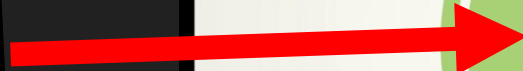


مساق



لغة الانترنت - Internet & HTML

Time to
FOCUS!



TURN

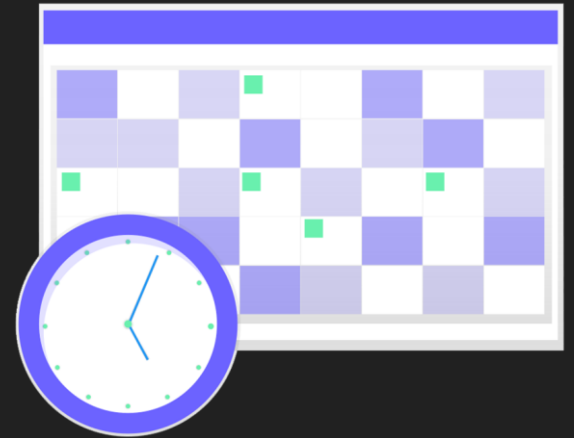
**DO NOT
DISTURB**

ON

**TURN IT ON AND
THROW YOUR PHONE
TO THE OTHER SIDE
OF THE ROOM**



Agenda



HTML

Continued   

Lecture 2



FRONTEND

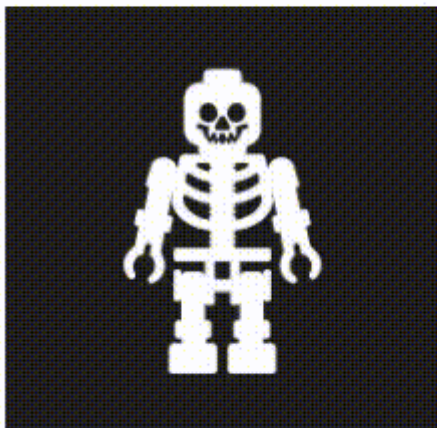
(HTML, CSS, JS)

Who's ready?



HTML

structure



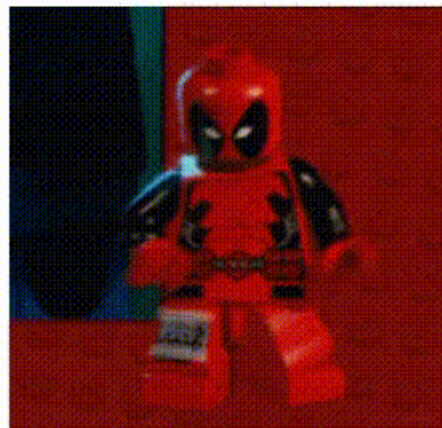
CSS

presentation/appearance



JavaScript

dynamism/action



Let's talk about the internet!

Computer 1



☞ internet = network of computers

☞ Computer 1 shoot bits to another Computer 2

Remember what a bit💡 is? E.g. 10011001 .

☞ Protocols translate these bits for example into web pages. Hypertext Transfer Protocol (HTTP) does this.

☞ Computer 2 is waiting, listening for Computer 1 to start talking to its port (80).

☞ Computer 1 can establish a connection to Computer 2 by using port number 80.

☞ Computer 1 = “the Listening computer” = the *server*.

☞ Computer 2 = “the Connecting computer” = the *client*

Let's talk about the World wide web!

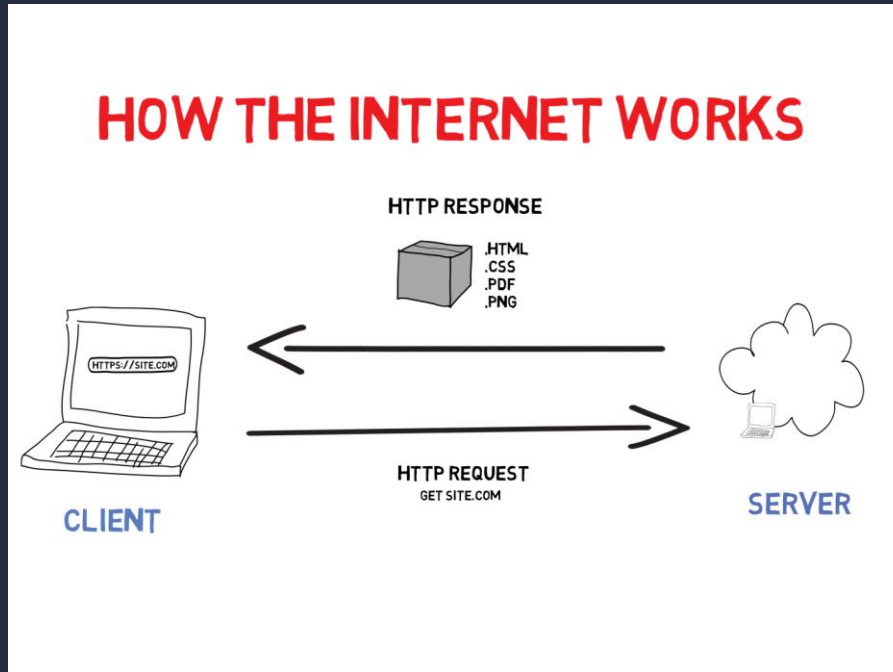


<http://www.anbilarabi.com/library>

HTTP

SERVER

PATH



HTML = Hypertext Markup Language

👉 Programming the look of
of a site

HTML



👉 uses tags `< />` = structure
of document

👉 Allows us to nest
tags

👉 attributes e.g.
`Link`

HTML basics

```

<!doctype html>

<html>
  <head>
    <meta charset="utf-8">
    <title> Clever Programmer Bootcamp </title>
  </head>
  <body>
    <h1> Profile page </h1>
    <p> Hello, I am Anh Nguyen and I joined the bootcamp.</p>
    <p> I love my dog! He looks like
    <a href="https://unsplash.com/photos/NzdjuGxj_18">this</a>.</p>
  </body>
</html>

```

👉 tags `</>`
= structure of the document

👉 `!doctype html`
Tells browser to interpret the page as modern HTML

👉 `<head>` and `<body>`
HTML documents have a head and a body.

