

Tutorial 1 - HTML BASIC

<http://web.jjay.cuny.edu/~pji/math279.html>

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HTML - HyperText Markup Language

- not a programming language
- structure text into headings, paragraphs, lists, hypertext links, or other *elements*
- *a language that instructs web browsers to properly render text, images, ...*

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XHTML (Extensible HTML)

- a stricter version of HTML
- designed to confront some of the problems associated with different and competing versions of HTML
- also designed to better integrate HTML with other markup languages such as XML

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HTML Documents

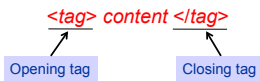
- plain-text files that can be created using any text editor (e.g., Notepad)
- `.html` or `.htm` extension
- constructed by HTML *elements*
 - An element: is a distinct object in the document, e.g. paragraph, heading, page title, etc.
 - The whole html document is also considered an “element”

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Define HTML elements using tags

tags:

- core building block of HTML
- marks the presence of an element
- two-sided element syntax



e.g., `<p> blah blah blah </p>`

- one side element

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More about tags

- special terms surrounded by angle brackets
- can be upper, lower or mixed case
 - `<TITLE> Math 279 </TITLE>`
 - `<title> Math 279 </title>`
 - `<TitLe> Math 279 </tiTIE>`are all ok
- most tags come in pairs, some don't

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Basic tags

- `<HTML> ... </HTML>`
 - tells browser that file contains HTML-coded information
 - .html, .htm
- `<HEAD> ... </HEAD>`
 - identifies first part of HTML-coded document that contains the title

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Basic tags (cont.)

- `<TITLE> ... </TITLE>`
 - used inside `<HEAD> ... </HEAD>`
 - identify document title
 - displayed in the title bar at top of browser window
 - identifies your page for search engines
- `<BODY> ... </BODY>`
 - start and end the actual contents

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Example for basic tags

```
<html>
  <head>
    <TITLE>A Simple HTML Example</TITLE>
  </head>
  <body>
    <H1>Welcome to Math 279</H1>
    <P>Math 279 is fun! This is the first
      paragraph.</P>
    <P>And this is the second paragraph.</P>
  </body>
</html>
```

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Exercise

- Create an html document with title “Dave’s Devil Sticks”

Working with block-level elements

- **block-level elements**: contain content viewed as distinct block within webpage
- when rendered visually, start on a new line
- e.g., headings, paragraphs

Heading & paragraph

- Headings
 - `<H1>...</H1>`, `<H2>...</H2>`, ..., `<H6>...</H6>`
 - six levels of headings
 - H1 is largest, and H6 the smallest
- Paragraphs
 - `<P>...</P>`

Exercise

```
<html>
<head>
<TITLE>Dave's Devil Sticks</TITLE>
</head>
<body>
<H1>Dave's Devil Sticks</H1>
<H2>Who am I?</H2>
<P>Welcome to Dave's Devil Sticks ...
</P>
<P>Every set is checked and tested
before being shipped ...
</P>
</body>
</html>
```

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More block level tags

- `<!--, ..., -->`, *comment tag*
 - `<!--` anything inside a comment tag is ignored by the web browsers `-->`
 - Important for documenting your html files
- `<blockquote>...</blockquote>`, exact text, rendered with indented margins
- `<pre>...</pre>`, exact *spacing* and *line breaks* as typed

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Exercise

```
... ..
<P>Every set is checked and tested
before being shipped ...
</P>
<blockquote>
<p>
I'm more than happy to recommend ...
</p>
</blockquote>
</body>
</html>
```

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Adding lists

- unordered list (bulleted list): ` ... `
- ordered list (enumerated list): ` ... `
 - `...`: specify each list item for both unordered and ordered lists
- definition list: `<dl>...</dl>`
 - a list of definitions
 - `<dt>...</dt>`: definition term
 - `<dd>...</dd>`: definition description

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Example for list tags

```
<html>
<head>
<title>Example for list tags</title>
</head>
<body>
Three kinds of lists are
<ul>
  <li>unordered list</li>
  <li>ordered list </li>
  <li>definition list </li>
</ul>
Three kinds of lists are
<dl>
  <dt>unordered list</dt> <dd>shows bullets</dd>
  <dt>ordered list</dt> <dd>enumerates items</dd>
  <dt>definition list</dt> <dd>lists definitions</dd>
</dl>
</body>
</html>
```

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Exercise

```
... ..
<blockquote>
  <p>
    I'm more than happy to recommend ...
  </p>
</blockquote>
<h2> My products </h2>
<ul>
  <li>Basic Stick</li>
  <li>Flower Stick</li>
  <li>Master Stick</li>
  <li>Glow Stick</li>
</ul>
</body>
</html>
```

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Exercise

```
... ..
<blockquote>
  <p>
    I'm more than happy to recommend ...
  </p>
</blockquote>
<h2> My products </h2>
<dl>
  <dt>Basic Stick</dt>
  <dd>Easiest Stick to learn</dd>
  <dt>Flower Stick</dt>
  <dd>A graceful stick with tassels</dd>
  <dt>Master Stick</dt>
  <dd>Our most popular stick</dd>
</dl>
</body>
</html>
```

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Other block-level elements

□ address tag:

```
<address> ... </address>
```

e.g.

```
<address> Dave's Devil Sticks
         541 West Highland Dr.
         Auburn, ME 04210
         (207) 555 - 9001
</address>
```

