Fullstack web development Tutorial Lesson 1

Today's lesson will cover

- **Introduction to web development**

- **Setting up tools**

- **Basics of HTML and CSS**

Introduction to Web Development

What is web development?

"Web development is the coding or programming that enables website functionality, per the owner's requirements. It mainly deals with the non-design aspect of building websites, which includes coding and writing markup.

Web development ranges from creating plain text pages to complex web-based applications, social network applications and electronic business applications.
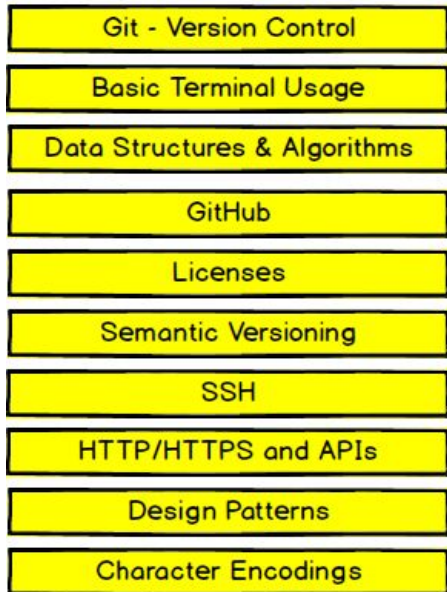
The web development hierarchy is as follows:

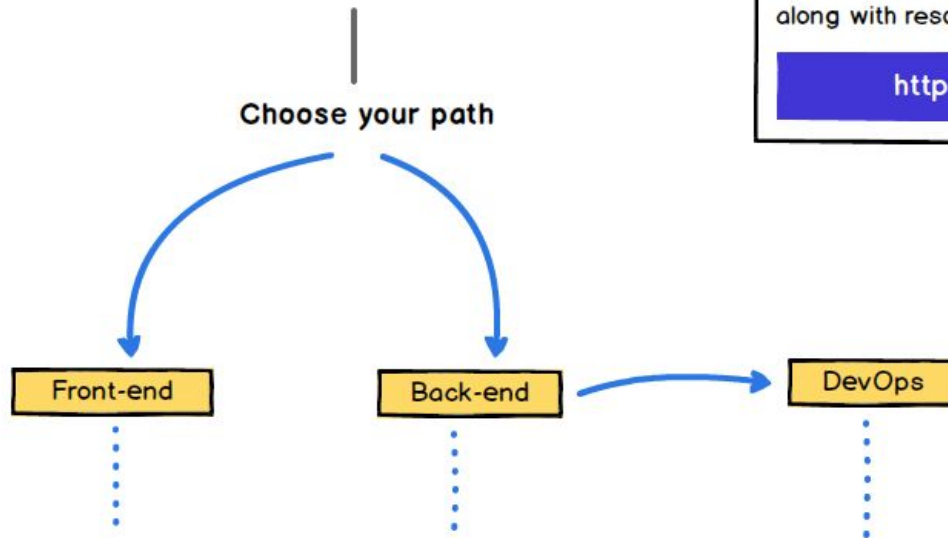- Client-side coding
- Server-side coding
- Database technology"

-- Techopedia

Web development roadmap in 2020

Required for any path

- Git - Version Control
- Basic Terminal Usage
- Data Structures & Algorithms
- GitHub
- Licenses
- Semantic Versioning
- SSH
- HTTP/HTTPS and APIs
- Design Patterns
- Character Encodings

Web Developer in 2020

Choose your path

Front-end   Back-end → DevOps

Find the detailed version of this roadmap along with resources and other roadmaps

http:// roadmap.sh

Source: Web Developer Roadmap Github Repo

Glossary of web related terms: https://developer.mozilla.org/en-US/docs/Glossary

Technology stack

Foundation technologies:

- HTML
- CSS
- JavaScript

Frameworks and libraries: "framework is like a prepackaged structure of pre-written code for your website that determines how programs should interact."

- React, Angular, Vue, next.js
- Express
- SCSS, SASS

Content Management System (CMS): "CMS typically uses a database (such as MySQL and MariaDB), which stores a collection of programs and tools...allowing you to edit and manage your website without needing to return to the minute details of your code."

- Wordpress, Drupal

Setting up tools

What do we need?

