

Introduction to HTML & Chrome Developer Tools

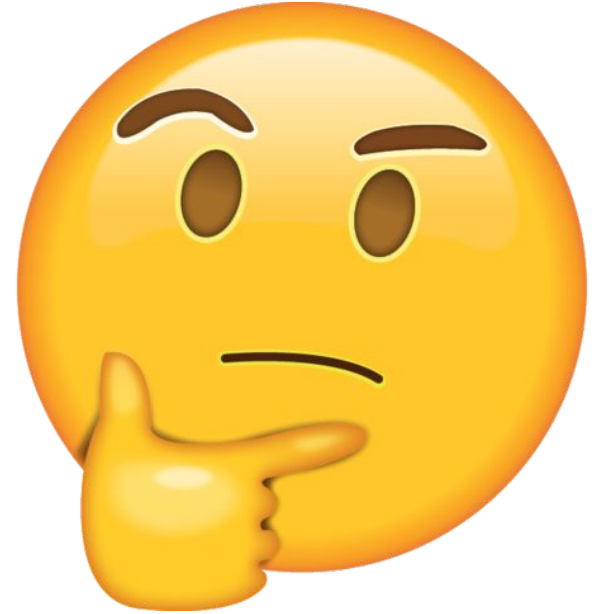
HTML

HyperText Markup Language

What is HTML?

HTML

Hypertext Markup Language (**HTML**) is the standard **markup language** for documents designed to be displayed in a **web browser**.



(Web) Browsers



browser

/ˈbraʊzə/

noun

1. a person who looks casually through publications or websites or at goods for sale.
"a wonderful array of shops that will keep any browser amused for hours"
2. a computer program with a graphical user interface for displaying HTML files, used to navigate the World Wide Web.
"a web browser"



HTML files

HTML Files

Most of the stuff on the web is no different than the stuff on your computer — it's just a whole load of files sorted into a whole load of directories.

HTML files are nothing more than simple text files, so to start writing in HTML, you need nothing more than a simple text editor.

To look at HTML files, they don't even need to be on the web. You just need a web browser.

HTML file structure

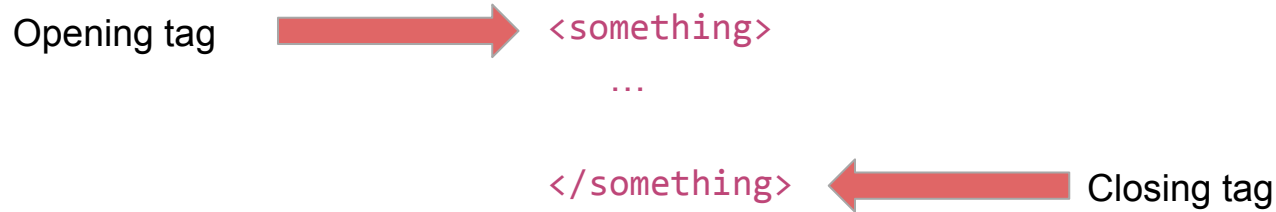

```
<!DOCTYPE html>
<html>
  <head>
    <!-- myFirst.html -->
    <title>My very first web page!</title>
  </head>
  <body>
    <h1>This is my first web page!</h1>
    <p>
      This is the first web page I've ever made,
      and I'm extremely proud of it.
      It is so cool!
    </p>
  </body>
</html>
```

HTML Tags

HTML tags

HTML tags are the hidden keywords within a web page that define how your web browser must format and display the content.

Most tags must have two parts, an opening and a closing part.



HTML tags

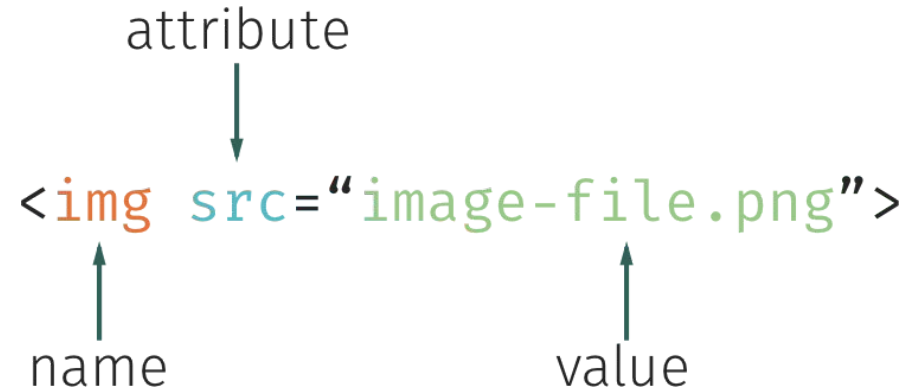
Examples of HTML tags:

