Updated on 12/17/2024

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JavaScript training

3 days (21 hours)

Presentation

JavaScript is the most popular programming language among developers. This language is supported by the best development environments and enables complex mechanisms to be integrated into a web page.

The main advantage of JavaScript is its compatibility with all modern browsers (Chrome, Safari, Firefox...).

JavaScript is an object-oriented language for creating all the interactive elements of a site: forms, animations, pop-ups and much more. The famous React, Angular and Vue frameworks all use JavaScript.

In our JavaScript : Fundamentals, you'll learn how to make web pages interactive by creating client-side scripts. You'll learn how to use DOM objects to intervene on a targeted element of a page. You'll also be able to `trigger` events asynchronously.

As always, we'll be presenting the latest version of the language: JavaScript 11 - ES2020.

Objectives

- Building web applications in JavaScript
- Building a responsive design site
- HTML5 and CSS3 skills
- Structure your application information with data types
- Identify and modify page elements with the DOM
- Know and understand the logic of a JavaScript program
- Manage events

Target audience

- Front-end developers
- Technical architects
- UI designers
- Project managers
- Design engineers
- Webmasters

Prerequisites

- Knowledge of HTML and CSS

Program of our JavaScript : Fundamentals

Introduction to JavaScript

- What is JavaScript?
- Adding JavaScript code to a web page
- Handling JS files
- Detecting and correcting errors
- Numbers and operators in JavaScript
- Text management: strings in JavaScript
- Useful methods for strings
- Best practices in responsive design

Variables and conditions

- What is a variable?
- Variable declaration
- Using let, var and const
- Naming variables
- Common errors
- Modifying variable values
- Conditions
    - If
    - Else if
    - Switch
    - Ternary syntax

Types and operators

- The numbers
- Negative numbers

- The dates
- Booleans
- Operators predominate
- Type conversion
- Objects and symbols

Tables with JavaScript

- Array creation and initialization
- Accessing array elements
- Handling tables
- Searching and looping in an array
- Tuple presentation and manipulation

JavaScript blocks and IIFEs

- Overview of building blocks
- Loops and iterations
- Reusable code blocks
- Create functions
- Function return values
- Introduction to events

JavaScript objects

- JavaScript objects overview
- Object basics
- Prototype objects
- Using JSON data
- Object construction

JavaScript functions

- Basic principle of functions
- Expression of functions
- Transmission of information to functions
- Return value of functions
- Scope of functions
- Using functions to modify web pages

Objects and the DOM

- Object properties
- Object methods
- Integrated standard object
- Document Object Model (DOM)
- Stylizing DOM elements
- Detect button clicks

Asynchronous JavaScript

- What is asynchronous?
- General concepts of asynchronous programming
- Cooperative asynchronous JavaScript: Delays and intervals
- Make asynchronous programming easier with async and await
- Asynchronous programming with Promises

Client-side Web API

- Introduction to web APIs
- Document handling
- Server data extraction
- Third-party APIs
- Video and audio APIs
- Client-side storage

Advanced concepts

- jQuery with HTML and CSS
- Building a JavaScript application
- Regular expressions
- AJAX and Fetch API
- JavaScript libraries
- Error handling on JavaScript

Companies concerned

This 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 enrolment is finalized, the learner receives a self-assessment questionnaire enabling us to assess his or her estimated level of proficiency in different types of technology, as well as his or her expectations and objectives.

This questionnaire also enables us to anticipate any connection or internal security problems (intra-company or virtual classroom) that could be problematic for the follow-up and smooth running of the training session. This questionnaire also enables us to anticipate any connection or internal security difficulties (intra-company or virtual classroom) that 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.