Extra:

👉 UTF-8 encoding is a way to encode Unicode text to binary data

HTML basics & DOM

```

<!doctype html>

<html>
  <head>
    <meta charset="utf-8">
    <title> Clever Programmer Bootcamp </title>
  </head>
  <body>
    <h1> Profile page </h1>
    <p> Hello, I am Anh Nguyen and I joined the bootcamp.</p>
    <p> I love my dog! He looks like
    <a href="https://unsplash.com/photos/NzdjuGxj_18">this</a>.</p>
  </body>
</html>

```

Attributes:

👉 All HTML-elements can have attributes = additional info which usually come in name/value pairs like name="value"

👉 <a> tag defines a hyperlink. Href is an attribute! As is src of

👉 <header> = container of metadata.

👉 metadata is NOT displayed in the browser!

Profile page

Hello, I am Anh Nguyen and I joined the bootcamp.

I love my dog! He looks like [this](https://unsplash.com/photos/NzdjuGxj_18).

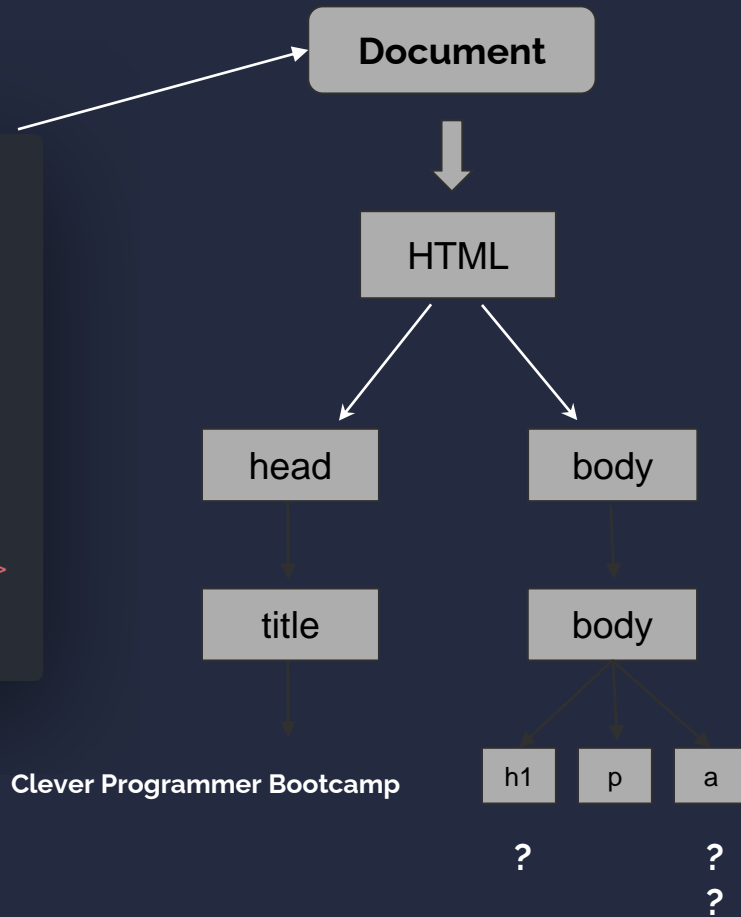


HTML basics & DOM



```
<!doctype html>

<html>
  <head>
    <meta charset="utf-8">
    <title> Clever Programmer Bootcamp </title>
  </head>
  <body>
    <h1> Profile page </h1>
    <p> Hello, I am Anh Nguyen and I joined the bootcamp.</p>
    <p> I love my dog! He looks like
    <a href="https://unsplash.com/photos/NzdjuGxj_18">this</a>.</p>
  </body>
</html>
```



Extra:

👉 UTF-8 encoding is a way to encode Unicode text to binary data

Document Object Model



```
<!doctype html>

<html>
  <head>
    <meta charset="utf-8">
    <title> Clever Programmer Bootcamp </title>
  </head>
  <body>
    <h1> Profile page </h1>
    <p> Hello, I am Anh Nguyen and I joined the bootcamp.</p>
    <p> I love my dog! He looks like
    <a href="https://unsplash.com/photos/NzdjuGxj_18">this</a>.</p>
  </body>
</html>
```

html

head

Title

Clever Programmer Bootcamp

body

h1

Profile page

p

Hello, I am

p

I love my dog!.....

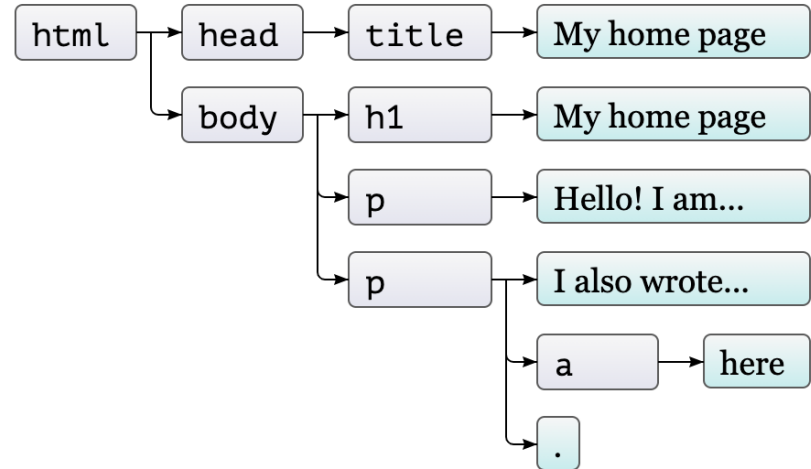
a

this

Document Object Model



- 👉 `documentElement` property refers to the `<html>` tag
- 👉 DOM is like a tree because of its branching structure.
- 👉 `document.documentElement` = root.
- 👉 trees => leaves are nodes.
- 👉 nodes = elements = HTML tags.