<p>

<button>

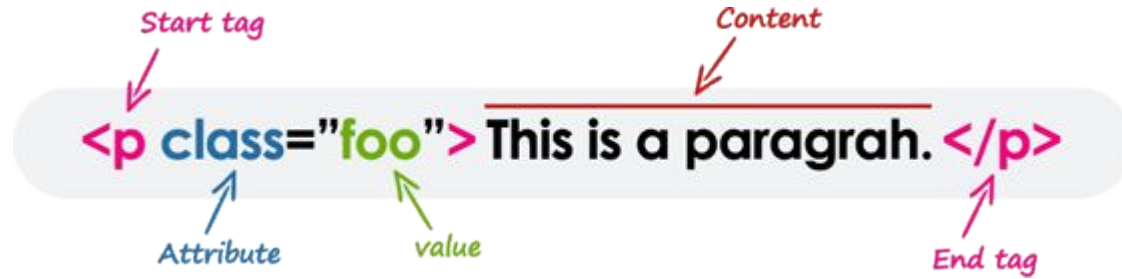
<input>

...



HTML Attributes

HTML attributes



Attributes define additional characteristics or properties of the element such as width and height of an image.

HTML `id` attribute

```
<p id="specialText">My very first web page!</p>
```

The `id` attribute provides a unique identifier for an element within the document.

No two elements in the same document can be named with the same `id`, and each element can have only one `id`.

HTML `class` attribute

```
<p class="specialText">My very first web page!</p>
```

Like `id` attribute, the `class` attribute is also used to identify elements.

But unlike `id`, the `class` attribute does not have to be unique in the document. This means you can apply the same class to multiple elements in a document

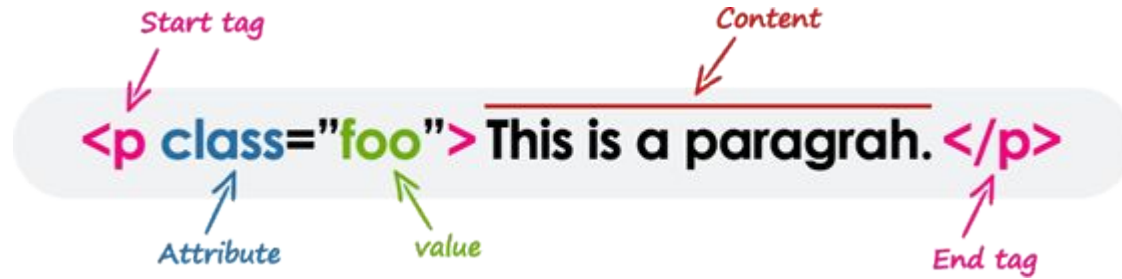
HTML **style** attribute

```
<p style="color: blue;font-family: arial;">My very first web page!</p>
```

The **style** attribute allows you to specify CSS styling rules such as color, font, border, etc. directly within the element - **inline styling**.

HTML Elements

HTML elements



An HTML element is an individual component of an HTML document.

Most HTML elements are written with a start tag (or opening tag) and an end tag (or closing tag), with content in between.

HTML at work

HTML file dissection - `<!DOCTYPE html>`

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 `<!DOCTYPE html>`

...

...

...

...

...

- The `<!DOCTYPE>` declaration must be the very first thing in your HTML document, before the `<html>` tag.
- The `<!DOCTYPE>` declaration is not an HTML tag; it is an instruction to the web browser about what version of HTML the page is written in.
- Various DOCTYPEs:
 - HTML4.0.1: `<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN" "http://www.w3.org/TR/html4/strict.dtd">`
 - HTML5 and beyond: `<!DOCTYPE html>`

HTML file dissection - `<html></html>`

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Opening html tag  `<!DOCTYPE html>`
`<html>`
`...`

...

`...`
`</html>`  Closing html tag

HTML file dissection - `<html></html>`

The `<html>` tag:

- it is required in every HTML document, and there may only be one `<html>` tag per page.
- tells the browser that this is an HTML document.
- represents the root of an HTML document.
- is the container for all other HTML elements (except for the `<!DOCTYPE>` tag).

