

Web Development Resources

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WHAT'S COVERED

In this lesson, you will learn about the World Wide Web Consortium (W3C), its goals, contributions, and responsibilities. Additionally, you will learn about the common languages that were created by W3C that we use today.

Specifically, this lesson will cover the following:

1. [Web Development Resources](#)
2. [World Wide Web Consortium \(W3C\)](#)
3. [W3C and Web Languages](#)
4. [Resource Sites](#)
 - 4a. [Language Reference Websites](#)
 - 4b. [Library Reference Website](#)
 - 4c. [Developer Forums](#)

1. Web Development Resources

As you get ready to delve into the next tutorials focused on the coding languages, it may be helpful to be aware of the different types of resources available to you as a new and growing developer. Developers need to be self-sufficient when it comes to problem solving. In fact, most, if not all, software developers consider themselves to be a “life-long learner”, someone who never stops learning. One strategy for this is to know where and how to research further into the languages and technologies you are using and to be able to locate your own solutions. We will discuss the World Wide Web Consortium, as well as language reference sites, library reference sites, and developer forums.

2. World Wide Web Consortium (W3C)

The World Wide Web Consortium (W3C) is an organization dedicated to the creation of technology standards used on the World Wide Web. In 1994, the W3C was founded by Sir Tim Berners-Lee to support and promote

the use and evolution of the World Wide Web. W3C is an international community of individuals, corporations, and governments that collaborate in working groups and public discussion focused on standardizing web technology.

Sir Tim Berners-Lee invented the World Wide Web (aka “the web”) in 1989. Recall that the World Wide Web is not the same thing as the Internet but is part of the Internet. When talking about the web, we are referring to all the public websites that users can access on their local computers and other devices through the Internet.

As you may recall, some important terminology distinctions that are sometimes used interchangeably but are different include the following:

Term	Description
Internet	A worldwide computer network that transmits a variety of data and media across interconnected devices using standards and protocols.
World Wide Web (WWW)	All the public websites that are accessible by users on their local devices through the Internet.
Web browser	Software application (i.e. Chrome, Firefox, Edge) that is used to access information on the World Wide Web.



DID YOU KNOW

W3C is far from a spooky, secret organization. Instead, the W3C has an open and transparent development process. All projects are open and transparent, allowing public access to draft specification, meeting minutes, and technical reports. This helps to ensure that the entire process is collaborative and is conducted in as much of an inclusive manner as possible.

The W3C has had, and currently has, different initiatives that focus on improving web standards related to new and emerging technologies or trends. For example, one of the initiatives is the Web Accessibility Initiative which is focused on managing the WCAG (Web Content Accessibility Guidelines) standards. Another initiative is the Mobile Web Initiative which recognizes that “Mobile access to the Web has been a second class experience for far too long,” as explained by Tim Berners-Lee, W3C Director. Through these initiatives, organizations, individuals, and governments get involved in the development process to help improve the technologies that we use and level the playing field so that all can be involved.

3. W3C and Web Languages

In addition to accessibility and compatibility standards, W3C is also responsible for developing and maintaining the standards for various web coding and markup languages. The most familiar language that is managed by W3C is HTML. However, the W3C was also responsible for the development of CSS, XML, and the SVG image format and currently maintains their standards documents.

The W3C publishes all of their current, past, and developing standards documentation for the public. This serves as a useful tool when it comes to understanding the purpose and use of the different parts of one of

these technologies. As these documents are the final word on the technologies they are related to, all other documentation stems from them. If you need to get a final say regarding the proper use of an element from one of the languages, the W3C documentation is the place to go. Thankfully, the documentation has been built into webpages that are easier to navigate.



REFLECT

Consider why this site is helpful. Let's say you are writing HTML and CSS code and want to know the correct way to structure a particular element and are not sure how. Furthermore, you do a quick Google search and find conflicting information. One site says to structure it one way, the other says another. How do you determine the most correct method? Go directly to the source. The W3C website provides access to all of the original standards documentation maintained by W3C and really should be considered the final word on such matters.



LEARN MORE

Check out the [HTML standard documentation](#) from the W3C site. You can examine just about anything related to the HTML language and the standard. This also includes information necessary for interacting with the element via JavaScript.

4. Resource Sites

Another valuable resource for web developers is reference websites. There are various types of reference websites. Let's take a closer look at 3 basic types: language reference websites, library reference websites, and developer forums.