HTML Elements

👉 elements

`<tagname> (content) </tagname>`

👉 h1, h2, h3

These are headers.

👉 p

A paragraph

```

<!doctype html>
<html>
  <head>
    <title>Website</title>
  </head>
  <body>
    <h1>Welcome!</h1>
    <h2>Profile page of Nazariy Dumanskyy</h2>
    <h3>I love code and tea. Oh and to teach!</h3>
    <p> Another paragaph...</p>
  </body>
</html>
```

Exercise: Create this by using this

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <link rel="stylesheet" href="css/styles.css" />
    <meta charset="UTF-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  </head>
  <body>
    </body>
</html>
```

html

head

Title

Clever Programmer Bootcamp

body

h1

Profile page

p

Hello, I am

p

I love my dog!.....

a

this

HTML Attributes



```
<a href="https://www.cleverprogrammer.com">Visit Clever Programmer</a>  
  
  
  
<p style="color:red;">This is a red paragraph.</p>
```



href attribute

For referring to a hyperlink!



src attribute

For referring to the source of the image.



width and height attribute

Adjusting the image



alt attribute

In case the image is not available



style attribute

To style an html element, in this case p

HTML Basics

Hypertext Markup Language



Ahmad Naser

Training Team



Ahmad Naser

<https://www.anbilarabi.com/>



1. What is HTML, HTML HEAD?
2. Element Anatomy
3. Document Anatomy
4. Formatting Text
5. Attributes
6. Images, Links and Forms
7. Multimedia Context
8. Nested Elements



HTML

Hyper Text Markup Language



What is HTML?

- Standard **markup language** for creating and displaying **web content**
- It represents a **series of elements** that you use to wrap different portions of content to make them look and act in a certain way
- HTML **is not** a programming language - it is a **markup language** that is used to tell your browser how to display the pages
- It's just a **text** file with **.html** extension

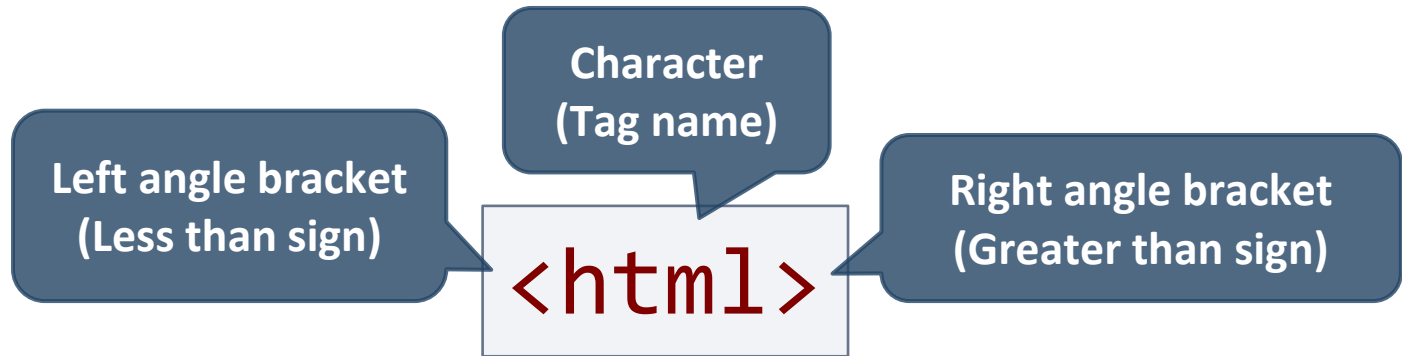


Anatomy of an Element



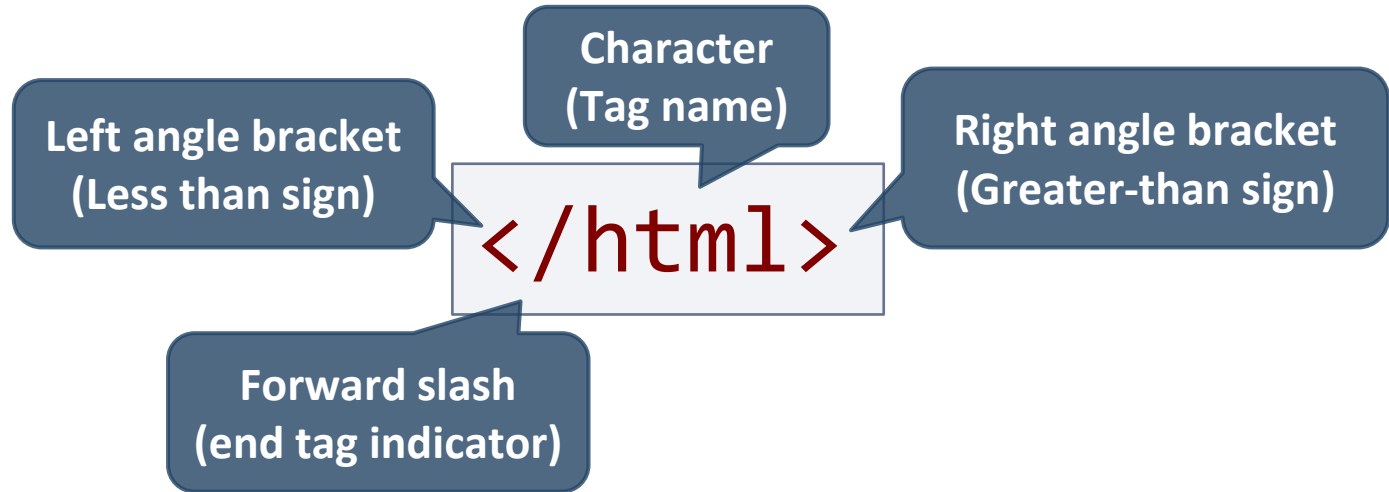
Element Anatomy

- The **main parts** of an element are: **Opening**, **Content** and **Closing** tag
- **Opening tag** - It consists of the name of the element surrounded by less than and greater than signs
- It indicates where the element starts





- **Closing tag** - Same as the opening tag, but with an additional slash before the item's name
- It shows where the element ends





- Everything between the **opening** and **closing tags** is defined as the content of this element

