

Web development, also known as website development, refers to the tasks associated with creating, building, and maintaining websites and web applications that run online on a browser. It may, however, also include web design, web programming, and database management.

Web development is closely related to the job of designing the features and functionality of apps (web design). The term development is usually reserved for the actual construction of these things (that is to say, the programming of sites).

The basic tools involved in web development are programming languages called HTML (Hypertext Markup Language), CSS (Cascading Style Sheets), and JavaScript. There are, however, a number of other programs used to “manage” or facilitate the construction of sites that would otherwise have to be done “from scratch” by writing code. A number of content management systems (CMS) fall into this category, including WordPress, Joomla!, Drupal, TYPO3, and Adobe Experience Manager, among others.

What Exactly is Web Development?

Web development is closely related to the job of designing the features and functionality of websites and apps (often called “web design”), but the “web development” term is usually reserved for the actual construction and programming of websites and apps.

Think of all the web pages you have used over the years – Web Developers built those sites, making sure they functioned properly and performed in ways that allowed for a great user experience. Web Developers do this by writing lines of code, using a variety of programming languages, which vary depending on the tasks they are performing and the platforms they are working on.

Web Development vs. Web Design

Though there is overlap, there are also key differences between web development and web design.

Let's take a closer look:

Web Designers:

- Create everything a user sees on a website or software product, including all visual, color, typography, and usability elements
- Work directly with a client to create designs or work as part of a team to develop client vision
- May need knowledge of a programming language or some coding skills, or at least

Web Developers:

- Write the code that makes a website function, whether they work on the front end or back end (server-side)
- Create or implement designs demanded by a client or created by a design team
- Need expert-level knowledge of a variety of programming languages, including HTML

some level of familiarity with widely used languages such as HTML, CSS, PHP, and JavaScript

- Create wireframes and prototypes to test design ideas, offer input on design logos, branding, company style guides

(HyperText Markup Language), CSS, PHP, and JavaScript but also extending to other languages (Ruby, C/C++, Python), frameworks, and libraries

- Rarely create mockups, select typography, or pick color palettes

What Are the Most Common Programming Languages?

The most common programming languages involved in web development are:

- HTML (Hypertext Markup Language)
- CSS (Cascading Style Sheets)
- JavaScript

Types of Web Development

There are three main types of web development: front-end development, back-end development, and full-stack development.

What Is Front-End Development?

Front-end development involves the “client-facing” side of web development. That is to say usually, front-end web development refers to the portion of the site, app, or digital product that users will see and interact with. A Front-End Developer, therefore, is responsible for the way a digital product looks and “feels,” which is why they are often also referred to as Web Designers.

Front-End Web Developers focus on translating website design and visual ideas into code. A front-end Software Developer takes the design ideas created by others on web development teams and programs them into reality, acting as a bridge between design and technology.

Front-End Developers will usually need to possess a solid understanding of programming languages, including HTML, CSS, and JavaScript, as well as frameworks like React, Bootstrap, Backbone,

AngularJS, and EmberJS. Responsibilities of a Front-End Developer would include creating responsive websites (that look and function well on any device), conducting website testing and fixing any bugs detected along the web development process, and ensuring site structure follows SEO best practices.

Front-End Development Jobs

Unlike back-end development, there are a number of job titles that cover different skill sets and experience levels within front-end development, including:

- Front-End Developer
- Front-End Engineer
- CSS/HTML Web Developer
- Front-End Web Designer (this usually denotes a role that involves more visual and interaction design requirements)
- Front-End User Interface Developer (covering interaction design skills)
- Mobile Front-End Web Developer
- Front-End SEO Expert (usually denoting a Developer with experience incorporating SEO strategy)
- Front-End Accessibility Expert
- Front-End Dev Ops
- Front-End QA (involving unit testing, functional testing, user testing, and A/B testing)

What Is Back-End Development?

If Front-End Developers are responsible for how a digital product looks, Back-End Developers are focused on how it works. A Back-End Developer creates the basic framework of a website before maintaining it and ensuring it performs the way it should, including database interactions, user authentication, server, network and hosting configuration, and business logic. Working behind the scenes – or server-side – Back End Developers are concerned with the systems and structures that allow computer applications to perform as desired.

The primary responsibility of Back-End Developers is to ensure the functionality of the site, including its responsiveness and speed. To do that, Back-End Developers have to know how to build servers with modern frameworks (while developing custom APIs and serving static websites and files), and how to manage databases and data on a web server.

Typically, Back-End Developers use server-side programming languages, including PHP, Ruby, and Python, as well as tools including MySQL, Oracle, and Git.

What Is a Full-Stack Developer?

A Full-Stack Developer is someone familiar with both front- and back-end development. Full Stack Developers usually understand a wide variety of programming languages and because of their versatility, they might be given more of a leadership role on projects than developers who specialize. They are generalists, adept at wearing both hats, and familiar with every layer of development. Obviously, employers want to hire Full-Stack Developers – according to an Indeed study, they are the fourth-most in-demand job in tech.

If the title is contentious, it's in the generalist nature of the position. Developers who specialize in the front-end or back-end often bristle at the notion that someone could be equally adept at both – the expression “jack-of-all-trades, master of none” comes to mind.

“My defensive tendencies are normally put on high alert when I hear that magic phrase (‘full-stack’),” wrote Front-End Developer Andy Shora. “Stacks are a lot bigger than what they used to be, and being able to claim one has acquired refined skills at every layer of web development is certainly not a small claim. Does this mean you have a broad range of skills or you specialize in everything?”

While that perception persists, there still is an increasing number of tech professionals who consider themselves Full-Stack Developers. According to a recent Stack Overflow survey of Developers, 48.2 percent consider themselves Full-Stack Developers.

What's unclear is whether Developers are now expected to possess a broader skillset, or if Developers are taking it upon themselves to understand functions at both the front-end and back-end. Either way, it's becoming increasingly important for aspiring Developers to have a foundation in both.

“For most people hoping to break into web improvement, you should center around working up an establishment in both front-end and back-end advancement first,” recommended Software Engineer and Tech Writer Muhammad Anser. “At that point, you can float towards a claim to fame later on.”

And with demand for Developers expected to grow 15 percent by 2026 (for 24,400 new jobs), much faster than the U.S. average rate of job growth, there may not be a better time to dive in and learn more about all the layers of Web Development.