Saying Hi to Python

About Python in brief

- High-level, **Interpreted**, Interactive, Object-Oriented
- NOT compiled unlike C/C++
- Dynamic: No need to specify data type
- Highly Readable
- Opensource : You can distribute the scripts
- General-Purpose: You can do everything
- Beginner friendly
- Community Support

History of Python

- Python was conceptualized by **Guido Van Rossum** in the late **1980s**.

- Rossum published the first version of Python code (0.9.0) in February **1991** at the CWI (Centrum Wiskunde & Informatica) in the Netherlands , Amsterdam.

- Python is derived from **ABC** programming language, which is a general-purpose programming language that had been developed at the CWI.

- Rossum chose the name "**Python**", since he was a big fan of Monty Python's Flying Circus.

- Python is now maintained by a core development team at the institute, although Rossum still holds a vital role in directing its progress.

https://en.wikipedia.org/wiki/Guido_van_Rossum#/media/File:Guido_van_Rossum_OSCON_2006.jpg

https://www.slideshare.net/TahaniAlManie/python-3-programming-language

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Comparing Python with Java

TOPIC	Java	Python
Compilation	Java is both compiled and interpreted language	Python is an interpreted lang.
Code Length	Longer lines of code as compared to python.	shorter
Syntax Complexity	Define particular block by curly braces, end statements by ;	No need of semi colons and curly braces, uses indentation
Ease of typing	need to define the exact datatype of variables	Dynamic, no need to define dtype
Speed	Java is much faster than python in terms of speed.	Expected to run slower than Java

Comparing Python with C++

Topic	PYTHON	C++
Code	Python has less lines of code.	C++ tends to have large lines
Syntax	Similar to human !	Complex structure
Compilation	Python uses interpreter.	C++ is precompiled.
Speed	Python is lot slower	C++ is faster in speed
Efficiency	Easier to maintain, object-oriented and simpler	Less clean and manageable in comparison to python
Nature	Python is dynamically typed.	C++ is statically typed.

Where to write code?

You can use any ide you like. For this course, we will use Jupyter Notebook from Anaconda Distribution. It's pretty use to use and fun to learn. Please follow the following website to download and install: https://www.anaconda.com/products/individual. Please install with python 3.6 or higher version.

In case you find hurdles, the link explains easily: https://www.youtube.com/watch?v=5mDYijMfSzs

If you still cannot figure this out, you can use google colab. Take a look: https://www.youtube.com/watch?v=i-HnvsehuSw

Nice resources

https://cognitiveclass.ai/courses/python-for-data-science/

https://pythonprogramming.net/python-fundamental-tutorials/