- Text editor: https://code.visualstudio.com/Download
- Browser: https://www.google.com/chrome
- Git: https://git-scm.com/downloads
- Terminal
- Server: https://nodejs.org/en/download/

CMS:

- WordPress installation instructions:
    - On Windows: https://www.wpbeginner.com/wp-tutorials/how-to-create-a-local-wordpress-site-using-xampp/
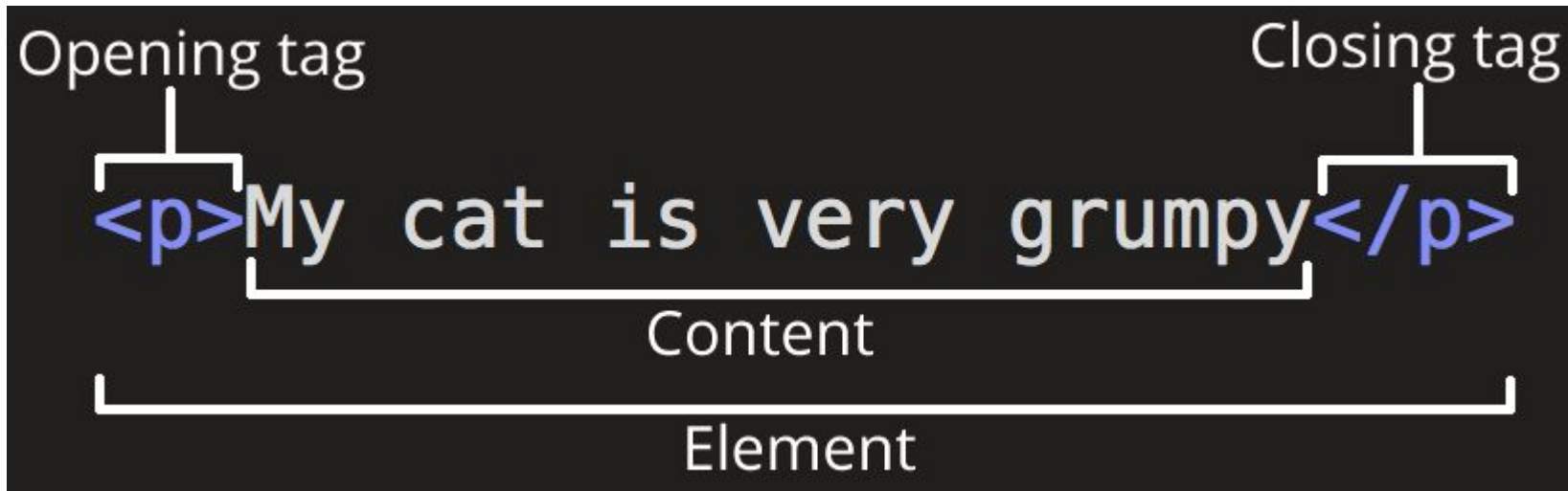   - On Mac: https://www.wpbeginner.com/wp-tutorials/how-to-install-wordpress-locally-on-mac-using-mamp/

Introduction to HTML

What is HTML?

HTML (Hypertext Markup Language) is not a programming language. It is a *markup language* that tells web browsers how to structure the web pages you visit. It can be as complicated or as simple as the web developer wants it to be. HTML consists of a series of elements, which you use to enclose, wrap, or *mark up* different parts of content to make it appear or act a certain way. The enclosing tags can make content into a hyperlink to link to another page, italicize words, and so on.

Source: Anatomy of HTML element

HTML Elements and Attributes

Elements: Contains and contents

- Nesting elements

- Block vs Inline elements

- Empty elements

Attributes: Apply information and characteristics of the elements and contents

- For example: href, title, target, src

- Boolean attributes: i.e. disabled

All possible HTML elements you may ever play around with: https://www.w3schools.com/html/default.asp

Introduction to CSS

What is CSS?

CSS (Cascading Style Sheets) is a declarative language that controls how webpages look in the browser. The browser applies CSS style declarations to selected elements to display them properly. A style declaration contains the properties and their values, which determine how a webpage looks.

CSS is one of the three core Web technologies, along with HTML and JavaScript. CSS usually styles HTML elements, but can be also used with other markup languages like SVG or XML.

A CSS rule is a set of properties associated with a selector.

