

HTML, beyond the basics

HTML Classes and IDs

Classes are attributes that attach information to an element so you can do more things with some or all elements that belong to a certain class.

IDs, like classes, are attributes attached to elements. IDs are unique identifiers for a particular element. They must ALWAYS start with a letter, but you can add numbers afterwards.

You would set an ID on an element if you need to particularly do something with that element, like run some JavaScript on it or even set some unique styling on it.

```
<p class="fancy">My fancy paragraph</p>
```

```
<h1 class="fancy">My fancy heading</h1>
```

```
<p id="s1">This paragraph can be  
referred to as s1</p>
```

```
<h1 id="mytitle">Title</h1>
```

Pseudo-Classes

A pseudo-class is used to define a special state of an element. for example:

- Style an element when a user mouses over it
- Style visited and unvisited links differently
- Style an element when it gets focus

```
selector:pseudo-class {  
    property:value;  
}
```

Anchor Pseudo-Classes

Links can be displayed in different ways:

```
/* unvisited link */  
a:link {  
    color: #FF0000;  
}
```

```
/* visited link */  
a:visited {  
    color: #00FF00;  
}
```

```
/* mouse over link */  
a:hover {  
    color: #FF00FF;  
}
```

```
/* selected link */  
a:active {  
    color: #0000FF;  
}
```

Note: `a:hover` MUST come after `a:link` and `a:visited` in the CSS definition in order to be effective!
`a:active` MUST come after `a:hover` in the CSS definition in order to be effective! Pseudo-class names are not case-sensitive.

Pseudo-classes and CSS Classes

Pseudo-classes can be combined with CSS classes

When you hover over the link that belongs to **highlight class** in this example, it will change color:

```
a.highlight:hover {  
    color: #ff0000;  
}
```

You can find the complete list of Pseudo-Classes [here](#).

HTML Block and Inline Elements

Every HTML element has a default display value depending on what type of element it is. The default display value for most elements is **block** or **inline**.

A block-level element always starts on a new line and takes up the full width available (stretches out to the left and right as far as it can).

An inline element does not start on a new line and only takes up as much width as necessary.

BLOCK:



INLINE:



HTML Block and Inline Elements

Example Block Elements:

`<p>` , `<pre>` , `<table>` , `` , ``, ...

Example Inline Elements:

`` , `<a>` , `` , `` , `<small>` , ...

Let's see that in action

<div> Element

The <div> element is often used as a container for other HTML elements.

The <div> element has no required attributes, but both style and class are common.

When used together with CSS, the <div> element can be used to style blocks of content

```
<div style="background-color:black;color:white;padding:20px;">
```

```
  <h2>London</h2>
```

```
  <p>London is the capital city of England. It is the most populous city in the United Kingdom, with a metropolitan area of over 13 million inhabitants.</p>
```

```
</div>
```


 Element

The element is often used as a container for some text.

The element has no required attributes, but both style and class are common.

When used together with CSS, the element can be used to style parts of the inline text

```
<h1>My <span style="color:red">Important</span> Heading</h1>
```

HTML Grouping Elements

In other words, `<div>` and `` can be seen as grouping elements.

- `<div>` defines one or more block-level sections in a document
- `` defines one or more inline sections in a document

```
.highlight{  
  color:yellow;  
}
```

```
<body>  
  <div id="header">  
    <h1>My Page Title</h1>  
  </div>  
  <div id="content">  
    <p>The main content</p>  
  </div>  
  <div id="sidebar">  
    <p>Some <span  
class="highlight"> stuff</span> in a  
sidebar</p>  
  </div>  
  <div id="footer">  
    <p>Copyright me</p>  
  </div>  
</body>
```

HTML5 Structural/Semantic Elements

HTML5 offers new elements for better document structure

Structural elements are all block-level elements and help identify the type of content and the area on the page where that content will be placed.

<code><header></header></code>	Defines a header for a document or section
<code><nav></nav></code>	Defines navigation links
<code><article></article></code>	Defines an article in a document
<code><section></section></code>	Defines a section in a document
<code><main></main></code>	Defines the main content of a document
<code><footer></footer></code>	Defines a footer for a document or section

You can find the complete list [here](#)

More on `<head>` Element

The `<head>` element is a container for metadata (data about data) and is placed between the `<html>` tag and the `<body>` tag.

HTML metadata is data about the HTML document. Metadata is not displayed.

Metadata typically define the document title, character set, styles, links, scripts, and other meta information.

What is Inside <head>: <title>

The `<title>` element defines the title of the document, and is required in all HTML documents.

The `<title>` element:

- defines a title in the browser tab
- provides a title for the page when it is added to favorites
- displays a title for the page in search engine results

```
<head>  
  <title>Page Title</title>  
</head>
```

What is Inside <head>: <style> and <link>

The <style> element is used to define style information for a single HTML page

```
<head>
  <style>
    body {background-color: powderblue;}
    h1 {color: red;}
    p {color: blue;}
  </style>
</head>
```

The <link> element is used to link to external style sheets

```
<head>
  <link rel="stylesheet" href="mystyle.css">
</head>
```

What is Inside <head>: <meta>

The `<meta>` element is used to specify which character set is used, page description, keywords, author, and other metadata.

