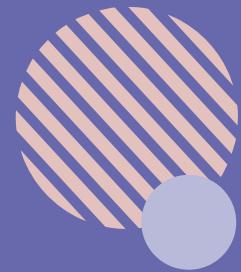


Web Programming

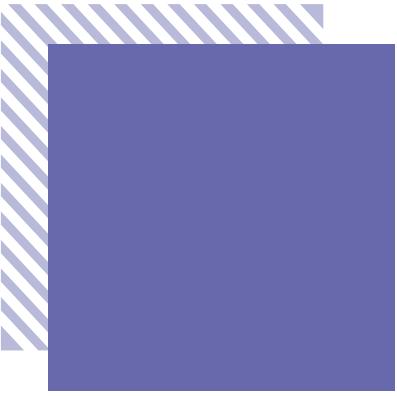
HTML Basics

Instructor: Prof. SoYeop Yoo
School of Computing, Gachon University

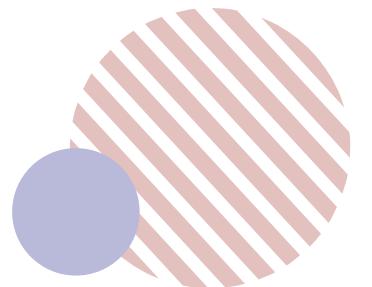


CONTENTS

- 01 Lab Set Up**
- 02 HTML5 Overview**
- 03 HTML5 Document Structure**
- 04 Text Formatting**
- 05 Lists**



Lab Set Up





Lab Set Up

■ Web Browser

- Google Chrome

■ HTML Editor

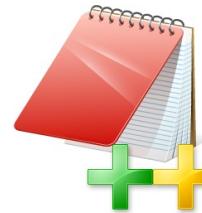
- Use any (EditPlus, Notepad++, VS Code, etc.)



