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Sign up

Python beginner training

A complete introduction to Python: from syntax to advanced concepts

3 days (21 hours)

Presentation

Our Python for beginners course will give you a thorough understanding of the Python programming language. You'll learn all the skills you need to design your own infrastructure.

Our Python for beginners course is designed for developers wishing to learn the basics of the Python language. Whether you're a beginner or an experienced coder, learning Python is an excellent way to upgrade your skills and master one of the most powerful programming languages on the market.

Our training is punctuated by practical workshops, enabling you to familiarize yourself with the concepts covered in the course and to apply them in your day-to-day tasks and become fully operational.

Objectives

- Learn the fundamental concepts of programming
- Developing skills in Python
- Discover [Object-Oriented Programming](#) (OOP)
- Understand and build a simple Python architecture

Target audience

- Beginner python developers
- Public

Prerequisites

- Comfortable using a web browser (Chrome, Firefox, Edge, etc.)
- Basic knowledge of development languages is a plus, but not mandatory

Our Python training program for beginners

Introduction to Python

- Python history, applications & use cases
- Introduction to Notebooks: Jupyter & Google Colab
- Introduction to syntax: variables, types and indentation

Flow control & Operators

- Understand arithmetic, logic and comparison operators
- If, elif, else conditions
- For and while loops
- Break, continue, pass

Data structure

- Lists & Tuples
- Dictionaries & Sets
- Common methods for manipulating data structures

Functions

- What is a function
- Define a function and execute
- Parameters and default values
- Scope of variables
- Anonymous functions: lambda

Errors & Exceptions

- What is an error in Python?
- What is an exception in Python?
- Exception handling: Try, except, finally
- Multiple exceptions

I/O files

- Open a text file
- Reading a text file
- CSV files: Read/write
- "with statement

External modules & libraries

- Python modules
- Import modules
- Import specific objects
- Standard libraries
- pip

Introduction to OOP

- What is Object-Oriented Programming (OOP)?
- Key concepts: class, object, attribute, method
- Constructor & Class destructor

Taking OOP a step further

- Single & multiple inheritance
- Overload
- Polymorphism

Best practices in Python

- Why are best practices important?
- Naming convention
- Documentation
- Project structuring

Debugging & Testing

- The importance of debugging and testing
- Unit testing
- Test methods

Final Project

- Review of all the concepts covered in the course
- Variables, data structures and functions
- File management
- OOP, classes, inheritance

- Error & exception handling
- Unit testing

Companies concerned

This training course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced computer technology, or to acquire specific business knowledge or modern methods.

Positioning on entry to training

Positioning at the start of training complies with Qualiopi quality criteria. As soon as registration is finalized, the learner receives a self-assessment questionnaire which enables us to assess his or her estimated level of proficiency in different types of technology, as well as his or her expectations and personal objectives for the training to come, within the limits imposed by the selected format. This questionnaire also enables us to anticipate any connection or security difficulties within the company (intra-company or virtual classroom) which could be problematic for the follow-up and smooth running of the training session.

Teaching methods

Practical course: 60% Practical, 40% Theory. Training material distributed in digital format to all participants.

Organization

The course alternates theoretical input from the trainer, supported by examples, with brainstorming sessions and group work.

Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

Sanction

A certificate will be issued to each trainee who completes the course.