```
<!DOCTYPE html>  
<html>  
  <!-- HTML ELEMENT CONTENT-->  
</html>
```

- The element** is the **set** of the opening tag, closing tag and content

```
<body>  
  <p>Hello, HTML!</p>  
</body>
```



Document Anatomy



Document Anatomy

- The basic requirement for content that an **html file** should have

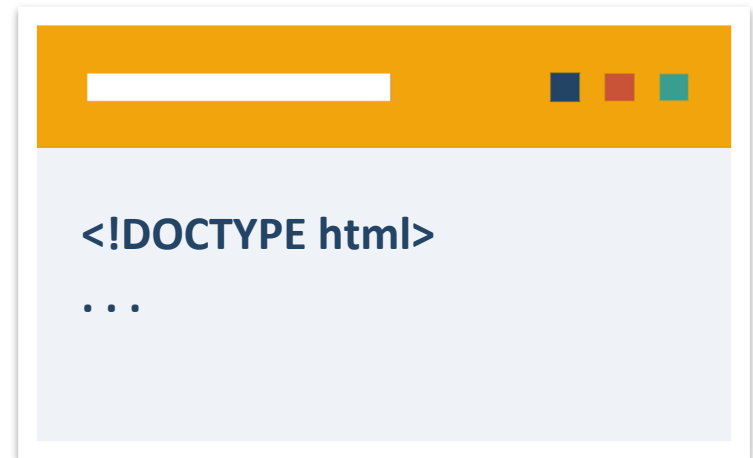
```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <title>HTML</title>
  </head>
  <body>
    <!-- ... -->
  </body>
</html>
```





`<!DOCTYPE html>`

- Describes the HTML
- It is an **instruction** for the web browser about what version of HTML the page is written in
- The **DOCTYPE** is supported by all modern **web browsers** like: Chrome, Firefox, IE, Safari and Opera





The <html> Tag

- This element surrounds the entire content of the page
- The **html element** must contain a **head** element followed by a **body** element

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





The <head> Tag

- Container for metadata
- **HTML metadata** is data about the HTML document but is **NOT** displayed
- Metadata typically define the **document title, styles, links, scripts**, and other **meta information**

```
<!DOCTYPE html>
<html>
  <head>
    <!-- HEAD ELEMENT CONTENT -->
  </head>
  <body>
    <!-- ... -->
  </body>
</html>
```



The <meta> Tag

- The information inside the **<meta> tag** is not displayed on the page but is relied on by the machine
- Meta elements are usually used to add a **description** to the page, **keywords** or **character sets**
- Meta tags are always in the **<head> element**
- It has no end tag

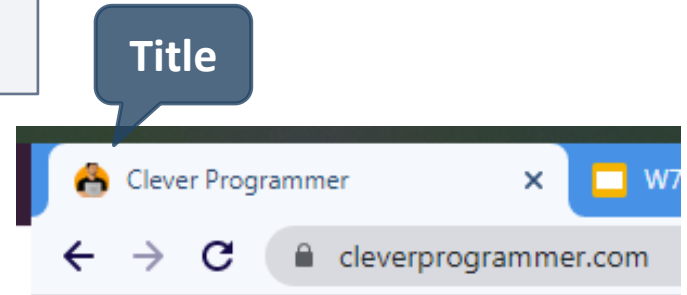
```
<head>
  <meta charset="UTF-8">
  <meta name="description" content="Tutorial">
  <meta name="keywords" content="Html,Meta,Tag">
</head>
```



The <Title> Tag

- Defines the **title** of the document
- Defines the **title** in the **browser's toolbar**
- Gives a **page title** when added to **favorites**
- Shows the **title** of the page in the **search engines**

```
<head>  
  <title>Clever Programmer</title>  
</head>
```



The <meta> Tag



<https://qrcood.com/GcKAs>



The <body> Tag

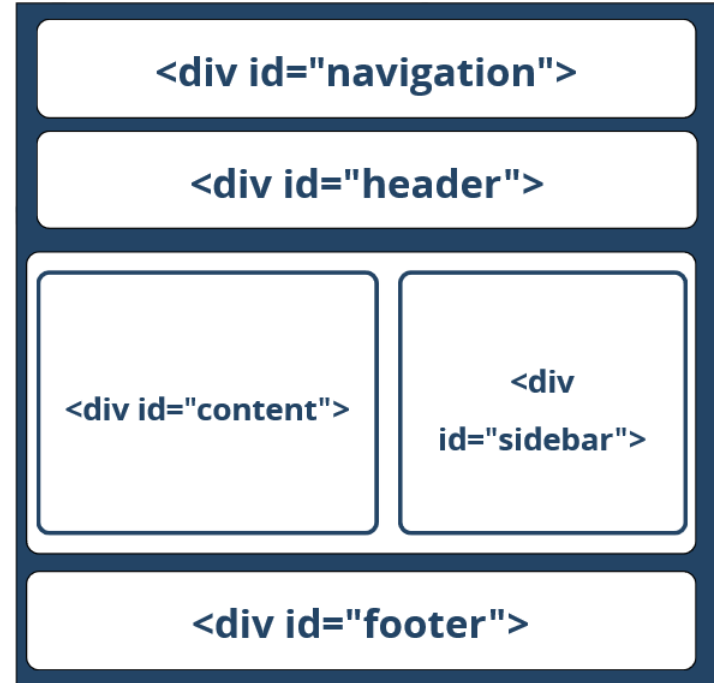
- The **main content** of the HTML document
- The section that will be **directly visible** on your web page