4a. Language Reference Websites

Let's say you are using CSS and you either see some code syntax that you don't recognize, or maybe you want to use a new feature of CSS, such as a pseudo-class CSS selector. The best place to go to find out about the language itself, its syntax, built-in keywords, operators, and functions would be a language reference website.



HINT

One challenge with this, however, is that these sites use the technical name for the features of the language... So how do you find the "thing" you are looking for when you don't know what it is called? The trick to finding the correct information is first identifying it using the Google search engine. Start by opening the Google search engine, add the name of the language you are interested in, and then copy and paste the section of code you are trying to learn about. Usually, you will be able to identify what the feature is called using the search results. Then, you can find it on the reference site and learn all that you need.

There comes a point where your time spent on language reference websites will dwindle as you come closer to learning all there is related to the language. Until then, these types of websites will become a valuable resource for you as a growing developer.

The analogy here is related to putting together a puzzle. The above teaches you how to put a puzzle together.

4b. Library Reference Website

Beyond the technical specifications of the language itself, all languages come with a standard library of pre-built objects, functions, and data structures. These pre-build library assets provide a great deal of convenience and efficiency to a developer's projects. For example, many languages already come with a "math" library object that contains all of the standard mathematical functions. Furthermore, most languages come with "graphics" libraries for programs that handle graphics or graphic editing.

In the case of web programming languages and web technologies, there are already lots of helpful websites dedicated to HTML, CSS, JavaScript, and more. W3schools.com and the Mozilla Developer Network are two sites that offer comprehensive language as well as a library reference documentation to all three languages, and more.

Which brings us to the second resource for developers, the library reference site. Many language reference websites also include a library reference section, but these can sometimes be found on other websites. Library reference sites provide a convenient index of all of the assets available in the language's library. For example, if you needed to perform square root calculations in any language, there is already a "sqrt()" function in the "math" library module of most languages that will perform such operations.



"Don't reinvent the wheel."

Remember the old saying "there's an app for that!"? Well, for most basic calculations and operations, there is a prebuilt library function to handle it.

Most library reference sites have a search engine built in. You can use this to quickly locate documentation within the site and avoid combing through the long index of library assets. On the other hand, if you are not sure what exactly you are looking for or what it is called, browsing the index of library assets might actually provide valuable insight into what is available.

The last, but not least, benefit to both language and library reference websites is the examples. Most of these types of sites will provide at least one, often many, example of the specific asset being used. Keep an eye out for these, they can be very informative for developers.

Back to the puzzle analogy, once you know how to put puzzles together, the library references teach you about all the types of puzzle pieces that can be used to put a puzzle together.

4c. Developer Forums

Beyond the language itself and the language's library of pre-built assets, there are resource websites designed for scenario or use-case problems. Developer forums are question-and-answer forums that allow users to post a question on a programming topic and other developers in the online community will respond with their answer or guidance. These are cases where you are trying to get your program code to perform some kind of operation or function or provide a unique feature that is not standard.

For example, if you wrote your own web application using a language that is not typically used for connecting to an Oracle database, and you are struggling to make it work as desired, you might post your scenario and goals to a developer forum. Other developers will ask additional questions, ask you to post your code or design diagrams, and will attempt to offer guidance as to how you might go about accomplishing your task.

[Stackoverflow.com](https://stackoverflow.com) is a great example of a developer community forum, as is [geeksforgeeks.org](https://www.geeksforgeeks.org).

The benefit of developer forum websites is that many times, your specific case or problem is actually not that unique. Most of the time, someone else has already encountered your scenario and asked the question. These situations are very beneficial as you do not have to post a question and wait for a response. Furthermore, when the question has already been asked and answered, the most accepted answer is usually marked with a big green checkmark and usually gets repositioned to just below the original post.



SUMMARY

In this lesson, you learned about the **World Wide Web Consortium (W3C)**, some of its initiatives, and the overall contributions made by the organization. Additionally, you learned about some of the **web languages** and technologies that were developed by W3C. You were also introduced to three categories of websites that are helpful resources for developers. You learned about **language reference sites**, language **library sites**, and **developer forums** for asynchronous questions and answers.

Source: This Tutorial has been adapted from "The Missing Link: An Introduction to Web Development and Programming " by Michael Mendez. Access for free at <https://open.umn.edu/opentextbooks/textbooks/the-missing-link-an-introduction-to-web-development-and-programming>. License: [Creative Commons attribution: CC BY-NC-SA](#).