



JÖNKÖPING UNIVERSITY

School of Engineering

INTRODUCTION TO PYTHON AND IDES

Peter Larsson-Green

Jönköping University

Autumn 2018

PYTHON

Versions:

- 0.9 released 1991.
- 1.0 released 1994.
- 2.0 released 2000.
- 3.0 released 2008.
 - 3.7 released 2018.

Python is quite popular:

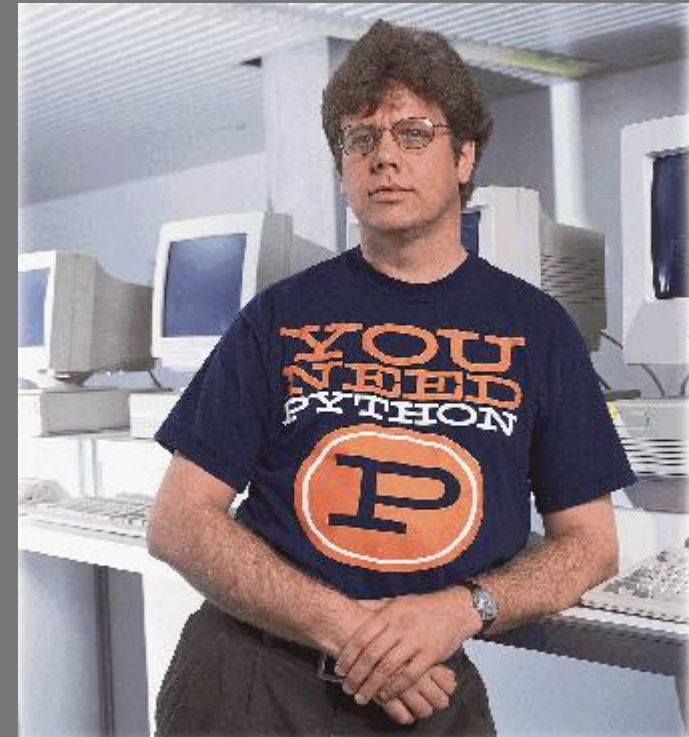
<https://www.tiobe.com/tiobe-index/>

C released ~1972

C++ released ~1983

Java released ~1995.

C# released ~2000.



Guido van Rossum

IMPERATIVE PROGRAMS

A program consists of:

- A sequence of statements.

A statement consists of:

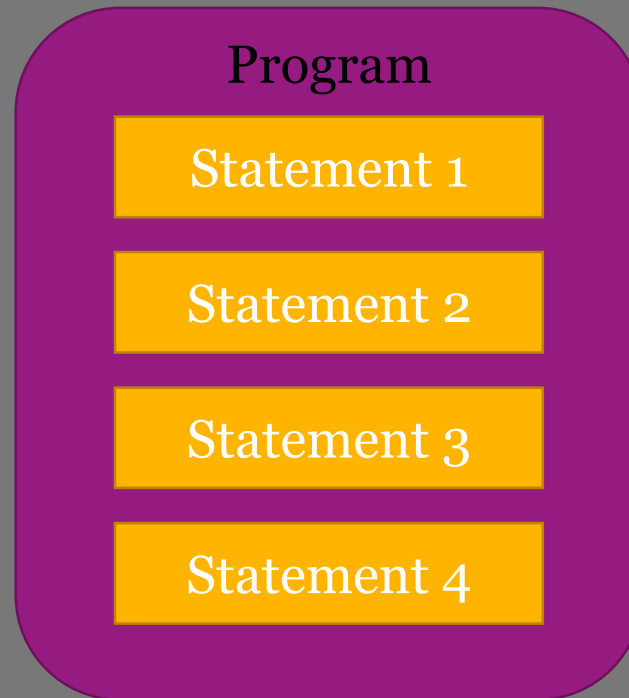
- Other statements and expressions.

Expressions evaluate to:

- Values.

Executed statements:

- Alters the state of the program.



Name	Value
x	12
y	36

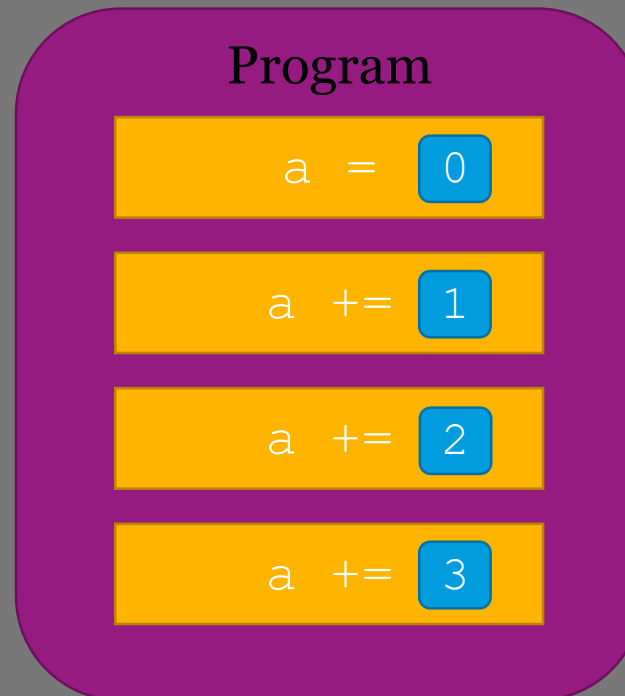
Variable table.

SAMPLE PROGRAM

Goal: to compute the sum of the integers between 0 and 3.

```
a = 0
a += 1
a += 2
a += 3
```

The code we write.



How the computer understands the code.

Name	Value
a	0 1 3 6

The variable table used while executing the program.

PYTHON - HELLO, WORLD!

Python 3

```
print("Hello, World!")
```

Python 2

```
print "Hello, World!"
```

How to run the code?

- An internet service: <https://repl.it/languages/python3>
- On your own computer: <https://www.python.org/downloads>

WRITING AND RUNNING CODE

Demonstration

IDE

Integrated Development Environment

- Code editor with useful programming features, such as:
 - Code highlighting.
 - Code completion.
 - Code hinting.
- "Run code" button.
- Debug capabilities.

VISUAL STUDIO CODE

- An IDE from Microsoft.
- Works on both Windows, Linux and Mac.
- Has good support for Python through an extension.

Website: <https://code.visualstudio.com>

VISUAL STUDIO CODE

Demonstration