```
<!DOCTYPE html>
<html>
  <head>
    <!-- ... -->
  </head>
  <body>
    <!-- BODY ELEMENT CONTENT-->
  </body>
</html>
```



- Using **<div>**s with **IDs** (the IDs are needed for styling)

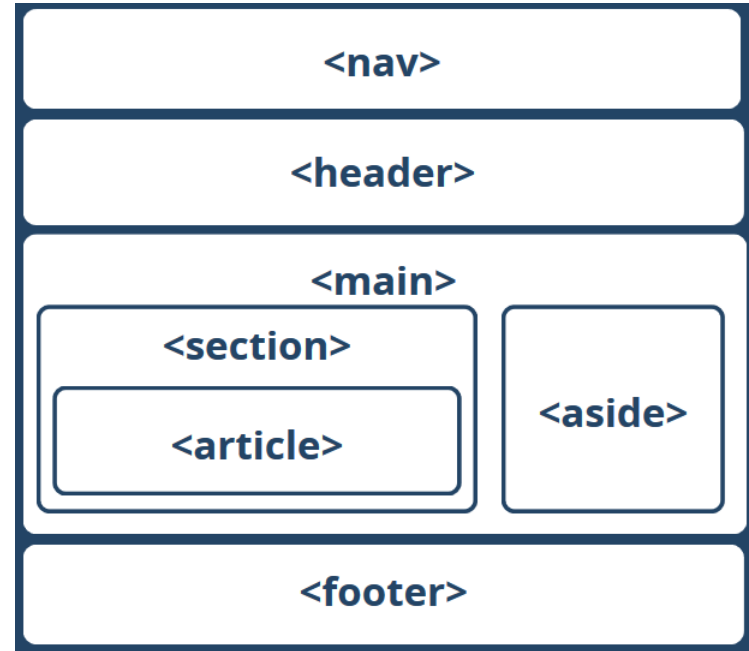
```
<html>
  <head>
    <!-- ... -->
  </head>
  <body>
    <div id="navigation">...</div>
    <div id="header">...</div>
    <div id="sidebar">...</div>
    <div id="content">...</div>
    <div id="footer">...</div>
  </body>
</html>
```

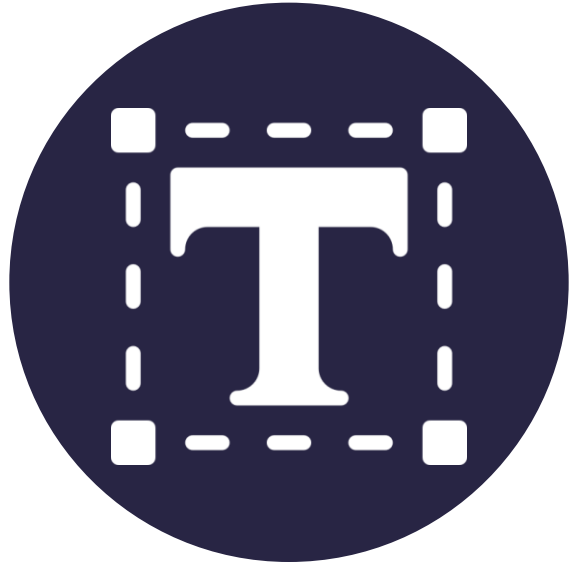




- HTML5 uses **semantic** tags for the document structure

```
<body>
  <nav>...</nav>
  <header>...</header>
  <main>
    <aside>...</aside>
    <section>
      <article>...</article>
    </section>
  </main>
  <footer>...</footer>
</body>
```



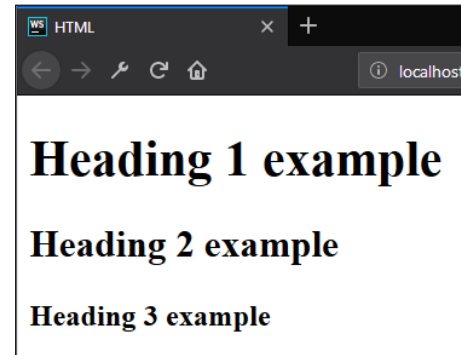


Formatting Text



- Allows you to **specify** that certain portions of the content are **titles** or **subheadings**

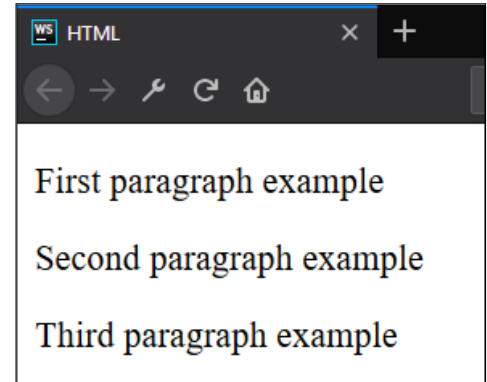
```
<body>  
  <h1>Heading 1 example</h1>  
  <h2>Heading 2 example</h2>  
  <h3>Heading 3 example</h3>  
</body>
```





- Is meant to contain the **individual paragraphs** in the text

```
<body>  
  <p>First paragraph example</p>  
  <p>Second paragraph example</p>  
  <p>Third paragraph example</p>  
</body>
```



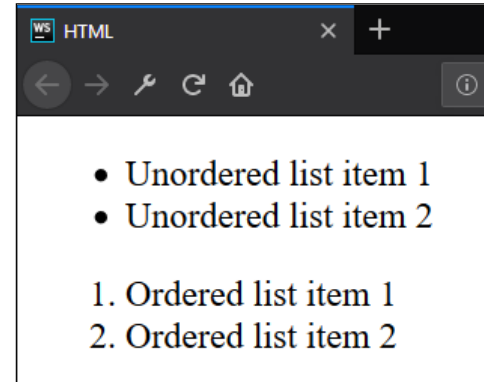


- The lists contain at least two elements
- The most common types are **ordered** and **unordered lists**