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Working with inline elements

- Inline element: marks a section of text within a block-level element
- `,...,`: boldface element, darkens any text inside
- `,...,`: like ``, but more general
- `<i>,...,</i>`: italicizes any text inside
- `,...,`: like `<i>`, but more general

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Homework

- ❑ Read Tutorial 1
- ❑ Finish Figure 1-28 on page 31

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Attributes in tags

- ❑ a property of an HTML element (tag)
- ❑ consists of *attribute_name* and *attribute_value*
- ❑ used with opening tag
- ❑ Example: **ALIGN** attribute
 - attribute_name: **ALIGN**
 - attribute_value: **LEFT | CENTER | RIGHT**
 - `<H1>Dave's Devil Sticks</H1>`
 - `<H1 ALIGN = "CENTER">Dave's Devil Sticks</H1>`

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The style attribute

- ❑ controls how the browser displays an element
- ❑ used with opening tag
- ❑ syntax
`<element style="rules" ... > content </element>`
- ❑ *rules*
 - a set of style rules
 - entered by specifying a style name followed by a colon and then a style value
`style="name1:value1; name2:value2; ..."`
- ❑ e.g.
`<h1 style="text-align:center">Dave's Devil Sticks</h1>`
`<h1 style="color: blue">Dave's Devil Sticks</h1>`
`<h1 style="text-align:center; color:blue">Dave's Devil Sticks</h1>`

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More example

```
<address style="text-align: center"> Dave's Devil Sticks  
  541 West Highland Dr.  
  Auburn, ME 04210  
  (207) 555 – 9001  
</address>
```

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Exercise

```
□ Add descriptions to Dave's products list  
<h2>My Products</h2>  
<ul>  
  <li><b>Basic Stick</b>  
    The easiest stick to learn with, but "grippy" enough for the most  
    demanding tricks. Comes in red, green and blue. </li>  
  <li><b>Flower Stick</b>  
    A graceful stick with colored tassels. Flower sticks float more  
    slowly, giving you ideal chance to practice new moves. </li>  
  <li><b>Master Stick</b>  
    My most popular stick is shorter and heavier for fast play and  
    more advanced tricks. Each Master set is available in custom  
    colors. </li>  
</ul>
```

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Empty element

- an **empty element** contains no contents
- usually one-side elements
- e.g.
 - line break: `
`
 - horizontal line: `<hr />`
- **exercise**
 - add line breaks between list items and their descriptions
 - add horizontal lines
 - after `<blockquote>`
 - before `</blockquote>`
 - before `<address>` tag

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Images

- ❑ use image files in .gif, .jpg, .png format
- ❑ do NOT use .bmp, .tiff, .pict
- ❑ use images with small size

Image tag

- ❑ **** tag: place images on Web Pages
- ❑ **src** attribute: specifies name of image file
 - attribute_name: **src**
 - attribute_value: source file name
- ❑ **alt** attribute, give your image a *hidden name*
 - attribute_value: a *hidden name* of your image
- ❑ example:
 - ``

Image tag (cont.)

- ❑ **WIDTH, HEIGHT** attribute: specifies size of image file
 - attribute_name: **width, height**
 - attribute_value: define the width or the height of a image
- ❑ example:
 - ``

Image tag (cont.)

- place an image in center of a browser
 - `<CENTER>`, ... `</CENTER>` tag
 - example
- ```
<CENTER>
<IMG src="logo.jpg" width="100" height="200" alt="Dave's
 Devil Sticks">
</CENTER>
```
- or use
- ```
<h1 style="text-align:center"> <IMG src="logo.jpg"
  width="100" height="200" alt="Dave's Devil Sticks"> </h1>
```

NOTE

- When insert an image, make sure that the image file is located at the **same disk directory** as shown in your **src** attribute in **** tag
- Example
 - if `` is used in your html file, then the image file (logo.jpg) **MUST** be installed in the same disk and same file folder with your html file!

Dealing with special characters

- Numeric character reference
 - use a *code* as the reference number to display a symbol
 - `&#code`
 - e.g., for copyright symbol ©, use `©`
- Character entity reference
 - use a short memorable name to refer a character
 - `&char`
 - for `<` use `<`;
 - for `>` use `>`;
 - for `&` use `&`;
 - for `"` use `"`;
 - for one blank space ` `;

More special characters

Symbol	Description	Entity Name	Entity Number
¢	cent	¢	¢
£	pound	£	£
¥	yen	¥	¥
€	euro	€	€
§	section	§	§
©	copyright	©	©
®	registered trademark	®	®
×	multiplication	×	×
÷	division	÷	÷

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Using generic elements: `div` & `span`

- elements represent a text block or a string of inline text without meaning (e.g., not-paragraph, not-headings, not-bullets), just *plain* block or string
- use `div` element mark general block-level content
 - syntax
`<div> ... </div>`
- use `span` element mark general inline content
 - syntax
` ... `
- will get back to `div` and `span` with much more details

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Homework

- Reading
 - Tutorial 1, finish
- Finish “Review Assignment” on page 50 - 52
- Case Problem 1 on page 52 - 53
- Case Problem 3 on page 55 - 57

- find related contents in “[useful links](#)”

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