Metadata is used by browsers (how to display content), by search engines (keywords), and other web services.

```
<meta charset="UTF-8">  
<meta name="description" content="Free Web tutorials">  
<meta name="keywords" content="HTML, CSS, XML, JavaScript">  
<meta name="author" content="John Doe">
```

What is Inside <head>: <meta>

HTML5 introduced a method to let web designers take control over the viewport, through the <meta> tag.

The viewport is the user's visible area of a web page. It varies with the device, and will be smaller on a mobile phone than on a computer screen.

```
<meta name="viewport" content="width=device-width, initial-scale=1.0">
```

The `width=device-width` part sets the width of the page to follow the screen-width of the device (which will vary depending on the device).

The `initial-scale=1.0` part sets the initial zoom level when the page is first loaded by the browser.viewport element in all your web pages:

Viewport

check out these two web pages on your phone or tablet:

https://www.w3schools.com/html/example_withoutviewport.htm

https://www.w3schools.com/html/example_withviewport.htm

More on HTML Links

```
<a href="url">link text</a>
```

HTML bookmarks are used to allow readers to jump to specific parts of a Web page.

Bookmarks can be useful if your webpage is very long.

To make a bookmark, you must first create the bookmark, and then add a link to it.

When the link is clicked, the page will scroll to the location with the bookmark.

Check out course web page for a sample

More on HTML Links

First, create a bookmark with the id attribute:

```
<h2 id="C4">Chapter 4</h2>
```

Then, add a link to the bookmark:

```
<a href="#C4">Jump to Chapter 4</a>
```

Or, add a link to the bookmark, from another page:

```
<a href="html_demo.html#C4">Jump to Chapter 4</a>
```

More on HTML Lists

Unordered list (bullets)

- List Item
- Another List Item

```
<ul>  
  <li>List Item</li>  
  <li>Another List Item</li>  
</ul>
```

Ordered list (sequence)

1. List Item
2. Another List Item

```
<ol>  
  <li>List Item</li>  
  <li>Another List Item</li>  
</ol>
```

More on HTML Lists

For Unordered HTML List we can change List Item Marker

The CSS list-style-type property is used to define the style of the list item marker

- List Item
- Another List Item

```
<ul style="list-style-type:disc">  
  <li>List Item</li>  
  <li>Another List Item</li>  
</ul>
```

possible values for list-style-type property are: **disc**, **circle**, **square**, **none**

More on HTML Lists

For ordered HTML List we can change the Type of the List Marker

The CSS type property is used to define the type of the ordered list item marker

A. List Item

B. Another List Item

```
<ol type="A">  
  <li>List Item</li>  
  <li>Another List Item</li>  
</ol>
```

type="1"	The list items will be numbered with numbers (default)
type="A"	The list items will be numbered with uppercase letters
type="a"	The list items will be numbered with lowercase letters
type="I"	The list items will be numbered with uppercase roman numbers
type="i"	The list items will be numbered with lowercase roman numbers

More on HTML Lists

HTML also supports description lists which is a list of terms, with a description of each term.

The `<dl>` tag defines the description list, the `<dt>` tag defines the term (name), and the `<dd>` tag describes each term

coffee
 black hot drink
milk
 white cold drink

```
<dl>  
  <dt>coffee</dt>  
  <dd>black hot drink</dd>  
  <dt>milk</dt>  
  <dd>white cold drink</dd>  
</dl>
```

More on HTML Tables

Firstname	Lastname	Age
Jill	Smith	50
Eve	Jackson	94

```
<table>
  <tr>
    <th>Firstname</th>
    <th>Lastname</th>
    <th>Age</th>
  </tr>
  <tr>
    <td>Jill</td>
    <td>Smith</td>
    <td>50</td>
  </tr>
  <tr>
    <td>Eve</td>
    <td>Jackson</td>
    <td>94</td>
  </tr>
</table>
```


More on HTML Tables: colspan

To make a cell span more than one column, use the colspan attribute:

Name		Age
Jill	Smith	50
Eve	Jackson	94

```
<table>
  <tr>
    <th colspan="2">Name</th>
    <th>Age</th>
  </tr>
  <tr>
    <td>Jill</td>
    <td>Smith</td>
    <td>50</td>
  </tr>
  <tr>
    <td>Eve</td>
    <td>Jackson</td>
  </tr>
</table>
```

More on HTML Tables: rowspan

To make a cell span more than one row, use the rowspan attribute:

Name		Age
Jill	Smith	50
Eve	Jackson	

```
<table>
  <tr>
    <th colspan="2">Name</th>
    <th>Age</th>
  </tr>
  <tr>
    <td>Jill</td>
    <td>Smith</td>
    <td rowspan="2">50</td>
  </tr>
  <tr>
    <td>Eve</td>
    <td>Jackson</td>
  </tr>
</table>
```

More on HTML Tables: caption

To add a caption to a table, use the `<caption>` tag immediately after the `<table>` tag

Random Table

Name		Age
Jill	Smith	50
Eve	Jackson	

```
<table>
  <caption>Random Table</caption>
  <tr>
    <th colspan="2">Name</th>
    <th>Age</th>
  </tr>
  <tr>
    <td>Jill</td>
    <td>Smith</td>
    <td rowspan="2">50</td>
  </tr>
  <tr>
    <td>Eve</td>
    <td>Jackson</td>
  </tr>
</table>
```