Welcome to the Python Bootcamp

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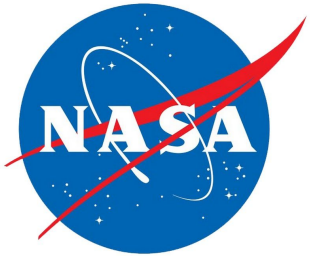
Python

Python is a powerful general-purpose programming language. It is used in **web development, data science, creating software prototypes,** and so on. Fortunately for beginners, **Python** has simple easy-to-use syntax. This makes Python an excellent language to learn to program for beginners.

Whether you're a first time programmer or you're experienced with other languages, it can be very easy to pickup. It is the fastest growing language in the industry right now.

Which companies use Python?



History!

It was conceived/founded in the late 1980s by Guido Van Rossum in Netherlands. Much before Java (which was launched in 1995). It's implementation began in 1989.

Guido is a huge fan of the British Comedy movie - Monty Python's Flying Circus, and hence he named his programming language as Python.

Versions:
*Python 1.0 - January 1994
*Python 2.0 - October 2000
*Python 3.0 - December 2008

Interpreter VS Compiler

Interpreter

- Interpreter translates just one statement of the program at a time into machine code.
- An interpreter takes very less time to analyze the source code. However, the overall time to execute the process is much slower.
- An interpreter does not generate an intermediary code. Hence, an interpreter is highly efficient in terms of its memory.
- Keeps translating the program continuously till the first error is confronted. If any error is spotted, it stops working and hence debugging becomes easy.
- Interpreters are used by programming languages like Ruby and Python for example.

Compiler

- Compiler scans the entire program and translates the whole of it into machine code at once.
- A compiler takes a lot of time to analyze the source code. However, the overall time taken to execute the process is much faster.
- A compiler always generates an intermediary object code. It will need further linking. Hence more memory is needed.
- A compiler generates the error message only after it scans the complete program and hence debugging is relatively harder while working with a compiler.
- Compilers are used by programming languages like C and C++ for example.