# 1: Introduction

Reading: Chapter 1
Course Organization

- Web page:
  http://www.mathcs.emory.edu/~hli57/CS130R/

- Syllabus
Installing Python

- See Setup Guide

- Work in the lab in Linux Ubuntu (see next week!)
Python

- What is programming? What is a (computer) program?

  Program = a set of instructions and commands for the computer to know what to do (transform input to output)

- Python is a simple and powerful programming language. Includes commands with precise syntax.
History of Python

- Developed by Guido van Rossum in the Netherlands in the late 1980s.

- Takes its name from the British comedy series *Monty Python's Flying Circus.*

[https://www.youtube.com/watch?v=2ChPAqPdDdw](https://www.youtube.com/watch?v=2ChPAqPdDdw)
Running Python interactively

- In Linux command line type:
  ```plaintext
  >python [hit enter]
  >>>print "Hello World!"
  Hello World!
  >>>2*3+8
  14
  ```

- Exit Python with CTRL+D
- Not good for programs longer than 2-3 lines
Your First Python Program

1. Open a text editor – good Notepad, Gedit, … Do not use Word editors!
2. Type in the editor:
   
   ```python
   #my first program
   print "Hello Python!"
   print("Your new score is", 1030 + 10)
   ```
3. Save file under name hello.py
4. At the command line in Linux type (call Python to interpret and run your code):
   
   ```bash
   >python hello.py
   ```
   
   Hello Python!
Why Python?

- Simple, and easy
- Powerful library of useful functions. Except standard library, many other special library, e.g. Pygame for game development, http://programarcadegames.com/ Numpy for matrix computing and etc, Scipy for scientific computing, engineering and etc.
- Object-Oriented
- Interpretable language.
- It is portable – runs & communicates with others Windows, Linux/Unix, OS/2, Mac
- Free, open source.
- etc.
Next lecture...

- Errors
- Types and Variables
- Assignment & homework submission