Day 2

HTML & CSS

Anatomy of a Website

Your Content

+

HTML (Structure)

+

CSS (Presentation)

=

Your Website

What is HTML?

HTML stands for HyperText Markup Language.
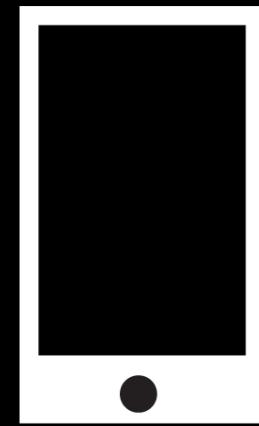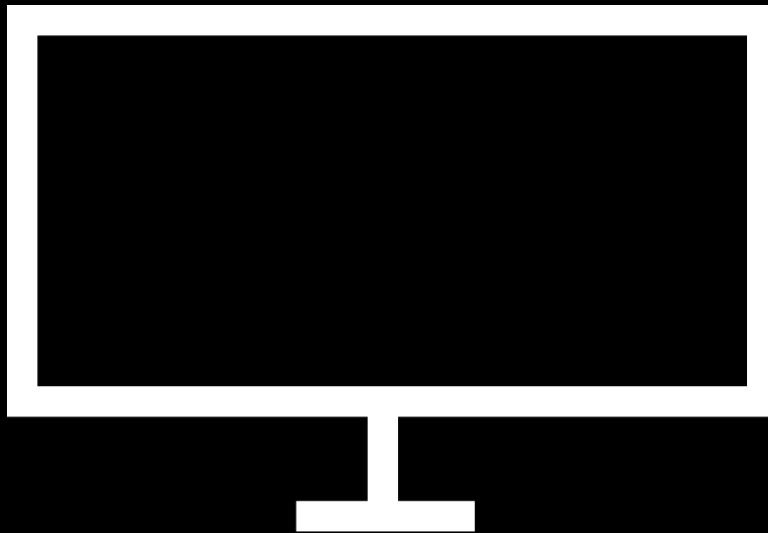
Structure of a web page

```
<html>
 <body>
  <p>Indicates a paragraph</p>
 </body>
</html>
```

This hierarchy structure is called the **DOM**:

The Document Object Model

Anatomy of an HTML Tag

Each tag has a "start tag", "end tag", some content in between, and optional attributes.

```
<tagname attribute="value">
 content
</tagname>
```

Think of a tag as a "command" to the browser and of the attributes as modifiers of that command.

<!DOCTYPE html>

```
<!DOCTYPE html>
<html>
</html>
```

The doctype isn't an actual tag, but it needs to be at start at every HTML page to tell browser which version of HTML you're using.

The <html> tag is always the first, root tag in the page.

<body>

```
<!DOCTYPE html>
<html>
 <head>
  <meta charset="utf-8">
  <title>Title of your page goes here</title>
 </head>
 <body>
  Bulk of your content here.
 </body>
</html>
```

The <body> contains the actual content of the page.

<head>

```
<!DOCTYPE html>
<html>
 <head>
  <meta charset="utf-8">
  <title>Title of your page goes here</title>
 </head>
</html>
```

The <head> contains "meta" information about the page, information that the browser needs before rendering.

What Goes In
<body> ?? </body>

\<p\> Paragraph Tags \</p\>

```
<body>
<p>Paragraph 1</p>
<p>Paragraph 2</p>
<p>Paragraph 3</p>
</body>
```

Paragraph 1
Paragraph 2
Paragraph 3

<h1> Headline Tags </h1>

```
<body>
<h1>Header 1</h1>
…
<h6>Header 6</h6>
</body>
```

Header 1

…

Header 6

Line Break Tags \<br\>

```
<body>
<p>
Imagine there's no Heaven <br>
It's easy if you try <br>
No hell below us  <br>
</p>
</body>
```

Imagine there's no Heaven
It's easy if you try
No hell below us

Notice: This tag does not need to be closed, since it doesn't encapsulate anything.

\ Unordered List Tags \

```
<body>
<ul> Unordered List
 <li>Item 1</li>
 <li>Item 2</li>
 ...
</ul>
</body>
```

Unordered List
- Item 1
- Item 2

...

Ordered List Tags

```
<body>
<ol> Ordered List
 <li>Item 1</li>
 <li>Item 2</li>
 …
</ol>
</body>
```

Ordered List

1.   Item 1
2.   Item 2

      …

<div> Div Tag </div>

```
<body>
<div style="color: #0000FF">
   <h1>This is a Main Heading</h1>
   <h2>This is a Sub-Heading</h2>
</div>
</body>
```

This is a Main Heading
This is a Sub-Heading

<section> Section Tag </section>

```
<body>
<section>
  <h1>This is a Main Heading</h1>
  <p>This text might be an
introduction to the rest of the
page.</p>
</section>
</body>
```

This is a Main Heading

This text might be an introduction to the rest of the page.

<article> Article Tag </article>

```
<body>
<article>
  <h1>Awesome article</h1>
  <p>Lots of awesome text.</p>
</article>
</body>
```

Awesome article

Lots of awesome text.

