

WebClient Computing

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Web Page Structure

- HTML
 - Content of a page and its organization
- CSS
 - Appearance (How it looks)
 - Background color, cell spacing, font size, ...
- Javascript
 - Functions for software programming feature
- WebClient renders a page using the above

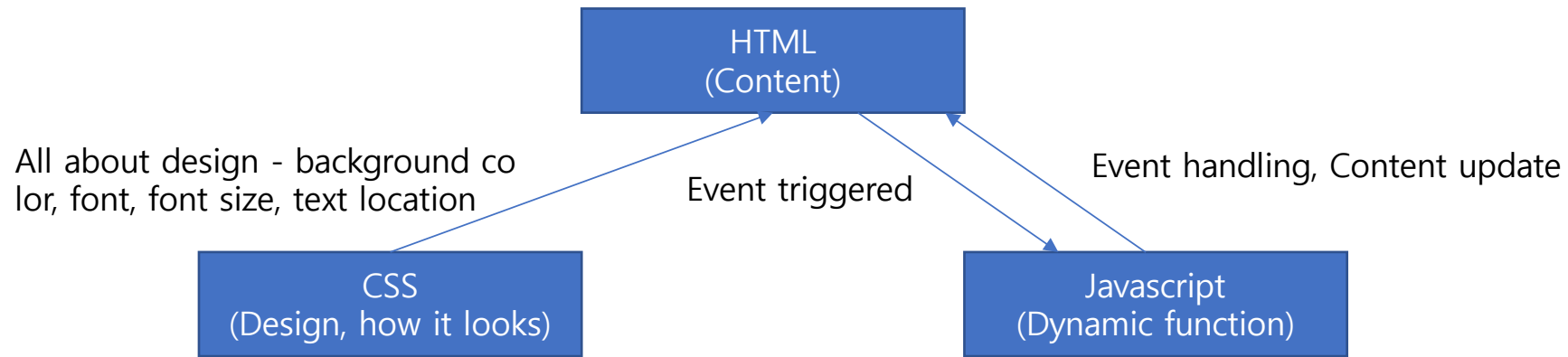
HTML

- **H**yper **T**ext **M**arkup **L**anguage
- From HTML slide
 - Hyper text is a structured text that uses links to navigate through different pages
- Markup language
 - Represents structure of documents or data
 - Different from programming language that executes with a computer (Java)
- Express title, sentence, list, link, references, ...

Example of HTML

```
<!DOCTYPE html>
<html>
<head>
  <title>My first web page</title>
  <!-- This is a comment, by the way -->
</head>
<body>
<h1>My first web page</h1>
<h2>What this is</h2>
<p>A simple page put together using HTML. <em>I said a simple page put together using HTML.</em> A simple page put together using
page put together using HTML. A simple page put together using HTML. A simple page put together using HTML. A simple page put to
HTML.</p>
<h2>Why this is</h2>
<ul>
  <li>To learn HTML</li>
  <li>
    To show off
    <ol>
      <li>To my boss</li>
      <li>To my friends</li>
      <li>To my cat</li>
      <li>To the little talking duck in my brain</li>
    </ol>
  </li>
  <li>Because I have fallen in love with my computer and want to give her some HTML loving.</li>
</ul>
<h2>Where to find the tutorial</h2>
<p><a href="http://www.htmldog.com"></a></p>
<h3>Some random table</h3>
<table>
  <tr>
    <td>Row 1, cell 1</td>
    <td>Row 1, cell 2</td>
    <td>Row 1, cell 3</td>
  </tr>
```

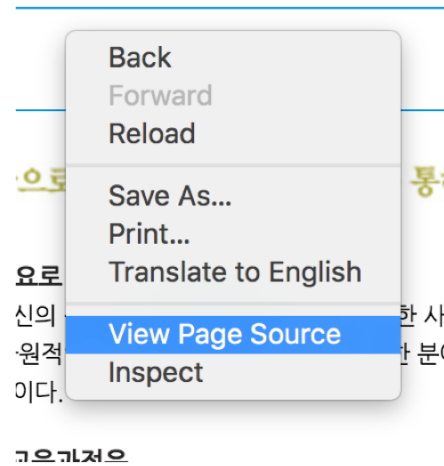
HTML, CSS, and Javascript



- HTML – House itself
- CSS – Painting the house and decoration
- Javascript – rich features, electricity on/off using a smartphone

How to Check HTML of a Web Page

- In a Chrome web-browser, right click a page
- Select "View Page Source"



HTML Composition



Diagram illustrating the structure of an HTML document. It consists of two stacked blue rectangular boxes. The top box is labeled 'HEAD' and the bottom box is labeled 'BODY'. To the right of these boxes is a bulleted list describing the contents of each section.

