to create new cells to experiment with code.
3. *Spyder* (https://www.spyder-ide.org/), an integrated development environment (IDE) for developing and running Python code, recommended for larger programs.

<u>Installing Jupyter Notebook and Spyder through the Anaconda Distribution</u>

Install the Anaconda Distribution for your system by following the directions at the following link: https://www.anaconda.com/distribution/

The Anaconda Distribution comes with both *Jupyter Notebook* and *Spyder*.

Running Jupyter Notebook

Once *Jupyter Notebook* is installed, you can run Jupyter Notebook by typing the following using your machine's **terminal** or **Anaconda Command Prompt**:

```
jupyter notebook
```

For more information, see https://jupyter.readthedocs.io/en/latest/install.html

Installing and Runnning Jupyter Lab

Install Jupyter Lab by typing the following from your terminal or Anaconda Command prompt:

```
conda install -c conda-forge jupyterlab
```

To run Juptyer Lab, type the following at your terminal or Anaconda Prompt:

```
jupyter lab
```

Installing Python modules

Your Python installation comes with hundreds of modules, such as the *math* module. We will use additional modules for specialized tasks, which can be installed by typing the appropriate commands at your **terminal** or **Anaconda prompt**. See the links below for installation instructions. Use the *import* statement in Python to check whether the module is successfully installed (e.g., open a Juptyer Notebook and type *import math*).

Required modules (will be updated throughout the semester):
- wordcloud: https://anaconda.org/conda-forge/wordcloud
- spacy: https://anaconda.org/conda-forge/spacy
  - en_core_web_sm model: https://anaconda.org/conda-forge/spacy-model-en_core_web_sm
  - en_core_web_lg model: https://anaconda.org/conda-forge/spacy-model-en_core_web_lg
- tweepy: https://anaconda.org/conda-forge/tweepy
- folium: https://anaconda.org/conda-forge/folium
- SpeechRecognition: https://anaconda.org/conda-forge/speechrecognition
- Google API Python Client: https://anaconda.org/conda-forge/google-api-python-client