```
<ul>  
  <li>Unordered list item 1</li>  
  <li>Unordered list item 2</li>  
</ul>  
<ol>  
  <li>Ordered list item 1</li>  
  <li>Ordered list item 2</li>  
</ol>
```

Unordered

Ordered





- A structured set of data made up of **rows** and **columns**

```

<table>
  <thead>
    <tr>
      <th>Name</th>
      <th>Age</th>
    </tr>
  </thead>
  <tbody>
    <tr>
      <td>Peter</td>
      <td>23</td>
    </tr>
    <!-- TODO: Add George -->
  </tbody>
</table>
    
```

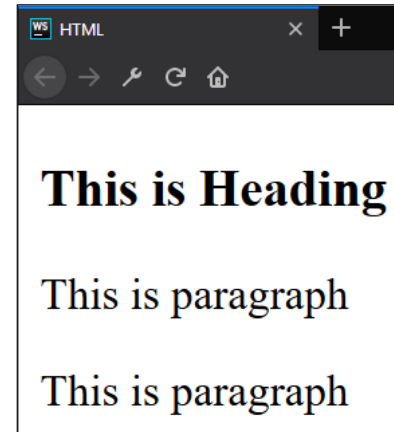


Name	Age
Peter	23
George	18



- Division element (**div**) is the generic **container** for flow content
- It has no effect on the content or layout
- As a "pure" container, the **<div>** element does not inherently represent anything

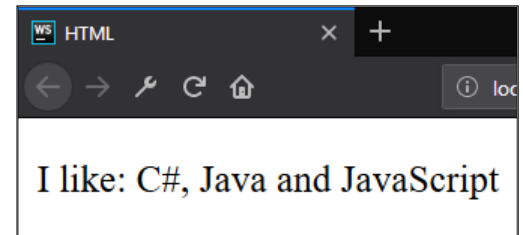
```
<div>  
  <h3>This is Heading</h3>  
  <p>This is paragraph</p>  
  <p>This is paragraph</p>  
</div>
```





- **Span** element is a generic **inline container** for phrasing content, which does not inherently represent anything
- It can be used to group elements for styling purposes

```
<p>I like:  
  <span>C#, Java and JavaScript</span>  
</p>
```

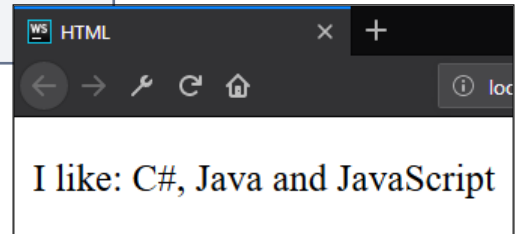




- Place comments in your HTML
- **Not visible** on the **page**
- But still **visible** in **dev tools**

```
<p>I like:  
  <span>C#, Java and JavaScript</span>  
  <!-- Add python, hello from dev tools -->  
</p>
```

```
<p>  
  I like:  
  <span>C#, Java and JavaScript</span>  
  <!-- Add python, hello from dev tools-->  
</p>
```

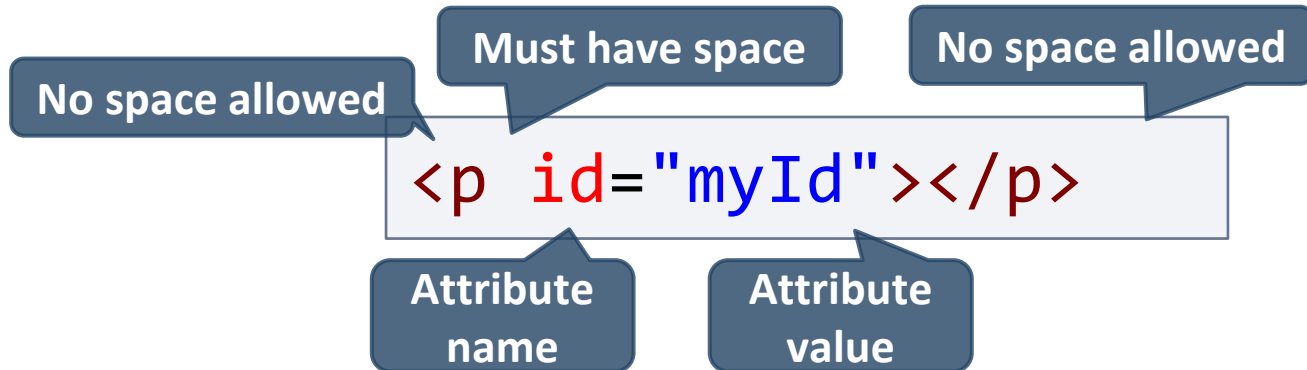




Attributes



- An **attribute** is a characteristic (special words) used inside the opening tag to **control** the **tag's behavior**
- An **attribute** is a characteristic of an element, such as font size or color





- **Attributes** are used to amplify a tag
- When a web browser interprets an **HTML tag**, it will also look for its **attributes** so that it can display the web page's elements properly
- Generally appear as **name-value pairs**, separated by '='

```
<div class="divElement" id="mainContainer">
```

In this case, the attributes will not affect the content of the div.

