Course : JavaScript, mastering object-oriented programming

Practical course - 3d - 21h00 - Ref. JAO
Price : 2150 CHF E.T.

★★★★⯪ 4,8 / 5

You will master the mechanisms of Object programming in JavaScript. You'll study its Object model in detail, implementing in particular the concept of classes and inheritance. You'll also discover the advanced mechanisms of JavaScript and the benefits of integrating it with TypeScript.

Teaching objectives

At the end of the training, the participant will be able to:

- Understanding the particularities of object-oriented programming with JavaScript
- Create classes with constructors and properties
- Implementing the inheritance principle
- Linking TypeScript with JavaScript syntax

Intended audience
Web developers and project managers.

Prerequisites
Programmers with basic JavaScript knowledge.

Course schedule

1 Class overview
- A reminder of OOP.
- The class mechanism.
- Definition of public and private properties and methods.
- Template class creation.
- Understand the prototype mechanism, __proto__.
- Object and typing of TypeOf, instanceOf objects.

(2) Constructor and properties

- Understand builder mechanisms.
- Constructor based on Object.create.
- Literal builder.
- Scope safe principle.
- Creation by singleton, pattern.
- Property creation methods, property scope (private, public, static).
- Scope of methods, polymorphism mechanisms.
- Preserve and manage Context this.

Hands-on work
Implement the different methods of class creation.

(3) Inheritance concepts

- Understand inheritance mechanisms in JavaScript.
- Single, multiple inheritance.
- Inheritance by prototype.

Hands-on work
Creating a simple inherited class with and without prototypes.

(4) Understanding the Object type

- Object literal creation, with a constructor.
- Create properties and methods.
- Object duplication by value, reference.
- Managing the this context with Object.apply and Object.call.
- Demystify Object properties.
- Modules: Object, AMD.

Hands-on work
Object-based class and factory construction.

(5) Advanced JavaSript mechanisms

- Variable declaration, typing, nomenclature, DOM access.
- Understanding the Hoisting mechanism.
- Promises and Asynchronous Programming.
- Ajax exchange of structured objects and serialization of multiple formats (text, image, JSON).
- Static namespace creation, object namespace, module pattern, proxy namespace.
- Anonymous functions, closures.
- Understand callback principles.

Hands-on work
Management of local storage solutions to store images, objects, etc.

⑥ Why use TypeScript?

- Data typing.
- Constructors, instances (method and property), interfaces.
- Class and object creation (private, public, static...).
- Getters, Setters.
- Inheritance, overload.
- Context management.
- Polymorphism.

Hands-on work

Creation of an object programming project in Typescript, using Node.js solutions.

Dates and locations

REMOTE CLASS

2026 : 11 Mar., 18 May, 16 Sep.