HEAD

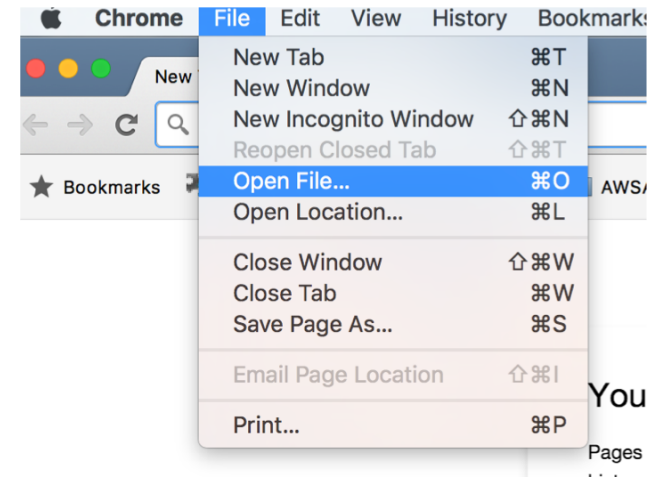
- Contains information about the page
- Title, meta (encoding), page styles, ...

BODY

- The main contents shown in the page

HTML Getting Started

- Create your first webpage
- Open a text editor and type a text in the editor
 - "This is my first web page"
- Save it as a plain text with an extension of ".html"
- Open Chrome web browser and load the html file



HTML Tags

- Tag/Element - Surround contents and apply meaning to them
 - Start tag with <> close tag with "/"
 - EX: <name>WebClient Computing</name>
- <!DOCTYPE html> : document type declaration
- <html>...</html> : The start and beginning of html document
- <body>...</body> : the main content in the browser window

```
<!DOCTYPE html>
<html>
<body>
  WebClient Computing
</body>
</html>
```

More about HTML DOCTYPE

- Specify which version of HTML was used to describe the content
- Helps a browser to correctly render a page
- HTML5
 - `<!DOCTYPE html>`
 - We will use this in the class
- HTML 4.01
 - `<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN" "http://www.w3.org/TR/html4/strict.dtd">`

Different Capabilities across Different HTML

Tag	HTML5	Transitional	Strict	Frameset	XHTML 1.1
<u><a></u>	Yes	Yes	Yes	Yes	Yes
<u><abbr></u>	Yes	Yes	Yes	Yes	Yes
<u><acronym></u>	No	Yes	Yes	Yes	Yes
<u><address></u>	Yes	Yes	Yes	Yes	Yes
<u><applet></u>	No	Yes	No	Yes	No
<u><area></u>	Yes	Yes	Yes	Yes	No
<u><article></u>	Yes	No	No	No	No
<u><aside></u>	Yes	No	No	No	No
<u><audio></u>	Yes	No	No	No	No

http://www.w3schools.com/tags/ref_html_dtd.asp

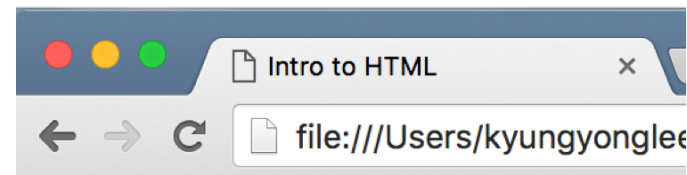
HTML Comments

- HTML comments
 - Start with `<!--`
 - End with `-->`

HTML Page Titles

- head and title tag
 - Contains information about the page (metadata – information about the data)
 - Title information appears in the top-left corner in a browser (Tab)
 - Title is also used in favorites or bookmarks page

```
<!DOCTYPE html>
<html>
<head>
  <title>Intro to HTML</title>
</head>
<body>
  WebClient Computing
</body>
</html>
```