HTML file dissection - `<head></head>`

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```

                                <!DOCTYPE html>
                                <html>
Opening head tag → <head>
                                ...
                                </head> ← Closing head tag
                                ...
                                ...
                                </html>

```

HTML file dissection - `<head></head>`

The `<head>` tag:

- a container for metadata (data about data) and is placed between the `<html>` tag and the `<body>` tag.
- it can also contain styling for elements

HTML file dissection - `<!-- -->`

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```

    <!DOCTYPE html>
    <html>
      <head>
        Comment tag → <!-- My first HTML page -->
        ...
      </head>

    </html>

```

HTML file dissection - `<!-- -->`

The `<!-- -->` tag:

- Indicates a comment
- Is not displayed by the browser
- Useful for describing functionality

HTML file dissection - `<title></title>`

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```
    <!DOCTYPE html>
    <html>
      <head>
        <!-- My first HTML page -->
Opening title tag → <title>My very first web page!</title>
        ...
      </head>
      ...

    ...
  </html>
```

The `<title>` tag:

- Is a metadata tag:
 - HTML metadata is data about the HTML document.
 - Metadata is not displayed.
 - Metadata typically define the document title, character set, styles, scripts, and other meta information.

HTML file dissection - `<link>`

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```
<!DOCTYPE html>
<html>
  <head>
    <!-- My first HTML page -->
    <title>My very first web page!</title>
    <link rel="stylesheet"
href="http://localhost:8000/course1.css">
  </head>
  ...
  ...
</html>
```

Stylesheet tag →

The `<link>` tag:

- defines a link between a document and an external resource.
- used to link to external style sheets.
- Style sheets provide stylisation for HTML pages like: colors, fonts, padding, margins, animations.
- Attributes:
 - rel
 - href

HTML file dissection - <meta>


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```

<!DOCTYPE html>
<html>
  <head>
    ...
    <meta name="author" content="Adela Tuduce">
  </head>
  ...
</html>

```

Meta tag



The `<meta>` tag:

- provides metadata about the HTML document
 - metadata is information about data
- used to specify page description, keywords, author of the document, last modified, and other metadata

HTML file dissection - `<body></body>`

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```

<!DOCTYPE html>
<html>
  <head>
    ...
  </head>
  <body>
    ...

                                </body>
                                </html>
```

Opening body tag →

← Closing body tag

HTML file dissection - `<body></body>`

The `<body>` tag:

- defines the document's body.
- contains all the contents of an HTML document, such as text, hyperlinks, images, tables, lists, etc.
- it is required in every HTML document, and there may only be one `<body>` tag per page.

HTML file dissection - `<header></header>`

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```

    <!DOCTYPE html>
    <html>
      <head>
        ...
      </head>
      <body>
        Opening header tag → <header style='background: orange;'>
          ...
          </header> ← Closing header tag
          ...
        </body>
      </html>

```

HTML file dissection - `<header></header>`

The `<header>` tag:

- intended to usually contain the section heading, but this is not required.

HTML file dissection - `<nav></nav>`

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```
<!DOCTYPE html>
<html>
  <head>
    ...
  </head>
  <body>
    <header style='background: orange;'>
      Opening nav tag → <nav>
      ...
      </nav> ← Closing nav tag
    </header>
    ...

  </body>
</html>
```

HTML file dissection - `<nav></nav>`

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The `<nav>` tag:

- defines a set of navigation links.

.

HTML file dissection - `<a>`

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```
<!DOCTYPE html>
<html>
  <head>
    ...
  </head>
  <body>
    <header style='background: orange;'>
      <nav>
        Opening ul tag → <ul>
          → <li><a href="./html_page.html">HTML</a></li>
          ...
        </ul> ← Closing ul tag
      </nav>
    </header>
    ...

