Unit 1: Introduction to Web Development, HTML, CSS and Git

Overview

Congratulations! This is the first step on your journey towards a career in full-stack web development. There are many paths your career can take in this field and this unit is the foundation for all of them. Every full-stack web developer must master HTML and CSS, as well as learn how to program browsers, servers and databases. There are several programming languages available to us to build and deploy full-stack web applications, such as PHP or Python. The language this course will focus on is JavaScript. We’ll use it to program both the browser, or client, and the server.

Regardless of the programming language, two tools that every developer uses on a daily basis are the command line and version control. The command line allows developers to quickly and efficiently interface with their operating system and software. To begin, we will use the command line to navigate the file tree and create directories and files. In later units, we will use the command line to install software dependencies and run servers, among other tasks. Version control is an approach to managing changes in files without the need to make multiple copies of those files. We will be learning Git, which is the most popular version control system. Git integrates with GitHub.com, a site for developers to host and share their code. We will be deploying our first web site through GitHub Pages.

The first, and perhaps most important, file we will create is index.html. It is the default entry point for any web application. All of our subsequent work will build on this initial starting point. The file suffix .html refers to HTML, or Hyper-Text Markup Language. HTML allows us to apply document formatting to text in a similar fashion to any word-processor. The biggest difference between HTML and a word processor is the ability to link between any document, anywhere in the world. This is the hyper-text of HTML.

While HTML is enough to create a simple website, it will be a bit flat. We will add color, fonts, and element positioning using CSS, or Cascading Style Sheets, to our HTML files to make them visually dynamic. In the next unit we will learn CSS frameworks which will expedite our development process.

Subsequent units will build on this foundation of HTML, CSS and version control as we add JavaScript, servers and databases to our stack to build interactive web applications.

Key Topics

Command Line Basics

Navigating file tree

Creating, copying and removing files and directories

HTML

semantic elements, tags

attributes

best practices: indentation, file naming conventions and directory structure

CSS

order of importance

class vs. id

selectors

typography

box model

positioning and floats

color: hexadecimal, rgb and named

Git & git workflow

git clone

git add

git commit

git push

git pull

GitHub

create a repository

deploy to personal pages

Comprehension Check

You will be employer-ready if you can answer the following questions:

What does it mean to be a full-stack web developer?

What is the relationship between HTML and CSS?

What is git workflow?

Learning Objectives

You will be employer-competitive if you are able to:

Build and style static web pages with semantic HTML & CSS

Implement best practices and standards when structuring HTML files using nested elements, indentation, comments, and line breaks

Implement CSS styling via class, id and element selectors using external stylesheets, inline styles and embedded style tags

Explain the cascade in Cascading Style Sheets and implement the box model for HTML elements

Explain the value of version-control and utilize git workflow to initialize projects, track changes and host via remote server

Perform common commands via the command line to interface with the operating system, such as navigating the file tree and creating and deleting files and directories

Execute live deployment using GitHub Pages

Homework

Build Your Portfolio Page (Recommended Homework): You will use your newly acquired web development skills to build a simple static site with HTML and CSS. You will take your site live by deploying it to GitHub Pages.

Build A Wireframe Layout (Easier Homework): You will build a web design skeleton using HTML/CSS.

Helpful Links

Version Control

HTML

CSS

Pro Git

Dev Docs