

Lesson 1-2. Introduction to HTML

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Content

1. HTML Basic
2. Structured Document
3. DOM (Document Object Model)
4. Common HTML Elements

2

Content

⇒ 1. HTML Basic

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What is HTML? (review)

- ◆ Hypertext Markup Language
- ◆ Markup Language for web pages
 - Markup Language
 - ◆ a set of annotations to text that describe how something is to be structured
 - Hypertext
 - ◆ text with references (hyperlinks) to other text that the reader can immediately access, usually by a mouse click or key press sequence

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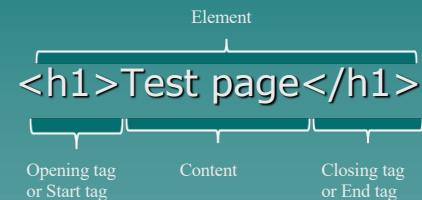
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HTML Example

```
<html>
  <head>
    <title>Test Page</title>
  </head>
  <body>
    <h1>Test Page</h1>
    <p>This is a test page.</p>
  </body>
</html>
```

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Element and Tag



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Attribute

- ◆ Most of elements can have attributes
- ◆ An attribute describes a property of an element

```
<h1 id="title">Test Page</h1>
```

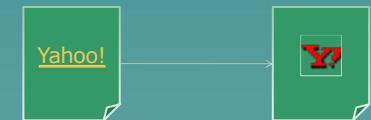
Attribute name Attribute value

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Hyperlink

- ◆ A link from a document to another document
- ◆ Anchor element with href attribute
 - href has a URI, an absolute path or a relative path
 - Example:
Yahoo!



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Images

- ◆ Insert image

-
-
- E.g. <p>

- ◆ Add a border to the image

- set attribute as , where n means the thickness of the border in pixels



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Images (2)

- ◆ Change the size of the images

- , where x, y is in pixel
- E.g. <p> My awards here

- ◆ show the words over the image

-



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2. Structured Document

- ◆ Most of Documents have a structure

- Article
 - ◆ Title, Part, Chapter, Section, Paragraph, ...
- CV
 - ◆ Name, Education, Work Experiences, Skills, ...

- ◆ Markup Language is a way to express structured document

- Nested Elements

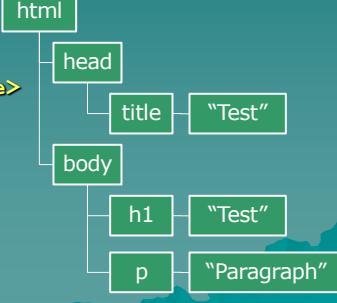
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2.1. Nested Elements

- ◆ Tree structure expressed by Markup Language

```
<html>
  <head>
    <title>Test</title>
  </head>
  <body>
    <h1>Test</h1>
    <p>Paragraph</p>
  </body>
</html>
```



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2.1. Nested Elements (2)

- ◆ Rule of Nested Elements

- Opening tags must be matched to closing tags
- The latest opening tag must be closed before other opening tag
 - ◆ Correct example
`<head><title>Title</title></head>`
 - ◆ Incorrect example
`<head><title>Title</head></title>`

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2.2. Global structure of HTML Document

- ◆ <html>
 - root of document
- ◆ <head>
 - meta information of document
 - ◆ title, meta, link, ...
- ◆ <body>
 - content of document
 - ◆ h1-h6, p, address, ...

```
<html>
  <head>
    <title>Test</title>
  </head>
  <body>
    <h1>Test</h1>
    <p>Paragraph</p>
  </body>
</html>
```

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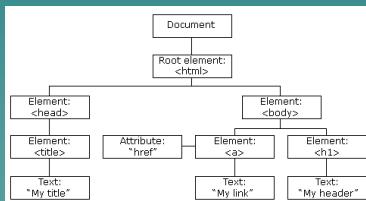
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3. DOM (Document Object Model)

- ◆ API for HTML Documents
 - defines a standard way for accessing and manipulating HTML documents
 - Object Oriented
 - Supported by various programming languages
- ◆ DOM representation
 - Logical tree structure
 - Hierarchy of node objects
 - ◆ root: Document
 - ◆ Node: Element, Attr, Text,...