CSS can be added to HTML elements in 3 ways:

- Inline - by using the style attribute in HTML elements

- Internal - by using a <style> element in the <head> section

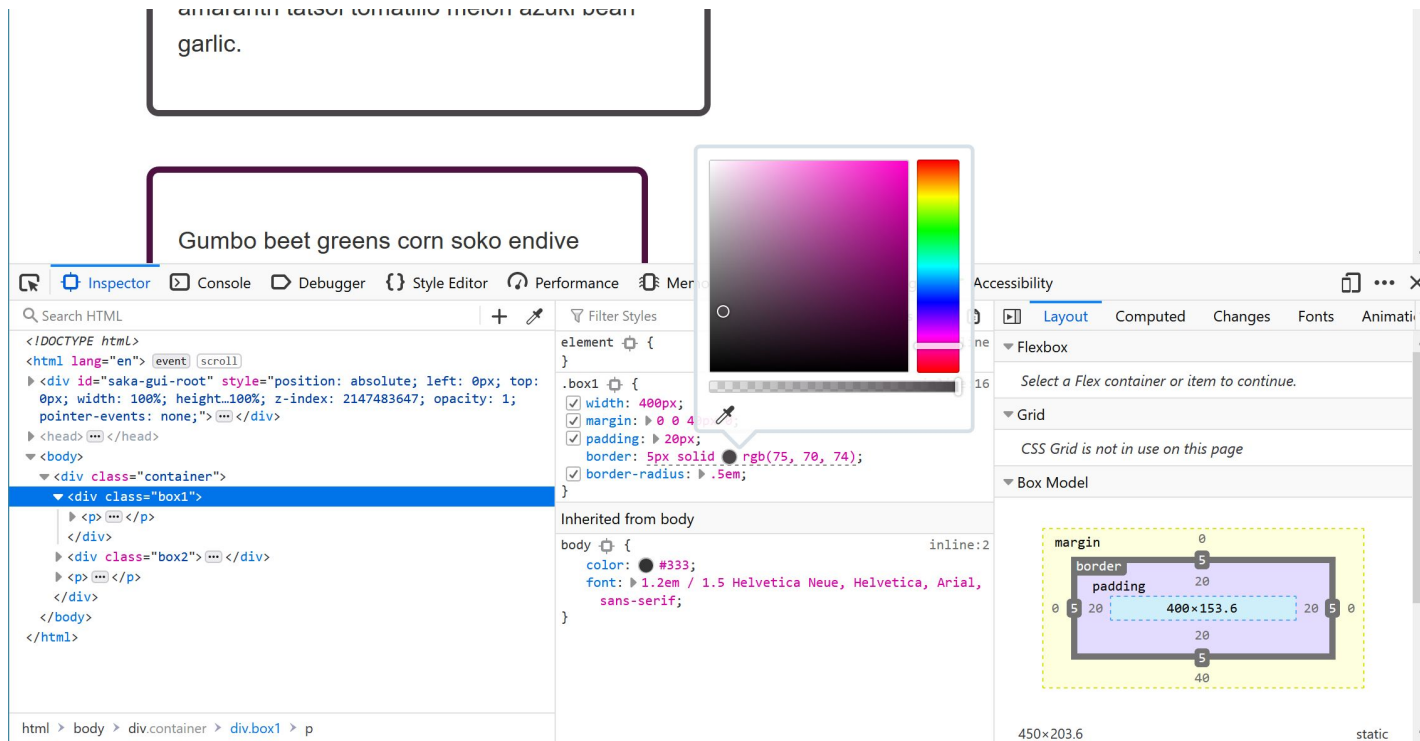- External - by using an external CSS file

CSS Selectors

- Basic Selectors
    - Universal - *
    - Type - HTMLelementname
    - Class - .classname
    - ID - #idname
    - Attribute - [attr] [attr=value]
- Grouping selectors
    - Selector list: A, B
- Combinators

CSS Layouts

- Normal flow
  - Display property: block, inline, inline-block
  - Floats
  - Position property
  - Table
- Flexbox
- Grid
- Floats
- Positioning
- Table layout
- Multiple-column layout

CSS Debugging

Open the developer tool of the browser by pressing F12 or Ctrl(cmd on Mac)+Shift+I

Self Study Assignments

To Dos

- Open github account: https://github.com/join

- Complete few HTML and CSS exercise from: https://www.freecodecamp.org/learn

- Setup Wordpress locally:

  - On Windows: https://www.wpbeginner.com/wp-tutorials/how-to-create-a-local-wordpress-site-using-xampp/

  - On Mac: https://www.wpbeginner.com/wp-tutorials/how-to-install-wordpress-locally-on-mac-using-mamp/