Tutorial 1 –
HTML BASIC

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, …*

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

HTML Documents

❑ plain-text files that can be created using any text editor (e.g., Notepad)

❑ .html or .htm extension

❑ constructed by HTML *elements*

- o An element: is a distinct object in the document, e.g. paragraph, heading, page title, etc.
- o The whole html document is also considered an "element"

Define HTML elements using tags

tags:

❑ core building block of HTML

❑ marks the presence of an element

❑ two-sided element syntax

<tag> content </tag>

Opening tag	Closing tag

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

❑ one side element

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 </tiTlE>

are all ok

❑ most tags come in pairs, some don't

Basic tags

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

Basic tags (cont.)

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

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"

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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
  - o <H1>…</H1>, <H2>…</H2>, …, <H6>…</H6>
  - o six levels of headings
  - o H1 is largest, and H6 the smallest
- Paragraphs
  - o <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>
```

More block level tags

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

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>
```

Adding lists

- ❑ unordered list (bulleted list): ‹ul› … ‹/ul›
- ❑ ordered list (enumerated list): ‹ol› … ‹/ol›:
  - ○ ‹li›…‹/li›: 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

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>
```

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>
```

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>

Working with inline elements

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

Homework

- Read Tutorial 1

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
  ○ atribute_value: LEFT | CENTER | RIGHT
  ○ <H1>Dave's Devil Sticks</H1>
  ○ <H1 ALIGN = "CENTER">Dave's Devil Sticks</H1>

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>

More example

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

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>
```

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

Images

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

Image tag

❑ **<IMG>** tag: place images on Web Pages
❑ **src** attribute: specifies name of image file
  o attribute_name: src
  o attribute_value: source file name
❑ **alt** attribute, give your image a *hidden name*
  o attribute_value: a *hidden name* of your image
❑ example:
  o <IMG src="dave_logo.jpg" alt="Dave's Devil Sticks">

Image tag (cont.)

❑ **WIDTH, HEIGHT** attribute: specifies size of image file
  o attribute_name: width, height
  o attribute_value: define the width or the height of a image
❑ example:
  <IMG src="logo.jpg" width="100" height="200" alt="Dave's Devil Sticks">

Image tag (cont.)

❑ place an image in center of a browser
- o <CENTER>, … </CENTER> tag
- o 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 <IMG> tag

❑ Example
- o if <IMG src="logo.jpg" …> 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
  o use a *code* as the reference number to display a symbol
  o &#*code*
  o e.g., for copyright symbol ©, use &#169
❑ Character entity reference
  o use a short memorable name to refer a character
  o &*char*
  o for < use <
  o for > use >
  o for & use &
  o for " use "
  o for one blank space

More special characters

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

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
    `<span> … </span>`
- will get back to div and span with much more details