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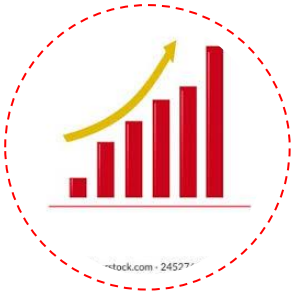
Why Python?

Simplicity

Large Community



High Demand

Some History

- “Over six years ago, in December 1989, I was looking for a "hobby" programming project that would keep me occupied during the week around Christmas…I chose Python as a working title for the project, being in a slightly irreverent mood (and a big fan of Monty Python's Flying Circus).”

  –Python creator Guido Van Rossum, from the foreward to *Programming Python (1st ed.)*

- Goals:
  - An easy and intuitive language just as powerful as major competitors
  - Open source, so anyone can contribute to its development
  - Code that is as understandable as plain English
  - Suitability for everyday tasks, allowing for short development times

Today’s Topics

Building a console based Ticket Booking app

Variables

Data Types

Operators

Conditions

Loops

Functions

Operators

- Python supports a wide variety of operators which act like functions, i.e. they do something and return a value:
  - Arithmetic: `+ - * / % **`
  - Logical: `and or not`
  - Comparison: `> < >= <= != ==`
  - Assignment: `=`
  - Bitwise: `& | ~ ^ >> <<`
  - Identity: `is is not`
  - Membership: `in not in`

Variable Data Types

- Available basic types: :
  - **Numbers**: Integers and floating point (64-bit)
  - **Complex numbers**: `x = complex(3,1)` or `x = 3+1j`
  - **Strings**, using double or single quotes: `"cat"` `'dog'`
  - **Boolean**: `True` and `False`
  - **Lists**, **dictionaries**, **sets**, and **tuples**
    - These hold collections of variables
  - Specialty types: files, network connections, objects

- Custom types can be defined using Python classes.

Variable modifying operators

- Some additional arithmetic operators that modify variable values:

Operator	Effect	Equivalent to…
x += y	Add the value of *y* to *x*	x = x + y
x -= y	Subtract the value of *y* from *x*	x = x - y
x *= y	Multiply the value of *x* by *y*	x = x * y
x /= y	Divide the value of *x* by *y*	x = x / y

- The += operator is by far the most commonly used of these.

Reference

- University of Boston - Intro To Python
- Python Official Documentation
- W3Schools - Python


Thank
you!