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The Web: How it Works

The foundation of these notes is taken from <u>Barry Luijbregts' PluralSight course called HTML</u>, <u>CSS</u>, <u>and Javascript: The big Picture</u>. The images are screen captures, a few of which have been edited. Some additional information is added from various sources where appropriate, which are listed at the bottom of each post in the <u>References</u> section.

This post is part of a long-term series called <u>The Web Series</u>. To start from the beginning, check out <u>History of The Web</u>. <u>The Web Series</u> includes everything you need to get started on the path of web development.

How the Web Works

What is the World Wide Web?

The World Wide Web is an **information space** where documents and other **web resources** are identified by **Uniform Resource Locators (URLs)**, interlinked by **hypertext links**, and can be accessed via **the internet**. He took this quote from Wikipedia in 2018, but as it's accurate I won't change it.

Everything is based on HTML documents with their own URLs.

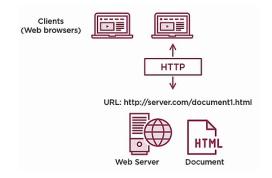
Resources -- HTML documents, images, etc. This is the content we want to use: the websites, the images we want to view, and the files we want to share.

URLs -- they find the file, show you them, or download them.

HTTP -- The HyperText Transfer Protocol retrieves documents and communicates them to the web browser.

How it Works

HTML documents and other resources are saved on servers, which are just computers with special software that allows them to serve those resources when requested. The Web Server has a unique address, or URL, like http://server.com which will contain resources with unique names like document1.html. This particular document on this specific server would



then have the URL <u>http://server.com/document1.html</u> . It's as simple as that.

These resources are accessible from a computer or anything device with a web browser installed. We refer to this as Client-side. The browser requests a specific document by giving its URL, then as long as it is available, the server sends them a branched copy of it. In HTTP this is a GET operation. The HTTP protocol handles the communication between the server and the browser. I like to think of it as a translator. Without the HTTP the browser could not understand the jibberish or foreign language that the server sent to it. Upon receiving the document, the browser must then print it to the screen. It does this with the help of CSS and JavaScript to style the document and give it functionality.

This isn't a one-way road. As much as the browser likes to receive documents, it can also send them. The most common way would be as forms. Forms can be anything from where you fill in your username and password, to using a website generator like Wix or WordPress. The input information is sent back to the server for processing using an HTTP POST operation.

This is just the beginning, but this is also where the course chooses to stop. It's a good enough background to get you started on the path of WebDev.

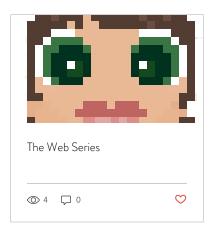
Resources

• HTML, CSS, and JavaScript: The Big Picture, by Billy Luijbregts, Jan 16, 2020. Pluralsite.

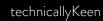
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