  </body>
</html>
```

HTML file dissection - ``

The `` tag:

- designates an unordered list.
- useful for creating bulleted lists, those in which the order of the items is arbitrary.
- Contains several `` elements: list items

HTML file dissection - `<a>`

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```
<!DOCTYPE html>
<html>
  <head>
    ...
  </head>
  <body>
    <header style='background: orange;'>
      <nav>
        <ul>
          <li><a href="./html_page.html">HTML</a></li>
          ...
        </nav>
      </header>
      ...
    </body>
  </html>
```

Opening hyperlink tag

Closing hyperlink tag

HTML file dissection - `<a>`

The `<a>` tag:

- defines a hyperlink, which is used to link from one page to another.
- most important attribute is the href attribute, which indicates the link's destination.
- target is a common attribute for hyperlinks, which is used in situations when we want hyperlinks opened in another tab

HTML file dissection - `<section></section>`

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```

    <!DOCTYPE html>
    <html>
      <head>
        ...
      </head>
      <body>
        <header>
          ...
        </header>
        Opening section tag → <section>
          ...
        </section> ← Closing section tag
          ...
      </body>
    </html>

```

HTML file dissection - `<section></section>`

The `<section>` tag:

- defines sections in a document, such as chapters, headers, footers, or any other sections of the document.

.

HTML file dissection - `<h1></h1>`

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```
<!DOCTYPE html>
<html>
  <head>
    <!-- myFirst.html -->
    <title>My very first web page!</title>
  </head>
  <body>
    ...
    <section>
      <h1>Summary</h1>
    </section>
    ...
  </body>
</html>
```

Opening heading tag  `<h1>Summary</h1>`  Closing heading tag

HTML file dissection - `<h1></h1>`

The `<h1>` tag:

- The `<h1>` to `<h6>` tags are used to define HTML headings.
- `<h1>` defines the most important heading. `<h6>` defines the least important heading.

HTML file dissection - `<p></p>`

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```
<!DOCTYPE html>
<html>
  <head>
    <!-- myFirst.html -->
    <title>My very first web page!</title>
  </head>
  <body>
    ...
    <section>
      <h1>Summary</h1>
      <p>
        During this course, you will learn how to
        work with different technologies.
      </p>
      ...
    </section>
  </body>
</html>
```

Opening paragraph tag



`<p>`

Closing paragraph tag



`</p>`

HTML file dissection - `<p></p>`

The `<p>` tag:

- The `<p>` tag defines a paragraph.
- Browsers automatically add some space (margin) before and after each `<p>` element. The margins can be modified with CSS (with the margin properties).

HTML file dissection - ``

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`<img`

`src="https://media.istockphoto.com/vectors/computer-vector-id862739254?k=6&m=862739254&s=612x612&w=0&h=AQ39dqG6aYEitGfVUAfWMAYRivwZiap9jRCPZOCHoMs="`

`width='100px' height='100px' alt='Computer photo'>`



HTML file dissection - ``

The `` tag:

- defines an image in an HTML page.
- has two required attributes: src and alt.
- Images are not technically inserted into an HTML page, images are linked to HTML pages.

HTML file dissection - ``

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```
<ul>
  <li>HTML</li>
  <li>CSS</li>
  <li>Git</li>
  <li>Github</li>
  <li>Javascript</li>
  <li>React</li>
  <li>Node.js</li>
</ul>
```

- HTML
- CSS
- Git
- Github
- Javascript
- React
- Node.js

HTML file dissection - ``

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```
<ol>
  <li class="participantsList">Trainers</li>
  <li class="participantsList">Students</li>
  <li class="participantsList" id="specialItem">Coaches</li>
</ol>
```

1. Trainers
2. Students
3. Coaches

HTML file dissection - ``

The `` tag:

- designate an ordered list.
- an ordered list can be numerical or alphabetical.
- Contains several `` elements: list items

HTML file dissection - `<table></table>`

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```
<table border='1'>
  <thead>
    <th>Name of activity</th>
    <th>Description</th>
    <th>Duration</th>
  </thead>
  <tbody>
    <tr>
      <td>Theoretical presentation</td>
      <td>A presentation containing information related to notions that you will use
during the course</td>
      <td>&tilde; 3h</td>
    </tr>
    <tr>
      <td>Practice what you learn</td>
      <td>You will receive <span style="color: deeppink;">assignments</span> which need
to be covered after the theoretical part</td>
      <td>&tilde; 5h</td>
    </tr>
  </tbody>
</table>
```


HTML file dissection - `<table></table>`

Name of activity	Description	Duration
Theoretical presentation	A presentation containing information related to notions that you will use during the course	~ 3h
Practice what you learn	You will receive assignments which need to be covered after the theoretical part	~ 5h

HTML file dissection - `<table></table>`

The `<table>` tag:

- allows web authors to arrange data like text, images, links, other tables, etc. into rows and columns of cells.
 - `<th></th>`
 - `<tr></tr>`
 - `<td></td>`