```
</div>
```

Full list of all HTML attributes: [Link](#)



Images, Links and Forms



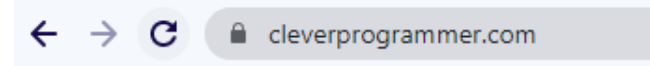
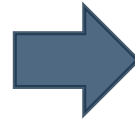
Images

- The **src** (source-source) attribute indicates the **path** to the image file
- The **alt** (alternate-substitute) attribute defines **descriptive text** for users who **can not see the image** for some reason

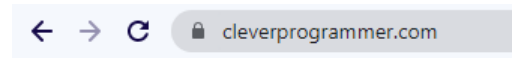




```
<body>  
  <h1>Welcome to CP</h1>  
    
</body>
```



```
<body>  
  <h1>Welcome to CP</h1>  
    
</body>
```



**Content of alt
attribute**



Links / References

- They are the essence of the web
- To add a reference, we use this simple element `<a>`, as it comes from **anchor**
- It needs an attribute to hold the reference we want to make
- This attribute is called **href** from **hypertext reference**

```
<body>  
  <a href="https://www.cleverprogrammer.com/">Coding  
  Bootcamp</a>  
</body>
```

Coding Bootcamp



Forms

- The HTML `<form>` element defines a form that is used to collect user input
- An HTML form contains **form elements**
 - Input elements
 - Text fields
 - Checkboxes
 - Radio buttons
 - Submit buttons





```
<body>
  <form>
    <label for="fullName">Full name</label>
    <input type="text" id="fullName" name="fullName">
    <label for="language">Language</label>
    <select id="language">
      <!-- TODO: -->
      <option>English</option>
    </select>
    <label for="knowledge">Basic Level</label>
    <input type="checkbox" id="knowledge" name="language" value="yes">
    <button type="submit">Submit</button>
  </form>
</body>
```



Multimedia Context



- The `<audio>` element inserts audio player in the Web page

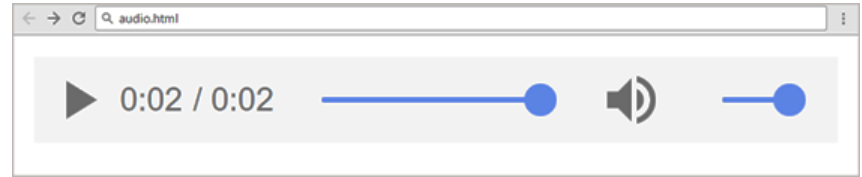
```
<audio controls autoplay>  
  <source src="horse.mp3" type="audio/mpeg" />  
  Your browser does not  
  support the audio tag.  
</audio>
```

Audio will play automatically

Audio file path

Audio file format

Alternative text





- **Audio formats** supported:
 - MP3 - audio/mpeg
 - OGG - audio/ogg
 - WAV - audio/wav
- **Attributes:**
 - controls
 - autoplay, loop, preload





- The `<video>` element inserts video player in your site

```
<video controls="controls">  
  <source src="shuttle.mp4" t  
ype="video/mp4" />
```

Your browser does not support the HTML5 video.

```
</video>
```

Video file name

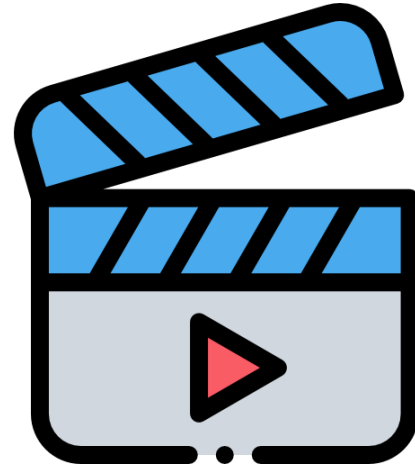
Audio file format

Alternative text





- **Video formats supported:**
 - MP4 - video/mp4
 - Ogg - video/ogg
 - WebM - video/webm
- **Attributes:**
 - width, height
 - poster
 - controls
 - autoplay, loop



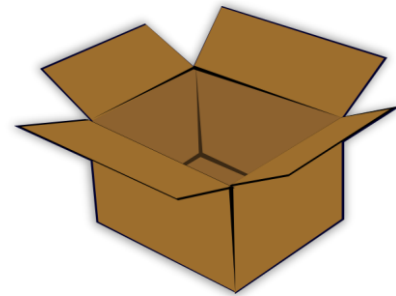


Nested Elements



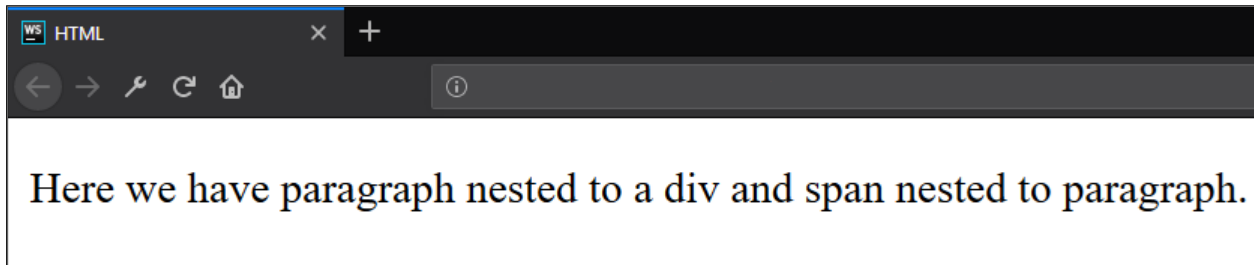
Nested Elements

- It is possible to put an element inside another element - this is called **nesting**
- Elements need to be **opened** and **closed properly** to be truly inside or outside of each other
- Some items **have no** content and are called **empty elements**





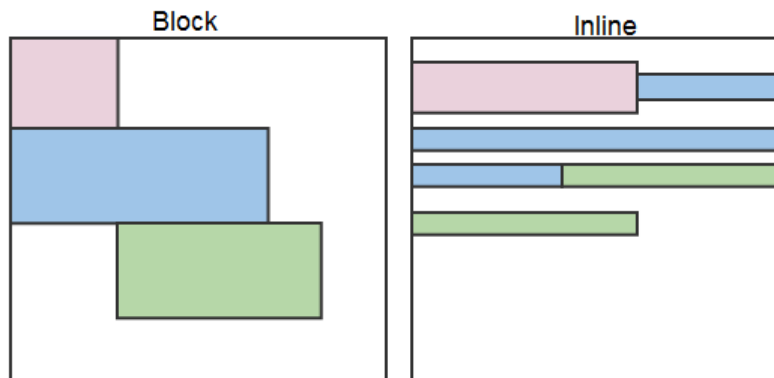
```
<div>  
  <p>  
    Here we have paragraph nested to a div and  
    <span>span nested to paragraph</span>.  
  </p>  
</div>
```





Display Properties – Block and Inline

- Browsers treat every element as a kind of **box**
- There are two types of boxes
 - **Block**
 - **Inline**

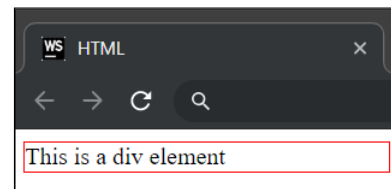




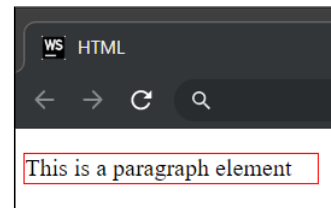
Block Elements

- Always **starts** on a **new line**
- **Fills up** the horizontal **space** left and right on the web page
- Block elements are `<div>` and `<p>`

