

Assignment on Web Development for CS50L

Total points 9/10 ?

Starting in 2021, all assignments in CS50L are out of 10 points. A score of 7 points or better (70%) is required to be considered to have "passed" an assignment in this course. Please do not resubmit an assignment if you have already obtained a passing score. You don't receive a final grade at the end of the course, so it will have no bearing on your certificate, and it will only slow down our graders!

Unlike CS50x, assignments in this course are graded on a set schedule, and depending on when you submitted, it may take up to three weeks for your work to be graded. Do be patient! Project scores and assignment status on cs50.me/cs50l (e.g. "Your submission has been received...") will likely change over time and are not final until the scores have been released.

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What is your GitHub username?

You only need to tell us if you are concerned about checking your progress in the course and/or you want a free CS50 Certificate after you satisfy all of the requirements of the course. If you do not already have a GitHub account, you can sign up for one at <https://github.com/join>. You can then use this account to log in to cs50.me/cs50l to track your progress in the course (your progress will only show up after you have received at least one score release email from CS50 Bot, so do be patient!). Don't worry about seeing a 'No Submissions' message on submit.cs50.io, if you find that. The course collects submissions using Google Forms, and only the gradebook on cs50.me/cs50l is important! If you do decide to provide us with a GitHub username, BE CERTAIN IT IS CORRECT. If you provide the wrong username, you will not be able to see your scores.

<https://github.com/maz786>

This course is graded by human graders, and has a ZERO TOLERANCE plagiarism * and collaboration policy. If **any** of your answers are copied and pasted from, or obviously based on (a) an online source or (b) another student's work in the course, in **any** of the course's ten assignments, you will be reported to edX and removed from the course immediately. There is no opportunity for appeal. There are no warnings or second chances.

It is far better, we assure you, to leave an answer blank rather than risk it. This may be an online course, but it is offered by Harvard, and we're going to hold you to that standard.

- ☒ I understand this policy and agree to its terms; I hereby affirm that I will not plagiarize any answers or collaborate with any other students in this course .

- ✓ In recent years, some municipalities have stepped into the role of ISPs, offering broadband internet service in their communities. Propose (at least) one potential benefit and (at least) one potential detriment of these municipal broadband networks. 1/1

Municipal broadband networks may help underserved or underprivileged communities that could not otherwise have access to the internet by way of private ISPs. By ensuring that everyone in the community has equal access to the internet and the opportunities it offers, this can aid in closing the digital divide.

The fact that municipal broadband networks can be expensive to establish and operate and may necessitate major inputs of taxpayer money is one possible disadvantage. Additionally, the municipality could need to increase taxes or fees in order to maintain the network if it cannot make enough money from the broadband service to cover its costs. Additionally, there is a chance that the municipal broadband network won't be as dependable or quick as those provided by commercial ISPs. This could be problematic for customers who depend on the internet for work or other crucial activities.

- ✗ Even though HTML is, per its own acronym, a language, why would it be incorrect to call HTML a programming language? 0/1

The structure and layout of a document, such as a web page, are defined by a set of markup elements known as a markup language. Text can be annotated using markup languages to specify how it should be formatted or shown. An illustration of a markup language is HTML.

On the other hand, a programming language is a formal language created to convey instructions to a machine, such a computer. Machine programmes, which are instructions that tell a computer what to perform, are written using programming languages. Numerous programmes, including desktop software, smartphone apps, and web applications, are made using programming languages.

A markup language is used to describe the structure of a document, whereas a programming language is used to write instructions that tell a computer what to do. This is one way to think about the distinction between markup languages and programming languages. While a computer language, such as JavaScript, is used to provide interactivity and dynamic behaviour to a website, HTML is used to define the structure and layout of a web page.

✓ In what context might we use the DOM?

1/1

An XML and HTML document's programming interface is called the Document Object Model (DOM). It depicts the structure of a document as a tree of objects, with each object standing in for a different component of the document, such as a text block, element, or attribute.

The DOM can be applied in a number of situations, such as:

Web development: The DOM is frequently used to alter the content, organisation, and aesthetics of web pages. A developer might utilise the DOM, for instance, to add or remove items from a website or to change an element's appearance by altering its style.

Data manipulation: An HTML or XML document's data can be altered using the DOM. A developer might use the DOM, for instance, to update or extract data from a document or web page.

Testing and automation: A web page or web application's behaviour can be tested using the DOM. To test the operation of a page, a developer may, for instance, replicate user actions using the DOM, such as clicking buttons or filling out forms.

Data extraction from web pages and online applications is possible using the DOM. The DOM, for instance, might be used by a developer to collect information from a website and store it in a database for later study.

Overall, web development and data processing make extensive use of the DOM, a potent technology. It enables programmatic interaction with a document's structure and content, giving developers the ability to build interactive and dynamic websites and applications.

✓ In the context of web programming, why might a company's JavaScript code be more susceptible to theft by competitors than, say, Python?