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3. DOM (2)

- ◆ DOM in JavaScript
 - E.g. get all of paragraphs in the document and display the first one of them

```
var paragraphs =  
    document.getElementsByTagName("p");  
alert(paragraphs[0].nodeName);
```

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4. Structured HTML Elements

- ◆ List
- ◆ Table
- ◆ Emphasis

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4.1. List

- ◆ Unordered List
- ◆ Ordered List
- ◆ Definition List

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Unordered List

```
<ul>
  <li>Apple</li>
  <li>Banana</li>
  <li>Grape</li>
</ul>
```

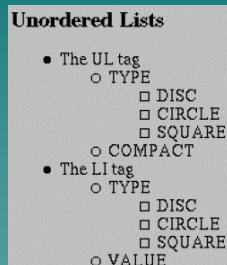
- Apple
- Banana
- Grape

◆ Attributes: TYPE
– TYPE is DISC, CIRCLE, or SQUARE

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```
<ul type="DISC">
  <li>The UL tag
    <ul type="CIRCLE">
      <li>TYPE
        <ul type="SQUARE">
          <li>DISC
          <li>CIRCLE
          <li>SQUARE
        </ul>
      <li>COMPACT
    </ul>
  <li>The LI tag
    <ul type="CIRCLE">
      <li>TYPE
        <ul type="SQUARE">
          <li>DISC
          <li>CIRCLE
          <li>SQUARE
        </ul>
      <li>VALUE
    </ul>
</ul>
```

UL: Custom Bullets



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Ordered List

```
<ol>
  <li>One</li>
  <li>Two</li>
  <li>Three</li>
</ol>
```

1. One
2. Two
3. Three

Attributes: TYPE, START

- TYPE: 1, a, A, i, I
- START=1 or 2 ... a or b ...

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```

<OL TYPE="I">
  <LI>Headings
  <LI>Basic Text Sections
  <LI>Lists
    <OL TYPE="A">
      <LI>Ordered
        <OL TYPE="1">
          <LI>The OL tag
          <OL TYPE="a">
            <LI>TYPE
            <LI>START
            <LI>COMPACT
          </OL>
          <LI>The LI tag
        </OL>
      <LI>Unordered
        <OL TYPE="1">
          <LI>The UL tag
          <LI>The LL tag
        </OL>
        <LI>Definition
          <OL TYPE="1">
            <LI>The DL tag
            <LI>The DT tag
            <LI>The DD tag
          </OL>
        </LI>
      </OL>
    <LI>Miscellaneous
  </OL>

```

Nested Ordered Lists

- I. Headings
- II. Basic Text Sections
- III. Lists
 - A. Ordered
 - 1. The OL tag
 - a. TYPE
 - b. START
 - c. COMPACT
 - 2. The LI tag
 - B. Unordered
 - 1. The UL tag
 - 2. The LL tag
 - C. Definition
 - 1. The DL tag
 - 2. The DT tag
 - 3. The DD tag
- IV. Miscellaneous

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Definition List

```

<dl>
  <dt>Apple</dt>
  <dd>A fruit or a computer company</dd>
  <dt>Grape</dt>
  <dd>A juicy purple- or green-skinned fruit</dd>
</dl>