<nav>Nav element </nav>

```
<body>
<nav>
<ul>
 <li><a href="/">Home</a></li>
 <li><a href="/about">About</li>
 <li><a href="/works">Works</li>
</ul>
</nav>
</body>
```

Navigation

Home

About

Works

<button>button tag </button>

```
<body>
<button>Click me</button>
</body>
```

Click me

HTML Readability

- Use quotes around attributes
- Indent to represent nesting
- Use same capitalization

Bad :(

```
<ul><li><a href=http://www.google.com>Google</a></li>
<LI>Yahoo</LI></UL>
```

Good :D

```
<ul>
  <li><a href="http://www.google.com">Google</a></li>
  <li>Yahoo</li>
</ul>
```

<!-- HTML Comments -->

<!-- I can comment for humans here. -->

<!--
I can write a comment that
spans multiple lines too.
-->

<img src = "Images">


```
<img src="http://www.google.com/images/srpr/logo1w.
png"
  alt="Google">
```



```
<img src="http://www.google.com/images/srpr/logo1w.png"
  alt="Google" height="50">
```

<a href= "Links">

```
<a href="http://www.google.com">Google</a>
```
Google
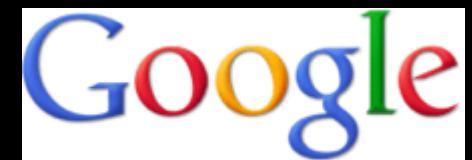
```
<a href="http://www.google.com">
  <img src="http://www.google.com/images/srpr/logo1w.png"
    alt="Google">
</a>
```



```
<a href="http://www.google.com" target="_blank">Google
(in new window)</a>
```
Google (in new window)

<id= "id's">

```
<h1 id="chapter1">Chapter 1</h1>

<p>Most exciting story in the world. To be continued...</p>
```

Every HTML element can carry the id attribute. It is used to uniquely identify that element from other elements on the page. Its value should start with a letter or an underscore (not a number or any other character).

<class= "classes">

```
<h1 class ="warning">Warning!!!</h1>

<p>Most exciting story in the world. To be continued...</p>
```

Every HTML element can also carry a class attribute.
Sometimes, rather than uniquely identifying one element within a document, you will want a way to identify several elements as being different from the other elements on the page.

<a href= "#InternalLinks">

```
<p>Jump to <a href="#chapter1">the first chapter!</a> </p>

<h1 id="chapter1">Chapter 1</h1>

<p>Most exciting story in the world. To be continued...</p>

<p>Read more on
<a href="http://en.wikipedia.org/wiki/Fox#Diet">Wikipedia</a>
</p>
```

What Goes In
<head> ?? </head>

\<head\>

```
<!DOCTYPE html>
<html>
 <head>
  <meta charset="utf-8">
  <title>Title of your page goes here</title>
 </head>
</html>
```

The \<head\> contains "meta" information about the page, information that the browser needs before rendering.

<title> Title </title>

```
<!DOCTYPE html>
<html>
 <head>
  <title>Title of your page goes here</title>
 </head>
</html>
```

Your website's title

<meta charset="utf-8">

```
<!DOCTYPE html>
<html>
 <head>
  <meta charset="utf-8">
 </head>
</html>
```

Character encoding

CSS

What Is CSS?

CSS = Cascading Style Sheets

CSS is a "style sheet language" that lets you style the elements on your page.

CSS is embedded inside HTML, but it is *not* **HTML** itself

What Can It Do?

text

color

size

position

Anatomy of CSS

CSS consists of "style rules". Each style rule consists of a "selector" and "declarations" of property-value pairs:

```
selector {
  property: value;
  property: value;
}
```

```
body {
  color: yellow;
  background-color: black;
}
```

Coding Conventions

It is possible to write
CSS like this:

```
selector{property:values;}selector{property:values;}
```

But it's preferred to write
it like this:

```
selector {
  property:values;
}

selector {
  property:values;
}
```

Notice: space between "selector" and "{", 2 spaces before property-value pair, space after "property:", semi-colon after "values", line between rules.

<style> CSS In HTML </style>

CSS can be embedded in HTML in several ways. One way is to include all CSS in a <style> tag, usually inside the head tag:

```
<html>
<head>
<style>
body {
  color: yellow;
  background-color: black;
}
</style>
</head>
```

<link rel =”External CSS File”

CSS can also be defined in a separate file.

Linked stylesheet:

```
<head>
<link rel="stylesheet" type="text/css" href="main.css"
>
</head>
```

<link rel =”Google Fonts”

To add google fonts all you have to do is add a special stylesheet link to your HTML document, then refer to the font in a CSS style.

Linked stylesheet:

```
<head>
<link rel="stylesheet" type="text/css" href="http://fonts.
googleapis.com/css?family=Font+Name">
</head>
```

<link rel ="Google Fonts"

Linked stylesheet:

```
<head>
<link rel="stylesheet" type="text/css" href="http://fonts.
googleapis.com/css?family=Tangerine">
</head>
```

Assigned font style:

```
<style>
    body {
      font-family: 'Tangerine', serif;
      font-size: 48px;
    }
</style>
```

Naming Conventions

Some rules to follow when making IDs and class names:

- Describe the content, not the presentation (**"warning"**, *not "redbox"*).

- Use all lowercase, and hyphens when needed for readability (**"header-info"**, *not "headerInfo"*).

- Use hyphens to show that a class or ID is part of something else. (e.g. **"footer"**, **"footer-copyright"**, and **"footer-logo"**).

/*Comments*/

```css
/* Comment here */
p
{
  margin: 1em; /* Comment here */
  padding: 2em;
  /*  color: white; */
  background-color: blue;
}

/*
  multi-line
  comment here
*/
```

/*Comments*/ will be ignored by the browser and are useful for documenting your styles to other humans or commenting out rules.