HTML file dissection - <div></div>

```
<div style="background-color:lightblue">
  <h3>Resources</h3>
  <br>
  <p>Here you can find more information on what was presented today:</p>
  <ul>
    <li><a href="https://www.makeuseof.com/tag/simple-html-code-learn-minutes/"
target="_blank">HTML Samples</a></li>
    <li><a href="https://www.w3schools.com/tags/ref_attributes.asp">HTML
Attributes</a></li>
    <li><a href="https://www.w3schools.com/html/html_elements.asp"
target="_blank">HTML Elements</a></li>
  </ul>
</div>
```

Resources

Here you can find more information on what was presented today:

- [HTML Samples](#)
- [HTML Attributes](#)
- [HTML Elements](#)

HTML file dissection - `<div></div>`

The `<div>` tag:

- defines a division or a section in an HTML document.
- often used as a container for other HTML elements to style them with CSS or to perform certain tasks with JavaScript.

HTML file dissection - <footer></footer>

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```
<footer>
  <div>
    <h4>Weather this week</h4>
    <dl>
      <dt>Monday</dt>
      <dd>Sunny</dd>
      <dt>Tuesday</dt>
      <dd>Mostly sunny</dd>
      <dt>Wednesday</dt>
      <dd>Hopefully sunny</dd>
    </dl>
  </div>
  <article style="text-align:center;">July 15, 2019</article>
</footer>
```

Weather this week

Monday

Sunny

Tuesday

Mostly sunny

Wednesday

Hopefully sunny

July 15, 2019

HTML file dissection - `<footer></footer>`

The `<footer>` tag:

- used for defining the footer of an HTML document or section.
- footers usually contain information such as the author of the document, copyright information, links to terms of use, privacy policy, etc.


```
<dl>
  <dt>Monday</dt>
  <dd>Sunny</dd>
  <dt>Tuesday</dt>
  <dd>Mostly sunny</dd>
  <dt>Wednesday</dt>
  <dd>Hopefully sunny</dd>
</dl>
```

Weather this week

Monday
Sunny
Tuesday
Mostly sunny
Wednesday
Hopefully sunny

HTML file dissection - `<dl></dl>`

The `<dl>` tag:

- defines a description list.
- The `<dl>` tag is used in conjunction with:
 - `<dt>` (defines terms/names)
 - `<dd>` (describes each term/name).

HTML file dissection - `<article></article>`

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```
<article style="text-align:center;">Juy 15, 2019</article>
```

July 15, 2019

HTML file dissection - `<article></article>`

The `<article>` tag:

- represents a self-contained composition in a document, page, application, or site, which is intended to be independently distributable or reusable
- example: date, weather info, etc