HTML Editing Tools

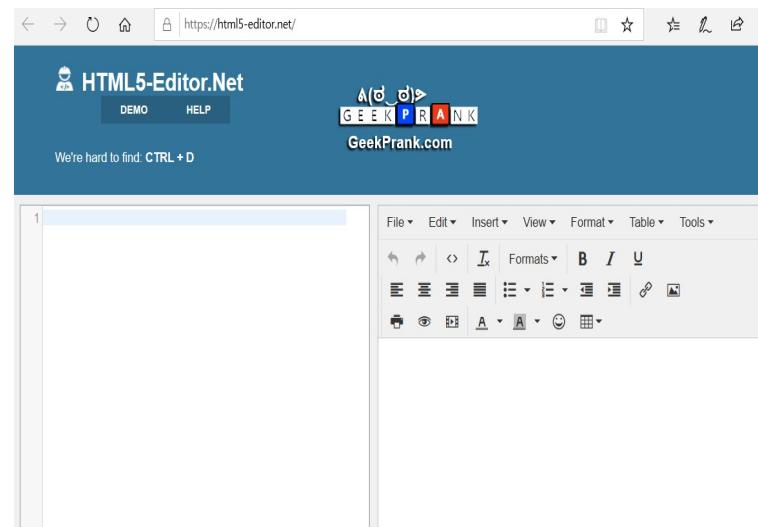
■ HTML Editing Tools

- EditPlus (shareware)
 - <https://www.editplus.com/>



■ Online HTML Editor

- <https://html5-editor.net/>
- <https://html-online.com/editor/>



■ APP

- HTML Editor anWriter free



Install Notepad++

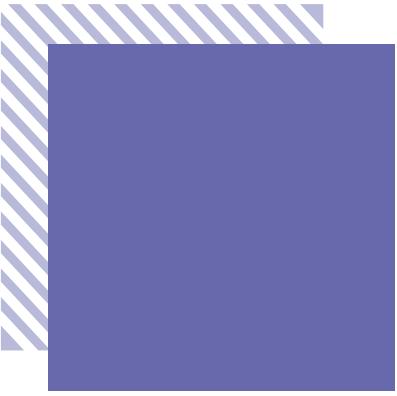
Notepad++

- <https://notepad-plus-plus.org/>

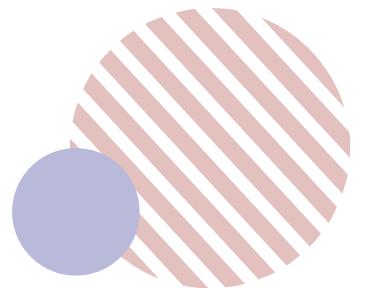
The image shows two side-by-side screenshots. On the left is a screenshot of a web browser displaying the Notepad++ website at notepad-plus-plus.org. A red box highlights the 'Download' link in the navigation menu, which is also being clicked by a cursor. A red number '1' is placed above the cursor, and a red number '2' is placed below it, indicating the steps to download the software. On the right is a screenshot of the Notepad++ application window. It shows a code editor with the following C++ code:

```
*D:\source\notepad4ever.cpp - Notepad++*
1 #include <GPL.h>
2 #include <free_software.h>
3
4 void notepad4ever()
5 {
6     while (true)
7     {
8         Notepad++;
9     }
10 }
```

Below the code editor, a message reads: "I hope you enjoy Notepad++ as much as I enjoy coding it."



HTML5 Overview





HTML (HyperText Markup Language)

■ Document formatting language

- Used to design most Web pages
- An instance of SGML
 - Standard Generalized Markup Language (ISO 1986)
 - Meta-language for defining markup languages

■ An HTML document

- A text file made up of HTML elements that are defined using HTML tags

■ HTML Editing Tools

- EditPlus (shareware)

■ Online HTML Editors

- <https://html5-editor.net/>
- <https://html-online.com/editor/>

■ APP

- HTML Editor anWriter free



HTML History

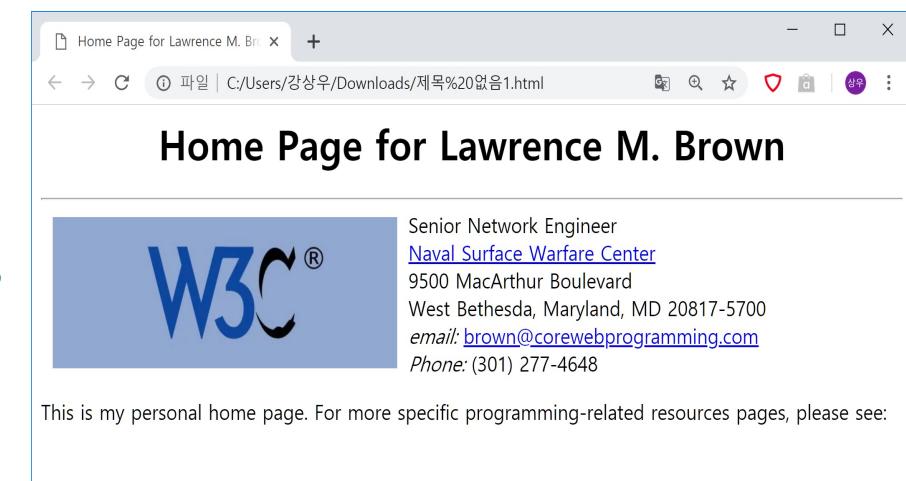
- **HTML (1993 by Tim Berners-Lee and Dan Connolly)**
 - Authors & users wanted more design capability
- **HTML 2.0 (1995)**
 - First HTML specification as a standard
- **HTML 3.2 (1997 as W3C Recommendation)**
 - Reconciled overlap among various proprietary extensions
 - Adopted most of Netscape's visual markup tags
- **HTML 4.01 (1999 as W3C Recommendation)**
 - Current standard version
 - CSS (Cascading Style Sheets) support
- **HTML 5 (2008)**
 - Advanced web programming