1/1

JavaScript code is more likely than Python code to be stolen by rivals when it comes to online programming for a few reasons:

JavaScript is a client-side language, which implies that rather than being run by the server but rather by the user's web browser on their machine. The code is communicated to the client's browser and is accessible via developer tools in this way, making it simpler for someone to inspect and possibly steal the code.

Absence of obfuscation: Since JavaScript code is frequently not compiled, it is usually simple to read and comprehend. Because they can just copy and paste the code into their own applications, competitors are more likely to steal it.

Widely used: Because JavaScript is one of the most used web programming languages, it is more likely to be the target of rivals.

Python, on the other hand, runs on the server rather than the client's PC because it is a server-side language. It is therefore less likely to be seen or taken by rivals. Python code can also be compiled, which makes it more challenging to read and comprehend.

Overall, while it is conceivable for any code to be stolen, JavaScript code is more vulnerable to theft by rivals than server-side languages like Python due to its client-side execution and lack of obfuscation.

✓ For what purpose(s), in the context of web development, might we use the services of a registrar? 1/1

A organisation with the right to handle domain name registration is known as a registrar in the area of web development. A domain name is a distinctive name used to visit a website on the internet and to identify it.

In web development, we might employ registrar services for the following key reasons:

A registrar can assist you in registering a new domain name for your website. This entails finding out if the domain name you want is available, reserving it for you, and adding it to the domain name registry's worldwide database.

Managing domain name records: You can get assistance from a registrar with managing the records for your domain name, including the name servers in charge of sending visitors to your website.

Renewal of a domain name: If your domain name is set to expire, a registrar can assist you in renewing it to protect the distinctive name of your website.

Transferring a domain name: If you want to change service providers, a registrar can assist you in transferring your domain name to a new registrar.

In general, registrars are crucial to the process of managing and registering domain names, which is an essential step in the web development process.

✓ In your own words, what is the action attribute of an HTML form used for? 1/1

A server-side script's URL that will handle processing form data is specified in the action element of an HTML form. The data is transmitted to the server when the form is submitted using the HTTP method provided in the form's method attribute (either "get" or "post").

Due to its ability to control where and how form input is handled, the action property is crucial. When a form is submitted, the data will be transferred to the "send-form.php" script on the server, for instance, if the action attribute is set to "send-form.php". After that, the script can handle the data anyway it sees fit, such as putting it in a database or sending it over email.

In a nutshell, an HTML form's action element is used to define the URL of the server-side script that will handle the form's data after it is submitted. This is a crucial step in the construction of a website since it enables websites to collect and handle user data in a systematic and secure manner.

Dive into HTML

For this challenge, you might find it helpful to skim or search

<http://htmldog.com/guides/html/> and <http://htmldog.com/guides/css/>, which build upon concepts from lecture. Here, we'll use a site called replit.com, which provides a lightweight online IDE for writing simple programs. We recommend you log in using your GitHub account at replit.com before beginning (this will make it a lot easier to find and rename your "repl"s if you need to go back), but it is also okay to create so-called "repl"s anonymously.

Visit <https://replit.com/@dlloyd09/CS50xCourseWebsite>. First, at the top, click "Fork"; then a new "repl" unique to you will be created. There you'll find a basic website started by Doug, with mostly-empty files `index.html` and `styles.css`.

To view (and thus test!) your web page, remember to click the Run button at the top to open your website in the embedded browser. Be sure things work as expected before you submit!

We'll leave its design largely up to you, subject only to the following requirements:

- i) Your website's main page should live in `index.html`, since most web servers serve up `index.html` by default, in the absence of an explicit file name in a URL.
- ii) Your website must include at least one image. Note that the embedded file browser also has a mechanism for uploading files from your computer, though you may also use images already on the internet.
- iii) Your website must be stylized with at least several CSS properties, which must live in `styles.css` (an "external stylesheet"). Your CSS needs to ultimately end up connected to your HTML, as well. Be sure to review lecture for ideas, if you forget how to do this!
- iv) Your website should be more complex than those from class (but much less complex than Harvard's home page!). As such, your website should probably use a few dozen HTML tags overall, plus several CSS properties.

Alright, make us proud!

✓ To submit your work, follow the instructions below. Read them carefully and fully to ensure you submit properly!

4/4

To view (and thus test!) your web page, remember to click the Run button at the top to open your website in the embedded browser. Be sure things work as expected before you submit! To submit your work, copy the URL of your repl (from the URL bar) and paste that link here. Do NOT select the "Post" option. Do NOT attempt to "Invite" us and share your "join" link--one that contains /join/ in the URL--this will result in a zero for the question if you do, because it is very likely to break, and therefore be inaccessible to the staff, if you share it with anyone else. Do NOT share the link to your live webpage, which will end in ".repl.co", typically.

https://replit.com/@Maz7861/CS50xCourseWebsite#styles.css



Have you tested your website to ensure that your site runs without errors and your CSS is properly linked?

Remember to click the Run button at the top to open your website in the embedded browser.

☒ Yes

☐ No

Debrief

About how many MINUTES would you say you spent on this assignment in total? *

Just to set expectations for future students.

666

This form was created inside CS50.

Google Forms