HTML file dissection - `<script></script>`

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```
<script>  
    document.getElementById("demo").innerHTML = "Hello HTML, I am  
Javascript!";  
</script>
```

Hello HTML, I am Javascript!

HTML file dissection - `<script></script>`

The `<script>` tag:

- used for declaring a script (such as JavaScript) within your HTML document.

Chrome Developer Tools

Chrome DevTools

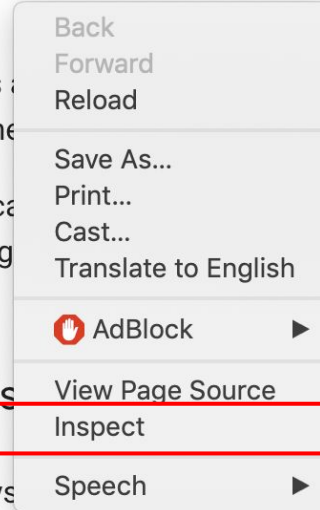
Chrome DevTools is a set of web development tools built directly into the Chrome browser. It allows you to edit pages on-the-fly and see the changes take effect immediately, which is a huge time-saver.

With DevTools you can inspect the page. Even the Google homepage is built with HTML and CSS. It's not magic, it's just code.

Open DevTools

There are many ways to open DevTools, but for different users want quick access to different parts of the DevTools UI.

- When you want to work with the DOM or CSS, right-click an element on the page and select **Inspect** to jump into the **Elements** panel. Or press Command+Option (Mac OS) or Ctrl+Shift+I (Windows/Chrome OS).





Elements

Console

Sources

Network

Performance

Memory

Application

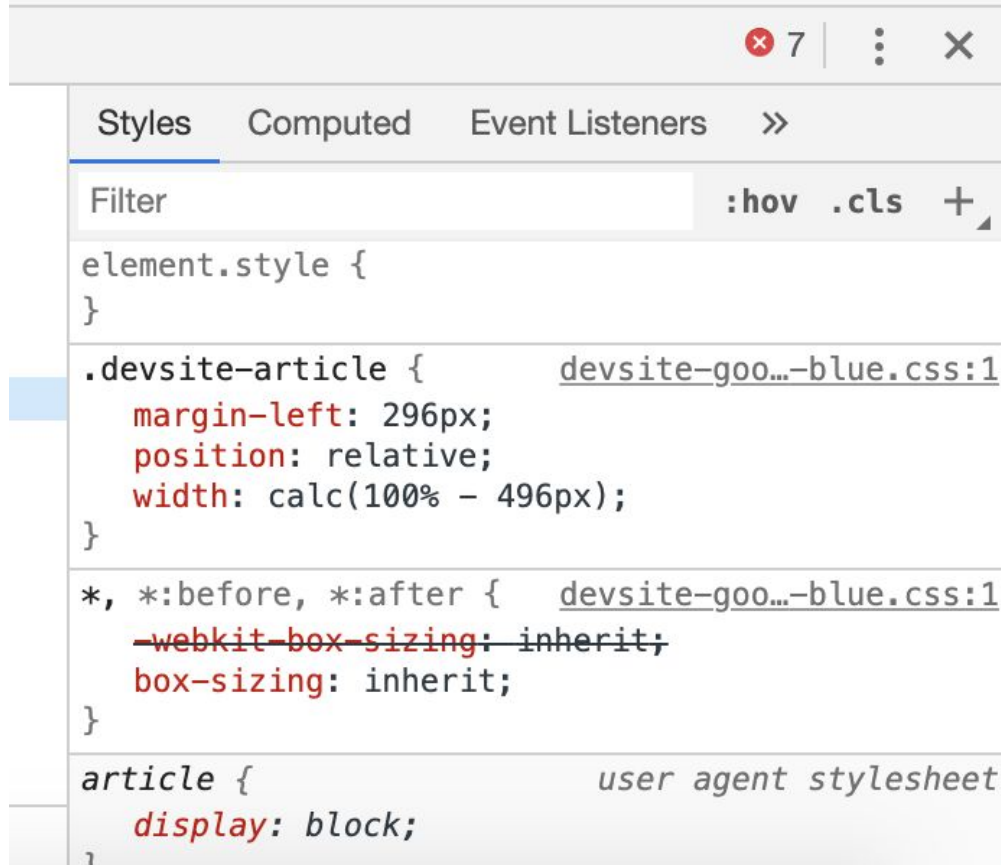
Security

Audits

AdBlock

```
▶<script>...</script>
  <div class="devsite-site-mask"></div>
▶<nav class="devsite-nav-responsive devsite-nav nocontent" tabindex="0" style="left: -256px;">...</nav>
▼<div class="devsite-main-content clearfix" style="margin-top: 40px;">
  ▶<nav class="devsite-section-nav devsite-nav nocontent" style="left: auto; max-height: 192px; position: relat
  ▶<nav class="devsite-page-nav devsite-nav" style="position: relative; left: auto; max-height: 192px; top: 0px
  ▼<article class="devsite-article">
    ▶<article class="devsite-article-inner">...</article> == $0
    </article>
    ::after
  </div>
▶<footer class="devsite-footer-promos nocontent">...</footer>
▶<footer class="devsite-footer-linkboxes nocontent
    devsite-footer-linkboxes-with-sites">...</footer>
▶<footer class="devsite-utility-footer">...</footer>
```

html body#top_of_page.devsite-doc-page.devsite-user-in-eu.no-touch div.devsite-wrapper div#gc-wrapper div.devsite-main-content.clea



Activity

1. Create a folder where you will store all your .html, .css, other application related files.
2. Create a simple HTML page for a store having the following components:
 - a. A head element, containing a title element with your name
 - b. A comment element, describing what you are working on
 - c. A body element, in which you need to add a side nav element with the following links:
 - i. Home - refer the first page to this link
 - ii. Products - refer the second page to this link
 - iii. New Product
 - d. A footer element, containing data about the contact information: phone number, location, etc
3. A second page with:
 - a. A table containing products.
 - b. For each product display: name, price, description and quantity in stock