```

Apple
A fruit or a computer company
Grape
A juicy purple- or green-skinned fruit

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```

<table>
  <caption>Users</caption>
  <tr>
    <th>Name</th>
    <th>Email</th>
  </tr>
  <tr>
    <td>John Smith</td>
    <td>smith@example.org</td>
  </tr>
  <tr>
    <td>Amy Wine</td>
    <td>amy@yahoo.com</td>
  </tr>
</table>

```

Name	Email
John Smith	smith@example.org
Amy Wine	amy@yahoo.com

4.2. Table

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4.2. Table (2)

- ◆ Adding a border
 - `<table border=10>`
- ◆ Changing the border color
 - `<table border=10 bordercolor=green>`
 - `<table border=10 bordercolorlight=green bordercolordark=red>`
- ◆ Setting the width of a cell or table
 - `<table border=0 width=320>`
 - `<table border=0 width=100%>`
 - `<td width=320> data </td>`
 - `<td width=30%> data </td>`

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4.2. Table (3)

- ◆ Centering a table on a page
 - `<table border=0 width=320 align=center>`
- ◆ Aligning a cell's contents:
 - `<td align=d1 valign=d2>`
 - ◆ d1: left, right or center
 - ◆ d2: top, bottom, middle or baseline
 - `<td align=left valign=top>`

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4.2. Table (3)

- ◆ Controlling space in and around cells
 - Cellpadding=m, where m is the number of pixels desired between the contents and the walls of the cell

◆ `<table cellpadding=8>`

data 11	data 12
Data 21	Data 22

data 11	data 12
Data 21	Data 22

- Cellspace=n, where n is the number of pixels desired between each cell

◆ `<table cellspacing=8>`

data 11	data 12
Data 21	Data 22

peaches	cherries

CELLSPACING

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4.2. Table (4)

- ◆ Spanning a cell across columns -- `<td colspan=n>`

```
<table border= 2 bordercolor=green align=left>
  <tr> <!-- first row -->
    <td> data 11 </td> <td > data 12 </td>
  </tr>
  <tr> <!-- second row -->
    <td> Data 21 </td>
    <td> Data 22 </td>
  </tr>
  <tr> <!-- third row -->
    <td colspan=2> Data 3 - last row??? </td>
  </tr>
</table>
```

data 11	data 12
Data 21	Data 22
Data 3 - last row???	

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4.2. Table (5)

- ◆ Spanning a cell across rows -- `<td rowspan=n>`

```
<table border= 2 bordercolor=green align=left>
  <tr> <!-- first row -->
    <td> data 11 </td> <td > data 12 </td>
  </tr>
  <tr> <!-- second row -->
    <td rowspan=2> Row 23 </td> <td> Data 21 </td>
  </tr>
  <tr> <!-- third row -->
    <td > Data 31 </td>
  </tr>
</table>
```

data 11	data 12
Data 21	Data 31
Row 23	

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4.3. Emphasis

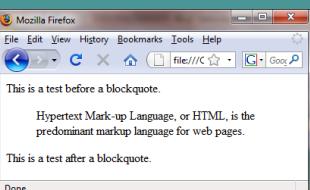
```
<p>
    Here is an emphasized <em>paragraph</em>
</p>
<p>
    This is a strongly emphasized <strong>text</strong>
</p>
```

Here is an emphasized *paragraph*
This is a strongly emphasized **text**

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4.4. Quote

```
This is a test before a blockquote.
<blockquote
    cite="http://en.wikipedia.org/wiki/HTML">
<p>Hypertext Mark-up Language - HTML, is the
    predominant markup language for web pages.</p>
</blockquote>
This is a test after a blockquote.
```



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4.4. Quote

◆ Short quote: <q>

- includes only text
- IE 8 doesn't support <q>
<p>He said, <q>I'm lucky</q>.</p>

He said, "I'm lucky".



◆ Long quote: <blockquote>

- includes block-level elements like headings, lists, paragraphs or div's
- inserts white space before and after a blockquote element

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4.4. Quote (2)

4.5. Other structuring of text

- | | |
|--------|-----------|
| ◆ dfn | ◆ abbr |
| ◆ code | ◆ acronym |
| ◆ samp | ◆ pre |
| ◆ kbd | ◆ ins |
| ◆ var | ◆ del |
| ◆ cite | ◆ sub |
| ◆ br | ◆ sup |

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