HTML Example

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<HTML>
<HEAD>
  <Title>Home Page for Lawrence M. Brown</Title>
</HEAD>
<BODY BGCOLOR="WHITE">
  <H1 ALIGN="CENTER">Home Page for Lawrence M. Brown</H1>
  <HR>
  <IMG SRC="images/nswc.gif" WIDTH=300 HEIGHT=117 HSPACE=10 VSPACE=5 ALIGN="LEFT" ALT="NSWC Logo">Senior Network Engineer<BR>
  <A HREF="http://www.dt.navy.mil/">Naval Surface Warfare Center</A><BR>
  9500 MacArthur Boulevard<BR>West Bethesda, Maryland, MD 20817-5700<BR>
  <I>email:</I>
  <A HREF="mailto:brown@corewebprogramming.com">brown@corewebprogramming.com</A><BR>
  <I>Phone:</I> (301) 277-4648<BR CLEAR="ALL">
  <P>
    This is my personal home page. For more specific
    programming-related resources pages, please see:
    <!-- Rest of Sample Page Deleted -->
</BODY>
</HTML>
```





HTML Basic Example (1/2)

■ Example document

```
<html>
  <body>
    <h1>My First Heading</h1>
    <p>My first paragraph.</p>
  </body>
</html>
```



HTML Basic Example (2/2)

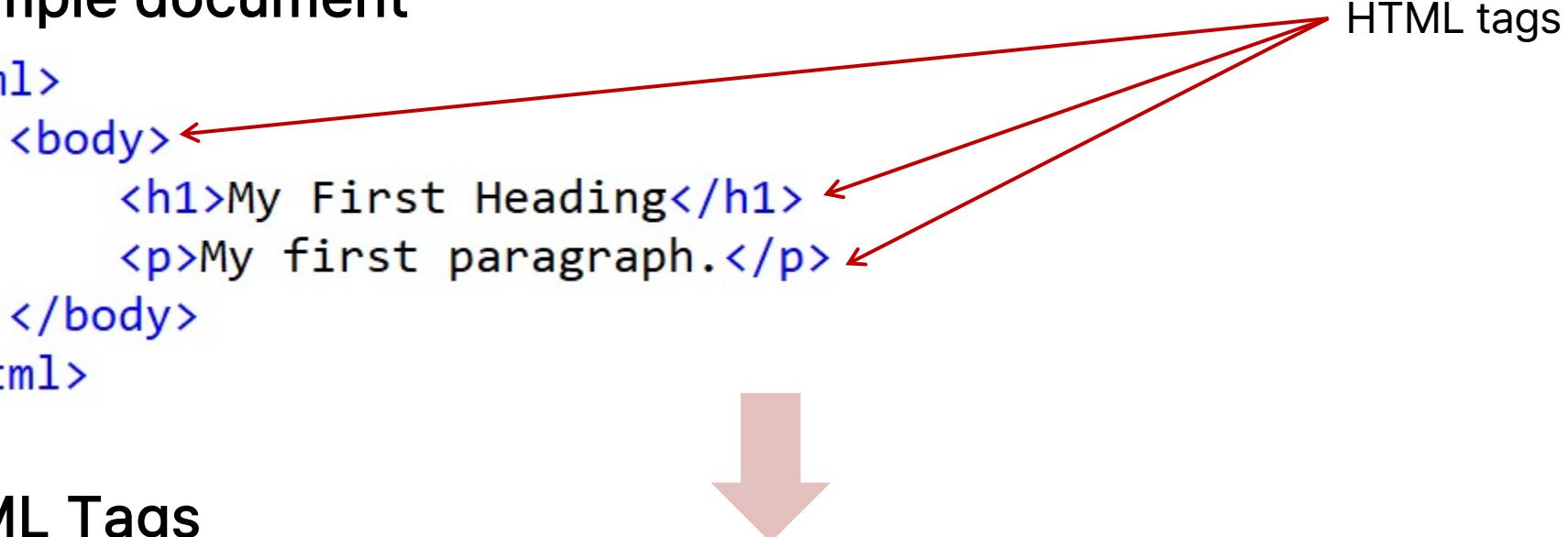
Example document

```
<html>
  <body>
    <h1>My First Heading</h1>
    <p>My first paragraph.</p>
  </body>
</html>
```

HTML Tags

Open: `<h1> <p>`

Close: `</h1> </p>`



My First Heading

My first paragraph.

The result of running the html program



HTML Document Template

Title of html file displayed in web browser

The diagram illustrates the mapping between an HTML document template and its visual representation in a web browser. A red arrow points from the title element in the code to the title bar of the browser window, which displays "Web Programm". Another red arrow points from the body content in the code to the main content area of the browser window, which contains the placeholder text "Content goes here.".