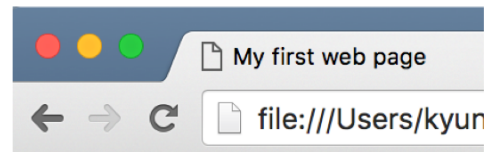


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HTML Tags – p, em, strong

- p – separates "pragraph"
- em – emphasize content (using *italics*)
- strong – make an element noticeable
- br – insert a new line

```
<!DOCTYPE html>
<html>
<head>
  <title>My first web page</title>
</head>
<body>
  This is my first web page
  <p>Yes, that <em>really</em>
  is <strong>exciting</strong></p>
  This is <br> a new line
</body>
</html>
```



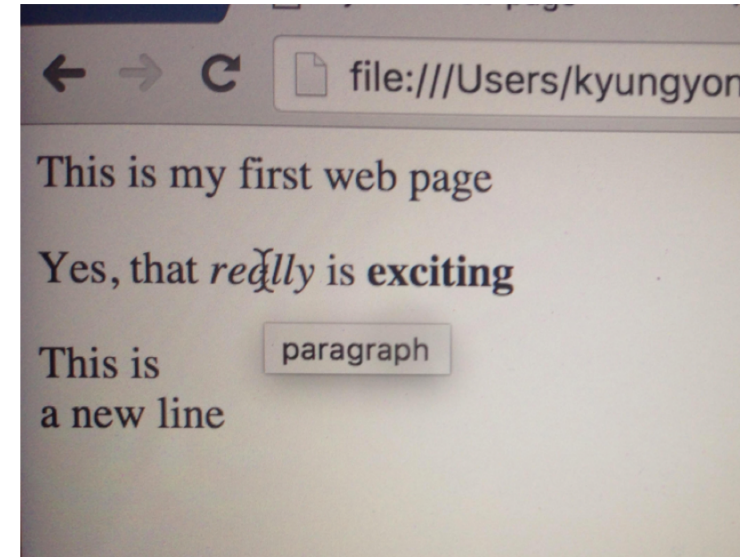
This is my first web page

Yes, that *really* is **exciting**

This is
a new line

HTML Tag Attributes

- Element is an independent object
- Attribute
 - Provide additional information of the element
 - Should be located within the starting tag
 - Key-value format (name="value")
 - Value is recommended to be quoted
- Example
 - Element: Computer
 - Attribute: Laptop, desktop, workstation, ...



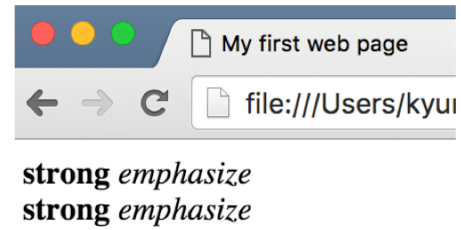
```
<!DOCTYPE html>
<html>
<head>
  <title>My first web page</title>
</head>
<body>
  This is my first web page
  <p title="paragraph">Yes, that <em>really</em>
  is <strong>exciting</strong></p>
  This is <br> a new line
</body>
</html>
```

HTML Semantics and Style

- `` implies the element is **strongly** important
- `` implies emphasize (강조)
- The effect of `` is same as `` : **Bold**
- The effect of `` is same as `<i>` : *Italic*
- The difference
 - `` and `<i>` is simply styling
 - `` and `` is implication/semantic (의미부여)
 - For blind people, `` and `<i>` cannot take effect
 - In mobile device, `` might not be recognizable

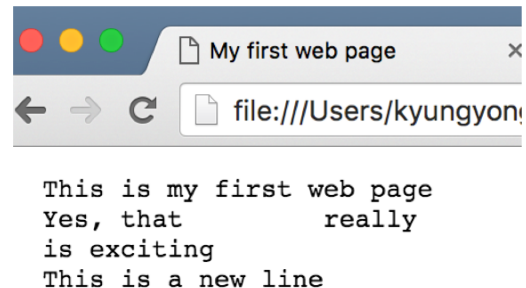
 <i>

```
<!DOCTYPE html>
<html>
<head>
  <title>My first web page</title>
</head>
<body>
  <strong>strong</strong> <em>emphasize</em><br>
  <b>strong</b> <i>emphasize</i>
</body>
</html>
```



HTML Display

- HTML developer does not know how the html is rendered in different browsers
 - Adding extra spaces and lines do not work
 - Browser will remove it – it depends on the browser
 - Use explicit command - `<p></p>`, `
`
- To show it as it is in the html, use `<pre></pre>`



