itpp-lesson1

January 12, 2018

1 ITPP - Lecture 1: A Practical Introduction to the Python Programming Language

Accompanying Slides

Python is a programming language that is applicable to anyone independent of their field of study. For computing majors, this class will provide a breadth to the core curriculum showing the applications for Python. For non-computing majors, this class will provide a strong foundation on programming which will allow you to create software to aid your work in your field of choice. This course will cover the basics of programming in Python, and consist of 2 projects: a data visualization website and an email automation tool.

By the end of this course, you will learn how to:

- Use Python as a general purpose programming language
- Use Python to conduct statistical methods and to create visualizations
- Use Python to automate sending and receiving emails

1.1 Logistics:

- **Instructor:** John Pham
- **Email:** jpham035@ucr.edu
- **Lecture Date/Time(s):** Wednesdays, 11AM - 12PM
- **Location:** ACM Clubroom (Winston Chung 127)
- **Office Hours:** By appointment via email

1.2 Course Schedule:

Week	Topics	Assignments Due
1	Logistics, Software, Intro the Programming	None
2	Math Operators, variables, comments, loops, and conditionals	HW1

Week	Topics	Assignments Due
3	Functions, statistics and modules	HW2
4	Modules, GitHub, CLI	HW3
5	Matplotlib	None
6	Matplotlib animations	HW5
7	Open-ended project introduction, Email automation	Data Visualization Project
8	Web scraping, accessing APIs	HW6
9	Automating your mouse and keyboard	HW7
10	Open-ended Project Demos	Open-ended project

1.3 Software and Tools:

We will be using Jupyter Notebooks which is an interactive Python shell for lecture, assignments, and quizzes. To use the Jupyter Notebook software, you will need to do the following:

1.3.1 Jupyter Notebooks

TODO: Add JupyterHUB information

1.3.2 Markdown

Markdown is markup language to format text. Unlike Microsoft Office or Google Docs, the way you format your text is done entirely with text. In Office, the way to bold text is to highlight the text you want to be bold then click the bold button. The way to do it in markdown is to surround the text with asterisks. To make text **bold**, you just type `**this is my bolded text**`.

Jupyter Notebooks support Markdown, so it's a good thing to know but not critical to your success with programming.

This is a good resource to learn Markdown.