```
<div>This is a div element</div>
```



```
<p>This is a paragraph element</p>
```

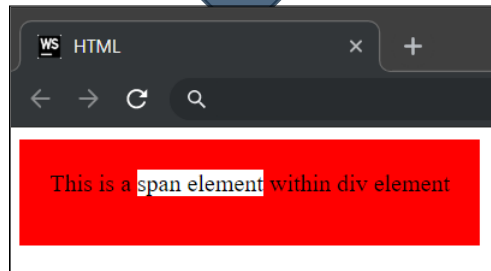


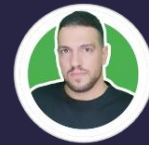


Inline Elements

- Appear on the **same line** as the content and tags beside them
- Inline elements can **appear within block** elements
- Inline elements are ``, ``, ``

```
<div>This is a <span>span element</span> within a div element</div>
```





- What is **HTML**?
- **Element** anatomy
- **Document** anatomy
- **Formatting** text
- **Attributes**
- **Images, Links** and **Forms**
- **Multimedia** context
- **Nested** Elements





HTML: the style attribute

```
• • •  
<a href="https://www.cleverprogrammer.com">Visit Clever Programmer</a>  
  
  
  
<p style="color:red;">This is a red paragraph.</p>
```

👉 href attribute
For referring to a hyperlink!

👉 src attribute
For referring to the source of the image.

👉 width and height attribute
Adjusting the image

👉 alt attribute
In case the image is not available

👉 style attribute
To style an html element, in this case p



HTML: the style attribute



```
<p>I am normal</p>  
<p style="color:red;">I am red</p>  
<p style="font-size:50px;">I am big</p>  
<p style="font-family:courier;">I like this font.</p>  
<p style="text-align:center;">Centered text.</p>  
<p style="background-color:powderblue;">
```

👉 style attribute for styling HTML elements

👉 color
For text-colors!

👉 font-size
For text sizes

👉 font-family
For text fonts

👉 text-align
For text alignment

👉 background-color:
For background color



HTML forms and input



```
<!DOCTYPE html>
<html>
<body>

<h2>HTML Forms</h2>

<form action="/action_page.php">
  <label for="fname">First name:</label><br>
  <input type="text" id="fname" name="fname" value="Jessy"><br>
  <label for="lname">Last name:</label><br>
  <input type="text" id="lname" name="lname" value="The"><br><br>
  <input type="submit" value="Submit">
</form>

<p>If you click the "Submit" button, the form-data will be sent to a page called "/action_page.php".
</p>

</body>
</html>
```

HTML Forms

First name:

Last name:

If you click the "Submit" button, the form-data will be sent to a page called "/action_page.php".

HW 4

<https://qrcood.com/masaq-hw4>

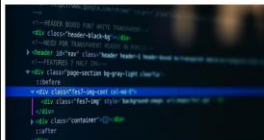
The Code Magazine

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The Basic Language of the Web: HTML



Posted by [Laura Jones](#) on Monday, June 21st 2027



All modern websites and web applications are built using three *fundamental* technologies: HTML, CSS and JavaScript. These are the languages of the web.

In this post, let's focus on HTML. We will learn what HTML is all about, and why you too should learn it.

What is HTML?

HTML stands for HyperText Markup Language. It's a markup language that web developers use to structure and describe the content of a webpage (not a programming language).

HTML consists of elements that describe different types of content: paragraphs, links, headings, images, video, etc. Web browsers understand HTML and render HTML code as websites.

In HTML, each element is made up of 3 parts:

1. The opening tag
2. The closing tag
3. The actual element

You can learn more at [MDN Web Docs](#)

Why should you learn HTML?

There are countless reasons for learning the fundamental language of the web. Here are 5 of them:

- To be able to use the fundamental web dev language
- To hand-craft beautiful websites instead of relying on tools like WordPress or Wix
- To build web applications
- To impress friends
- To have fun 🤪

Hopefully you learned something new here. See you next time!

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By Jonas Schmedemann



[The Unknown Powers of CSS](#)

By Jim Dillon



[Why JavaScript is Awesome](#)

By Matilda

A blurred background image of a computer monitor. The screen shows a code editor with various lines of code in different colors (blue, green, red, purple). A hand is visible in the center, holding a pen and pointing towards the code. The overall scene is dimly lit, with the screen's glow providing the main light source.

LET'S CODE