

Initiation to Python programming

Duration: 3 days

Audience: Analyste de données

Who is this training for?

- Programming beginners
- Professionals who want to automate tasks or analyze data
- Analysts, technicians or anyone who wants to learn a first programming language

Training objectives

- Master the fundamentals of programming
- Develop ease in programming with the Python language
- Be able to design computer programs of medium to complex difficulty

Summary

This course introduces you to the fundamentals of programming and allows you to develop ease in programming with the Python language. You will be able to design computer programs of medium to complex difficulty using the best practices of the Python language.

Course outline

Module 1: Introduction to Programming and Python

- Basic Concepts (Algorithm, Variable, Data Types)
- Python Installation and Environment
- Basic Syntax

Module 2: Control Structures

- Conditions (if, else, elif)
- Loops (for, while)
- User Input Management

Module 3: Data Structures

- Lists, Tuples, Dictionaries, Sets
- Data Manipulation and Traversal

Module 4: Functions and modularity

- Creating functions
- Parameters and return values
- Organizing code

Module 5: File manipulation and exceptions

- Reading and writing files
- Error handling (try/except)

Module 6: Introduction to Python libraries

- Using standard modules
- Introduction to some useful libraries (e.g. math, datetime)

Module 7: Good programming practices

- Code readability
- Documentation and comments
- Introduction to debugging

Approach and methodology

This course takes a progressive approach combining short theoretical presentations and numerous practical exercises to promote learning by doing. Participants complete guided exercises and mini-projects to apply concepts as they go. Interactivity, live demonstrations and real-world problem-solving reinforce skill acquisition.

Recommendations

Have ease in software installation