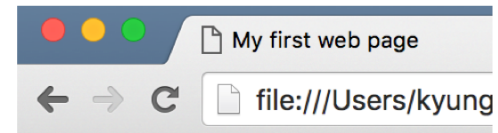
```
!DOCTYPE html
<html>
<head>
  <title>My first web page</title>
</head>
<body>
  <pre>
    This is my first web page
    Yes, that      really
    is exciting
    This is a new line
  </pre>
</body>
</html>
```

small, mark, deleted, superscript, subscript

- Small
 - Small text: This is `<small>small text</small>`
- Mark
 - Marked text: This is `<mark>marked text</mark>`
- Del
 - Deleted text: This is `deleted text`
- Sup
 - Superscript: This is `^{superscript}`
- Sub
 - Subscript: This is `_{subscript}`

Examples

```
<!DOCTYPE html>
<html>
<head>
  <title>My first web page</title>
</head>
<body>
This is <small>small text</small><br>
This is <mark>marked text</mark><br>
This is <del>deleted text</del><br>
This is <sup>superscript</sup><br>
This is <sub>subscript</sub>
  █
</body>
</html>
```



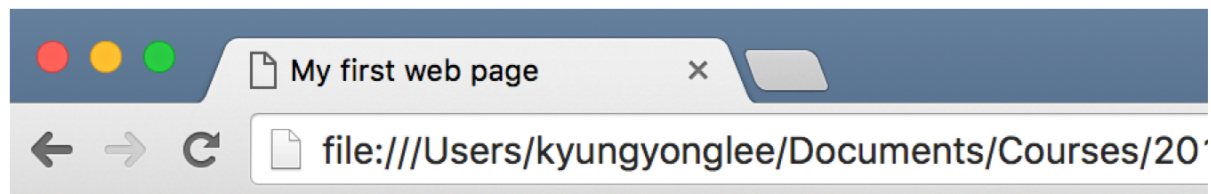
This is small text
This is **marked text**
This is ~~deleted text~~
This is ^{superscript}
This is _{subscript}

Quotation and Abbreviation

- `<q>`
 - Quotes a short sentence – This is `<q>short quotation</q>`
- `<blockquote>`
 - Relatively long quotation – Indents the messages
- `<abbr>`
 - Defines abbreviation or an acronym
 - 70th year of `<abbr title="Kookmin University">KMU</abbr>`
 - Useful for search engine to index a page

Examples

```
<!DOCTYPE html>
<html>
<head>
  <title>My first web page</title>
</head>
<body>
  This is <q>short quotation</q>
  <p>Here is a quote from WWF's website:</p>
  <blockquote cite="http://www.worldwildlife.org/who/index.html">
    For 50 years, WWF has been protecting the future of nature.
  </blockquote>
  70<sup>th</sup> year of <abbr title="Kookmin University">KMU</abbr>
</body>
</html>
```



This is "short quotation"

Here is a quote from WWF's website:

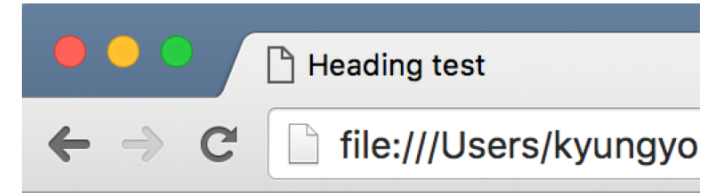
For 50 years, WWF has been protecting the future of nature.

70th year of KMU

HTML Headings

- Organizing contents hierarchically
 - Recommended to use in order
 - h1, h2, h3, h4, h5, h6
 - Space is automatically added after heading
 - Search engine use headings to **index** the structure of the content

```
<!DOCTYPE html>
<html>
<head>
  <title>Heading test</title>
</head>
<body>
  <h1>h1 heading</h1>
  <h2>h2 heading</h2>
  <h3>h3 heading</h3>
  <h4>h4 heading</h4>
  <h5>h5 heading</h5>
  <h6>h6 heading</h6>
</body>
</html>
```



h1 heading

h2 heading

h3 heading

h4 heading

h5 heading

h6 heading

References

- <http://www.w3schools.com/html/> - HTML tutorial
- <http://www.htmldog.com/guides/html/>
- <http://fromyou.tistory.com/581>