

Python programming language.

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1. Introduction:

- What is Python.
- History of Python.
- Versions.
- Installation.
- Hello world!
- Python keywords.
- Indentation is very important!
- Quotes.
- Comments.
- Type of variables.

2. Work with objects:

- Assignment, deleting, conversion.
- Immutable vs Mutable
  - list, dict, set, object
  - tuple, int, float, string

3. Operators:

- Arithmetic operators
- Comparison operators
- Assignment operators
- Bit operations
- Identity Operators(is, is not)
- Membership Operators(in, not in)
- Priority of operations

4. Conditionals:

- if... else...
- if... elif...
- one-line if

5. Cycles:

- for
- while
- else in cycles
- break, continue

6. Numbers:

- int, long, float, complex

- import math
  - import random
7. Strings:
- .format and %
  - r'expression' and u'expression'
  - methods
8. Slices
9. Type system
10. Iterators and Generators:
- list comprehensions
  - dict comprehensions
  - set comprehensions
  - Iterators
11. Files and I/O
12. Context managers
13. Functions:
- Area of visibility
  - lambda
  - locals(); globals()
  - function as object
14. Modules:
- import
  - from ... import ...
  - from ... import ... as ...
  - Write your own module
  - dir()
  - reload()
15. OOP:
- Classes and objects
  - Attributes
  - public and private
  - Garbage Collection
  - Inheritance
  - issubclass, isinstance

16. Exceptions:
17. Magic methods:
18. Metaprogramming:
  - Decorators
  - Metaclasses
19. Concurrency
20. Standard library
21. Unit testing
22. High Performance Python