

# Lesson 1

## Python Essentials

### Overview

1. History
2. Installing & Running Python
3. Working with Python using VSCode

### History

- Invented in the Netherlands, early 90s by Guido van Rossum
- Named after Monty Python
- Open sourced
- Designed to be human readable
- Scalable, object oriented and functional from the beginning
- Active community

### Installing Python

- Python is pre-installed on most Unix systems, Linux and MAC OS X
- The pre-installed version may not be the most recent one
- Download from <http://python.org/download/>
- Python comes with a large library of standard modules

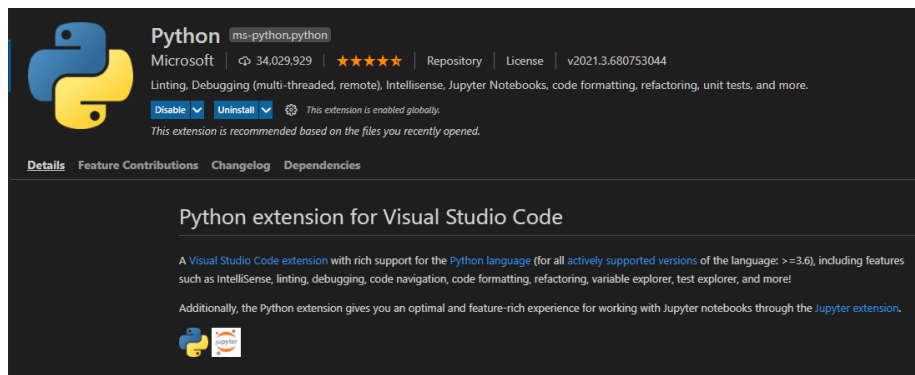
### Running Python

- Considered a scripting language, but is much more
- Python interpreter evaluates each expression
- Python also has mechanisms to allow a python program to act both as a script and as a module to be imported and used by another python program



## VSCode

- There are several options for an IDE.
- We will use VSCode as our primary IDE.
- Python extension available.



## Python Programming Language

- Two kinds of programs process high-level languages into low-level languages: interpreters and compilers.
- An interpreter reads a high-level program and executes it.
- A compiler reads the program and translates it completely into an executable before the program starts running.
- Python uses both processes, but because of the way programmers interact with it, it is usually considered an interpreted language.



Figure 1: image

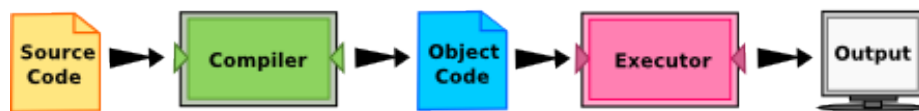


Figure 2: image