

CSS Grid & Flexbox training

2 days (14 hours)

Overview

CSS Grid & Flexbox are modern, complementary tools for structuring flexible, high-performance web layouts.

While Flexbox makes it easy to manage one-dimensional layouts (rows or columns), Grid offers precise control over both axes (rows and columns): ideal for complex, adaptive layouts.

This 2-day web training course for developers alternates theory, case studies and practical exercises.

Objectives

- Master the basics and advanced properties of Flexbox
- Design complex, responsive grids with CSS Grid
- Combine Flexbox and Grid to optimize layouts
- Produce adaptive, accessible and easy-to-maintain interfaces.

Target audience

- Front-end developers wishing to structure modern interfaces
- Familiar HTML/CSS professionals wishing to master Grid and Flexbox

Prerequisites

- Basic knowledge of HTML and CSS
- Previous web layout experience desirable

CSS Grid & Flexbox training program

Flexbox principles and flexible containers

- Introduction to Flexbox, container vs. items
- Container properties: display: flex, flex-direction, flex-wrap, gap
- Alignment: justify-content, align-items, align-content, align-self
- Flexible sizing: flex-grow, flex-shrink, flex-basis, shorthand
- Specificities and cases of one-dimensional content

Concrete interface use cases

- Layout of a navigation menu or horizontal gallery
- Automatic space distribution and responsive folding
- Reordering items via order
- Use in modern UI components (cards, toolbars, etc.)
- Workshop: creating a responsive navigation bar with flexible alignment

CSS Grid - basic concepts

- Introduction to CSS Grid, comparison with Flexbox (2?dimensions vs. 1?dimension)
- Grid definition: grid-template-columns/rows, gap, grid-template-areas
- Explicit placement (grid lines, areas) and auto-placement
- Grid alignment: justify-items, align-items, justify-content, align-content
- Modern units: fr, minmax(), repeat()

Putting Grid to work

- Creating complex layouts: header, sidebar, main and footer zones
- Use of subgrids, named zones and responsive via media queries
- Managing order and stacking (overlap, layering)

Flexbox integration in Grid and mix

- When to use Flexbox inside a Grid item and why
- Combining layout-first (Grid) + content-first (Flexbox)
- Advanced examples of responsive UI design

Optimization and best practices

- Browser support and backwards compatibility for older browsers
- Accessibility and keyboard navigation
- Debugging with dev tools (grid overlay, flex inspector)
- Performance, CSS maintenance, code clarity
- Workshop: building a responsive home page combining a main grid and Flexbox components inside it

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 forthcoming course, 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 training: 60% hands-on, 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.

Certification

A certificate will be awarded to each trainee who has completed the entire course.