```
<!doctype html>
<html>
  <head>
    <title>Web Programming</title>
    <meta name="description" content="Our first page">
    <meta name="keywords" content="html template">
  </head>
  <body>
    Content goes here.
  </body>
</html>
```



Creating HTML Documents

■ Text editors

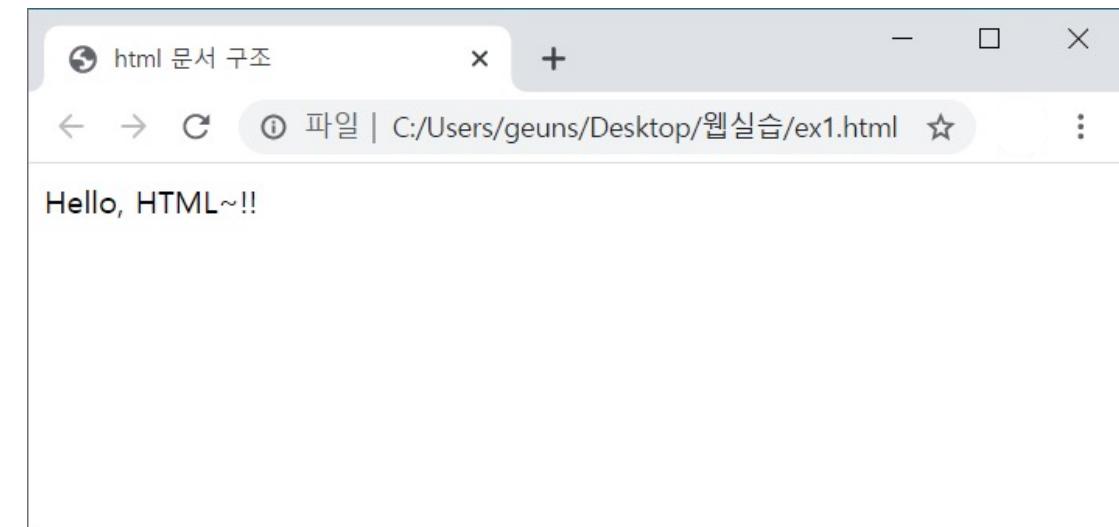
- Notepad, Notepad++, NetBeans IDE, Edit Plus, Ultra Edit, ...

■ WYSIWYG(what you see is what you get) HTML editors

- Dreamweaver, FrontPage, ...

Write and Present an HTML Document

- Write an HTML document -- using an editor, such as Notepad++
 - Save as an HTML file -- (e.g.) ex1.html
 - Present the HTML document -- using the Chrome browser

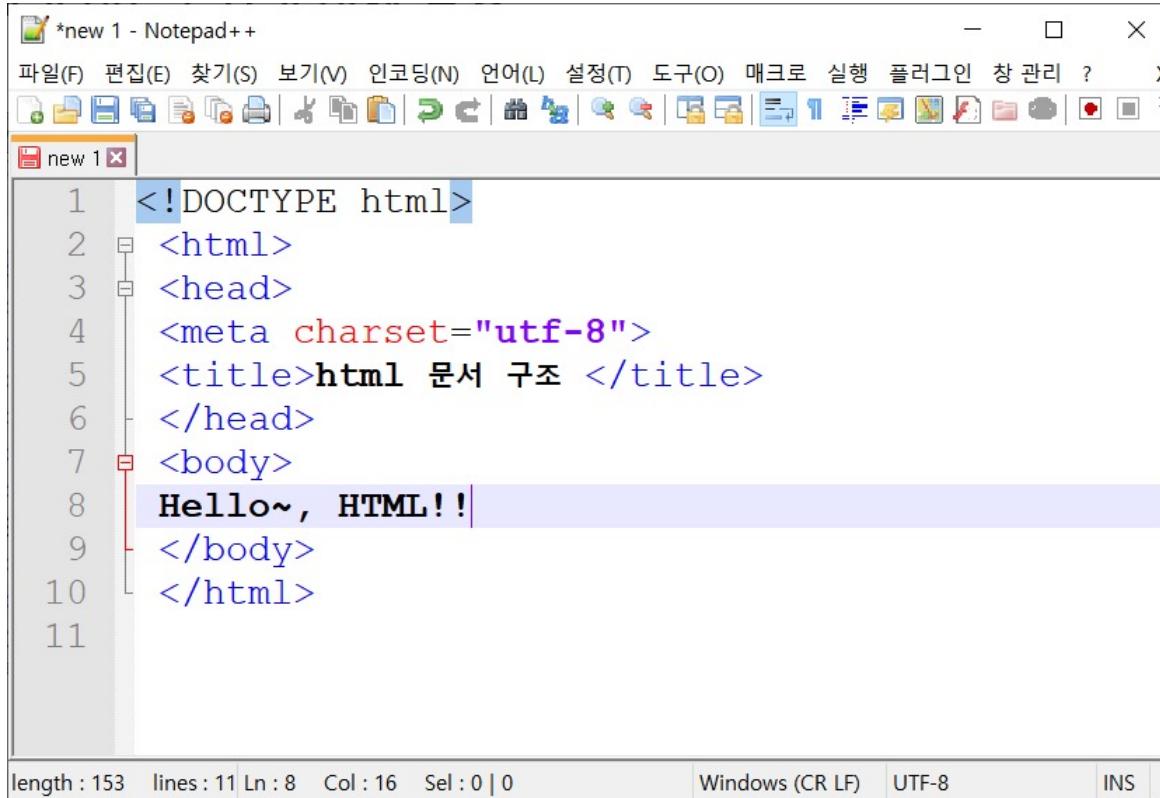




Write and Save an HTML Document (1/3)

■ Write in a new page

- Menu [파일]-[새 파일]



