2 - Development Setup (Installing Python and Running Python Code)

Course: Python Programming

Installing Python

1. Get it from the official website (www.python.org) – you'll get only the basic stuff

2. Get it from the Anaconda website –
   you'll get most of the things needed in single installation package

3. Use a "no-install" option – no need to INSTALL anything on your PC, instead, use a website to access and execute code (e.g., Google Colab) – you need a live internet connection while working

   Google Collaboratory
   URL: https://research.google.com/colaboratory/
   You need a Google account to create Python notebooks
   (think of them as Python source code files)

- There are many ways to run Python!
- Later on we'll explore the difference between running a Python .py script or running Python code in a notebook environment.
  - ***Either way, we will still want to install Python!***

- Installation Lecture:
  - Install Anaconda Distribution for Python.
    - Anaconda installs Python **and** an easy to use development environment and navigator launch tool.
  - Briefly run Jupyter Notebook.
  - Explore “no install” online options.

- To install Python we will use the free Individual Anaconda distribution.
- This distribution includes Python as well as many other useful libraries, including Jupyter Notebook environment.
- Anaconda can also easily be installed on to any major OS, Windows, MacOS, or Linux.

www.anaconda.com/downloads

- **Free “No Install” Options:**
  - jupyter.org/try
  - Google Collab Online Notebooks
  - Repl.it
    - Google Search:
      - “Python Interpreter Online”

Running Python Code

- There are several ways to run Python code.
- First let’s discuss the various options for development environments
- There are 3 main types of environments:
    - Text Editors
    - Full IDEs
    - Notebook Environments

- Text Editors
  - General editors for any text file
  - Work with a variety of file types
  - Can be customized with plugins and add-ons
  - Keep in mind, most are not designed with only Python in mind.

Most popular:
VS Code, Notepad++, Sublime Text

- Full IDEs
  - Development Environments designed specifically for Python.
  - Larger programs.
  - Only community editions are free.
  - Designed specifically for Python, lots of extra functionality.

Most popular: PyCharm and Spyder

- Notebook Environments
  - Great for learning.
  - See input and output next to each other.
  - Support in-line markdown notes, visualizations, videos, and more.
  - Special file formats that are not .py

Most popular is Jupyter Notebook.

- Most important note:
  - Development Environments are a personal choice highly dependent on personal preference.

Choose whichever development environment you prefer!

- Let’s now explore how to run Python code:
  - First with an editor to create a .py script and run the file at your command line.
  - Then with a Jupyter Notebook.

Thanks