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## PyScript training

3 days (21 hours)

### Presentation

**PyScript** is a framework for creating Python applications in the browser with the HTML interface, the power of Pyodide, WASM and other modern web technologies. Its aim is to facilitate the use of Python in the browser.

PyScript offers you a programming language with consistent style conventions, greater expressiveness and ease of learning.

PyScript aims to combine several open technologies into a framework that allows users to create browser applications with Python. It integrates seamlessly with the way the DOM works in the browser, allowing users to add Python logic in a natural way.

Our PyScript training course will teach you how to use PyScript in HTML files to execute Python code in the browser. You'll learn about PyScript's various operations and features, its project architecture and its main tags.

### Objectives

- How to use Python code directly in a browser
- Creating rich Web applications
- Reuse of the same code on the back-end and front-end
- Call Python functions from JavaScript and vice versa
- Distribute Python programs without dependencies

### Target audience

- Developers
- Data Analysts
- Anyone else who wants to code

# Prerequisites

Knowledge of Python and HTML

# PyScript Training Program

## Introduction

- What is PyScript?
- PyScript benefits
- Creating an HTML file
- Link the HTML file with PyScript
- Print "Hello World" in the browser

## PyScript project architecture

- Basic architecture
- Basic PyScript tags
- Using Python modules
- External modules

## PyScript features

- PyScript key tags
- Integration of Python modules
- Implementing Python REPL
- Managing external modules and dependencies
- Management of forms and event triggers

## Attaching labels

- Passing Python code variables to HTML
- Transmit strings displayed as plain text
- Run REPL in the browser
- Import files, modules and libraries
- Metadata configuration

## PyPI bookshops

- Python ecosystem
- Installing a PyPI package
- Import packages

- PyScript libraries ( Numpy, Pandas, Scikit-learn)

## PyScript Deep Drive

- PyScript vs. JavaScript
- Importing a Python script from an external file
- Importing functions from a python file
- Multi-line python script
- Using classes and functions in PyScript
- Add local modules
- Outputting Python code to HTML tags
- Working with built-in and external Python libraries
- Events with PyScript

## Creating studs with PyScript

- Bar chart using numpy and matplotlib in PyScript
- On-line graphics
- Bokeh graphics
- Distplot with histogram
- Scatter diagram

Python training

HTML5, CSS3, JavaScript training

Advanced JavaScript training

## 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.