

The Zen Of Python – workshop

For developers

40 HOURS

The course will focus on strengthening understanding and fluency in python.

With tips, tricks and rule-of-thumb and deep dives, we take your python skills to the next level:

1. Write short, concise, readable code in a pythonic style
2. Avoid pitfalls, tricky gotchas and common bugs
3. Understand how python works under the hood

Course prerequisite:

- Practical experience in some programming language: C/C++, Java, Cobol
 - Python experience a plus

Course content covers:

- The basics: Objects, types, variables
 - Everything is an object
 - The zen of python
- Flow control and loops
 - emphasis on the utility of for loop and list comprehension
 - Unpacking
 - Debugging in visual studio code
- Strings
 - Strings and their functions
 - Escaping
 - Multiline strings
 - Raw strings
 - String formatting and f-strings
- Collections
 - Lists, sets, dictionary and their uses
 - Mutability vs immutability
 - iterables
 - Collection tricks: defaultdict, Counter
- Functions
 - Designing good functions
 - Side effects and pure VS non-pure functions
 - Positional arguments and keyword arguments
 - Default arguments
 - Variadic functions *args, **kwargs
 - Lambda
 - Functions as variables and objects
- Exceptions
 - Catching exception with try / except
 - The finally clause
 - Stack unrolling

- Raising exceptions
- The exceptions hierarchy
- File i/o
 - Opening and closing files
 - Iterating over lines using for
 - Writing to files
 - With statement
- Modules
 - How the import process works
 - From .. import ... as ... and variations
 - The __main__ trick
 - Packages
 - Dependency management with pipenv