

## HTML Boot Camp

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### Course Summary

#### Description

The HTML 5.2 Bootcamp offers a comprehensive journey into the world of HTML 5.2, empowering participants with practical skills to develop modern, interactive web pages and create custom web components. This course serves as an essential foundation for aspiring front-end developers and those seeking to stay updated with the latest HTML standards and best practices.

#### Objectives

The HTML 5.2 Bootcamp is a comprehensive front-end web development course. Participants will gain an in-depth understanding of HTML 5.2, learning how to structure and build modern web pages. The course covers HTML 5.2 syntax, elements, and best practices. Additionally, students will explore HTML forms, media elements, and the canvas API. The course delves into the concept of web components, enabling participants to create reusable custom elements using the Shadow DOM and HTML Templates. With hands-on exercises, practical demos, and quizzes, this bootcamp equips learners with essential HTML skills for creating interactive and user-friendly web pages.

#### Topics

- Front-end Web Development
- Introduction to HTML 5.2
- HTML 5.2 Syntax
- HTML Elements
- HTML 5.2 Forms
- HTML 5.2 Media
- HTML Canvas
- Web Components

#### Audience

This course is designed for new or experienced web developers who want to become job-ready, front-end web developers. Participants will be ready to join web development teams as productive team members with a thorough understanding of HTML, the DOM, and how properly structured semantic HTML can play a role in both CSS and JavaScript. Thus, adding value to their teams project by following best practices.

#### Prerequisites

Students should be able to navigate the Windows file system and have a basic understanding of the world wide web. Prior HTML, CSS or JavaScript experience is helpful but not required.

#### Duration

Five days

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### Course Outline

- I. *Front-end Web Development*
  - A. Introduction to front-end web development and Fast Track Exercise
  - B. Understanding how the web works
  - C. Distinguishing front-end and back-end roles
- II. *Introduction to HTML 5.2*
  - A. Introduction to HTML 5.2/3 and Fast Track Exercise
  - B. Understanding HTML's role in web page structure
  - C. Exploring HTML 5.2: Features and governance
  - D. Benefits of writing HTML 5.2
  - E. Insight into HTML 5.2 creation and specification
  - F. Contributing to the HTML 5.3 specification
  - G. Writing basic HTML 5.2 code with a guided exercise
  - H. Condensed guide to HTML 5.2 syntax
  - I. How to code HTML elements like paragraphs and headings
  - J. Working with HTML attributes and the official W3C Syntax Guide
  - K. Best practices for HTML 5.2 development
  - L. Practice exercises to write HTML5 templates
  - M. Utilizing the Emmet plugin with Visual Studio Code and WebStorm
  - N. Understanding HTML document objects and elements
  - O. Challenge and Extra Credit exercises to create web pages
  - P. Quiz and Homework exercise exploring HTML history and resources
- III. *HTML 5.2 Syntax*
  - A. Introduction to HTML5.2 Syntax and Fast Track Exercise
  - B. Guided exercise to write basic HTML5 code
  - C. HTML elements and syntax rules
  - D. Optional elements and void elements
  - E. Understanding HTML 5.2 page structure and rendering modes
  - F. Exploring the Doctype and document root node
  - G. The HTML head section and its elements
  - H. Setting the character set, using link, preload, and script elements
  - I. Familiarizing with HTML 5 semantic elements and their usage
  - J. Quiz and resources to reinforce learning
- IV. *HTML Elements*
  - A. What are the HTML5 elements?
  - B. How do I use the HTML5 elements?
  - C. The picture element
  - D. Guided Exercise: Using the picture element
  - E. Guided Exercise: Understanding the srcset attribute
  - F. Guided Exercise: Understanding image use cases
  - G. Resources: HTML images
  - H. Guided Exercise: Using the summary and details element
  - I. Summary/Details Polyfill
  - J. Guided Exercise: Using the ins and del elements
  - K. Guided Exercise: Using the fig and figcaption elements
  - L. Guided Exercise: Using the mark element
  - M. Guided Exercise: Using the meter element
  - N. Guided Exercise: Using the progress element
  - O. Guided Exercise: Using the dialog element
  - P. Guided Exercise: Using the time element
  - Q. Guided Exercise: Using the template element
  - R. Challenge Exercise: Template Challenge
  - S. Guided Exercise: data, code, wbr, and additional HTML elements
  - T. HTML 5 new attributes
  - U. contentEditable API
  - V. Guided Exercise: Using contenteditable
  - W. The data- attributes
  - X. data-\* syntax rules
  - Y. the dataset API
  - Z. Guided Exercise: Setting dataset attributes
  - AA. Guided Exercise: Getting dataset attributes
  - BB. Practice Exercise: Working with data- attributes
  - CC. Demo: Using the hidden attribute
  - DD. Other ways to hide elements
  - EE. Extra Credit Exercise: Using the new elements and attributes
  - FF. Quiz
  - GG. Homework Exercise: Practice the new elements
  - HH. Resources

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### Course Outline (cont)

#### V. *HTML 5.2 Forms*

- A. Introduction to Forms and Fast Track Exercise
- B. Understanding form elements, input types, and attributes
- C. Creating forms with different input elements
- D. Exploring advanced form attributes and form control disabling
- E. Guided exercise to use new input and form attributes
- F. Handling form data using the FormData object
- G. Form validation with guided exercise and extra credit challenge
- H. Homework exercise to build a form and extra credit for registration form
- I. Quiz and resources for further learning

#### VI. *HTML 5.2 Media*

- A. Introduction to HTML 5 media elements
- B. Working with audio and video elements
- C. Browser support for new media elements and attributes
- D. Guided exercises for video and audio control and formats
- E. Homework exercise to create a video player

- F. Quiz and resources to enhance understanding

#### VII. *HTML Canvas*

- A. Introduction to HTML 5 canvas and its benefits
- B. Detecting browser support for canvas and working with the element
- C. Drawing shapes, gradients, and patterns on the canvas
- D. Homework exercise to create a signature pad
- E. Extra credit challenge to build a canvas page
- F. Quiz and resources for continued exploration

#### VIII. *Web Components*

- A. Introduction to Web Components and its advantages
- B. Understanding custom elements, Shadow DOM, and HTML Templates
- C. Comparing HTML Web Components with popular JavaScript frameworks
- D. Guided exercises for custom elements creation and usage
- E. Utilizing JavaScript modules for web component development
- F. Quiz and resources to master web component creation