# Introduction to Python for Scientists

# Some Logistics

- classes: 12:40 – 13:30 on Fridays, here in 232
- no classes: Oct 7, Oct 21, Nov 11, Nov 25
- notes and schedule: https://github.com/mommermi/Introduction-to-Python-for-Scientists
- questions? Office hours: simply check Rm 315 or send me an email: michael.mommert@nau.edu
- suggestions/complaints? goo.gl/fgl6zm

# Grading

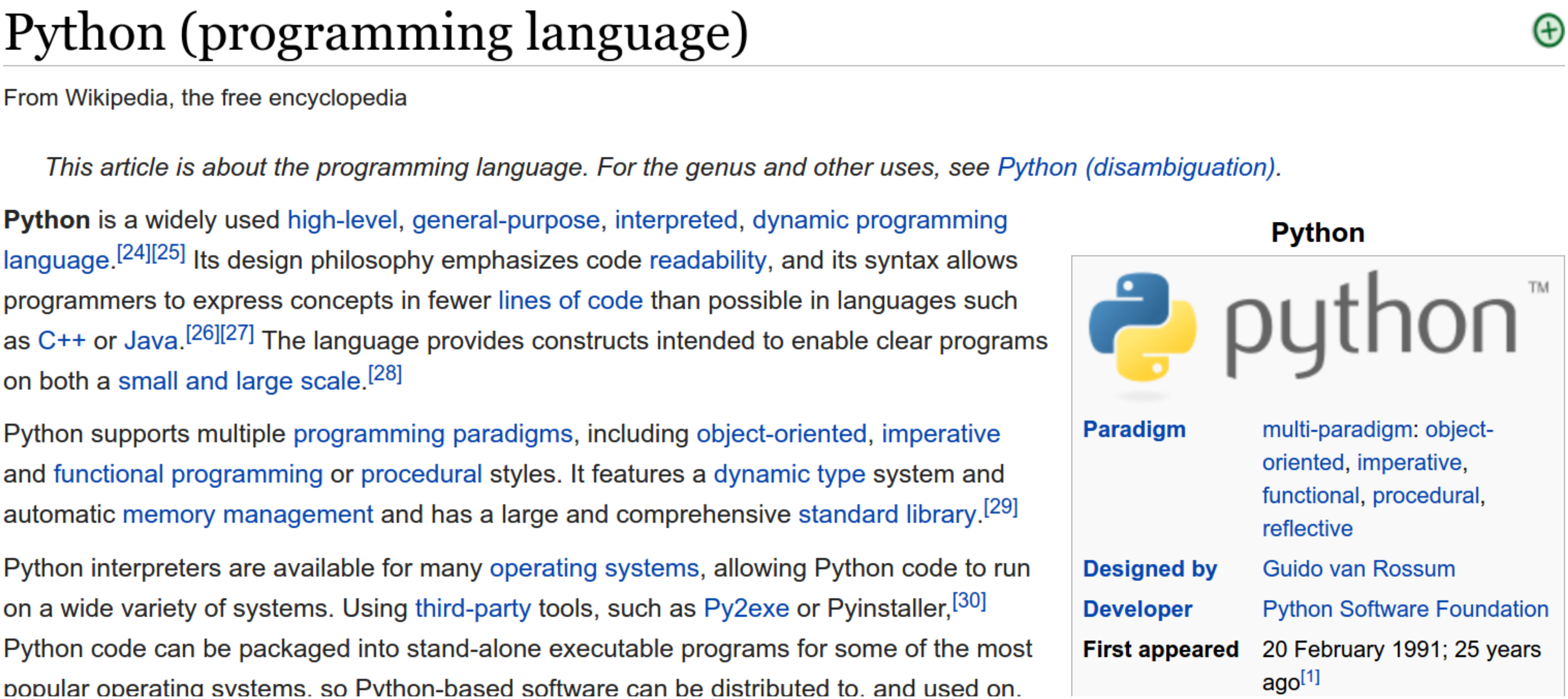
- letter grade
- there will be homework/exercises
- final grade mainly based on submission of homework assignments:
  - ≤ 1 assignment solved: letter grade D
  - 2 assignments solved: letter grade C
  - ≥ 3 assignments solved: letter grade B
- only select assignments (not the first n ones) count into grade
- extra credit if all assignments are solved well and classes have been attended regularly (your chance for an A!)

# Homework

- send me your code via email
- your code should...
  - run (not create any errors; warnings are ok)
  - be structured, concise, and well readable
  - be commented (but not over-commented)
  - not require any user input (if input is necessary, create a variable and make up a reasonable value)

# Python

# Python



## Python (programming language)

From Wikipedia, the free encyclopedia

*This article is about the programming language. For the genus and other uses, see Python (disambiguation).*

**Python** is a widely used high-level, general-purpose, interpreted, dynamic programming language.[24][25] Its design philosophy emphasizes code readability, and its syntax allows programmers to express concepts in fewer lines of code than possible in languages such as C++ or Java.[26][27] The language provides constructs intended to enable clear programs on both a small and large scale.[28]

Python supports multiple programming paradigms, including object-oriented, imperative and functional programming or procedural styles. It features a dynamic type system and automatic memory management and has a large and comprehensive standard library.[29]

Python interpreters are available for many operating systems, allowing Python code to run on a wide variety of systems. Using third-party tools, such as Py2exe or Pyinstaller,[30] Python code can be packaged into stand-alone executable programs for some of the most popular operating systems, so Python-based software can be distributed to, and used on,

**Python**

| | |
|---|---|
| **Paradigm** | multi-paradigm: object-oriented, imperative, functional, procedural, reflective |
| **Designed by** | Guido van Rossum |
| **Developer** | Python Software Foundation |
| **First appeared** | 20 February 1991; 25 years ago[1] |

+ it is free, there is a wide range of modules available for a huge variety of tasks

2 major releases: 2 and 3 → mostly similar, but at some there will be only 3

# Python Resources

- The Python Tutorial: https://docs.python.org/2/tutorial/index.html
- Python Standard Library: https://docs.python.org/2/library/index.html#library-index
- Style Guide for Python: https://www.python.org/dev/peps/pep-0008/
- The Zen of Python: https://www.python.org/dev/peps/pep-0020/
- stackoverflow: http://stackoverflow.com/