```
*new 1 - Notepad++
파일(F) 편집(E) 찾기(S) 보기(V) 인코딩(N) 언어(L) 설정(T) 도구(O) 매크로 실행 플러그인 창 관리 ?
new 1 x
1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="utf-8">
5 <title>html 문서 구조 </title>
6 </head>
7 <body>
8 Hello~, HTML!!<br/>
9 </body>
10 </html>
11

length : 153  lines : 11 Ln : 8  Col : 16  Sel : 0 | 0      Windows (CR LF)  UTF-8      INS
```

The screenshot shows a Notepad++ window with the title bar "new 1 - Notepad++". The menu bar includes "파일(F)", "편집(E)", "찾기(S)", "보기(V)", "인코딩(N)", "언어(L)", "설정(T)", "도구(O)", "매크로", "실행", "플러그인", "창 관리", and "?". The toolbar below the menu has various icons for file operations like Open, Save, Print, and Find. The main editor area contains an HTML document with the following code:

```
<!DOCTYPE html>
<html>
<head>
<meta charset="utf-8">
<title>html 문서 구조 </title>
</head>
<body>
Hello~, HTML!!<br/>
</body>
</html>
```

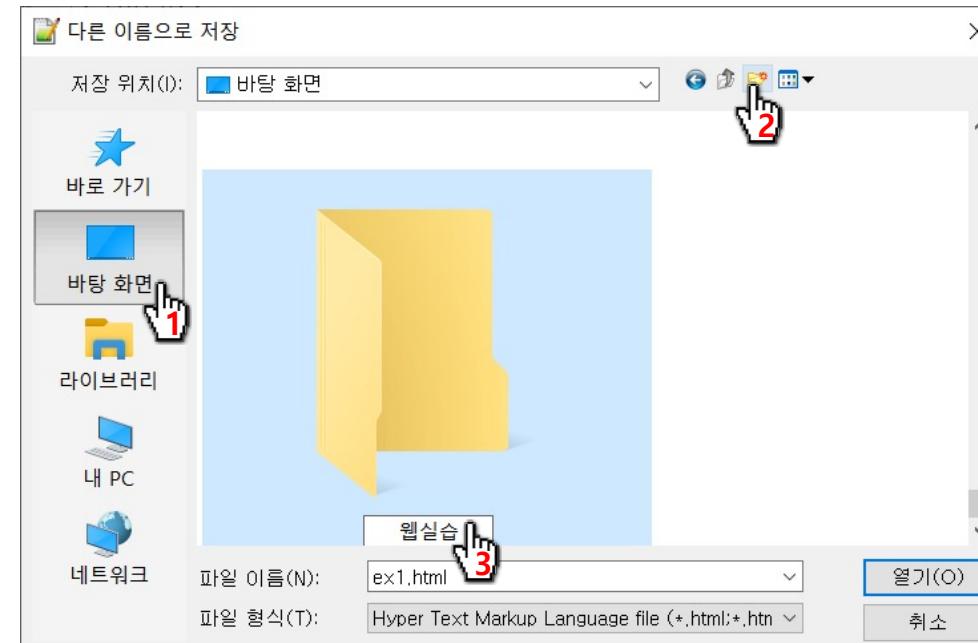
The code is color-coded: blue for tags like `<html>`, `<head>`, `<body>`, and `<meta>`; red for the `charset` attribute value `utf-8`; and black for the content `Hello~, HTML!!`. Line numbers 1 through 11 are visible on the left. The status bar at the bottom shows "length : 153", "lines : 11", "Ln : 8", "Col : 16", "Sel : 0 | 0", "Windows (CR LF)", "UTF-8", and "INS".



Write and Save an HTML Document (2/3)

Save #1

- [파일]-[다른 이름으로 저장]
- [바탕화면] → [새 폴더 만들기]
- Folder: web

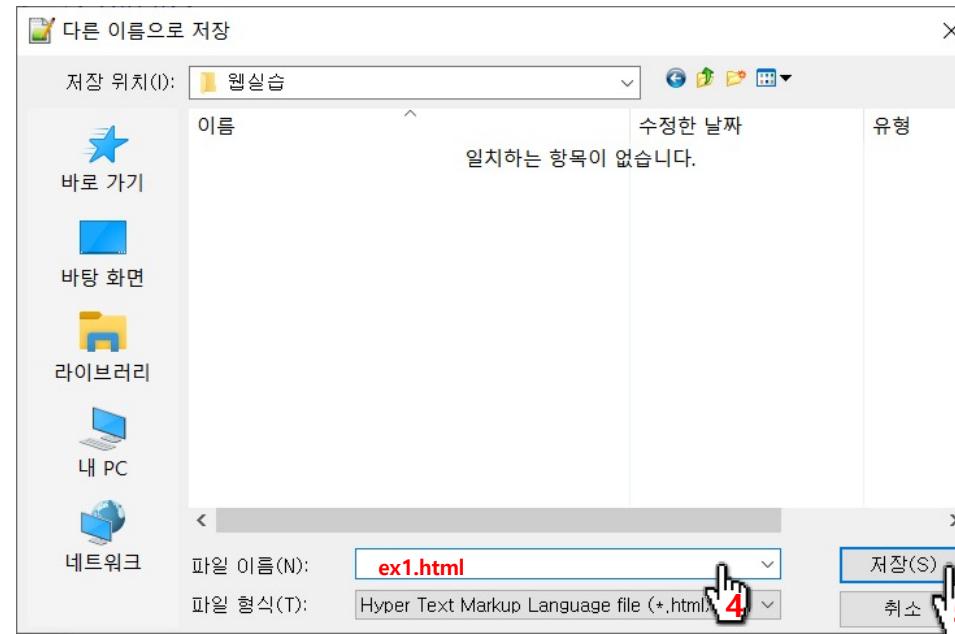




Write and Save an HTML Document (3/3)

■ Save #2

- Double click the [web] folder
- File name
 - ex1.html
- File type
 - Hyper Text Markup Language file (*.html)
- [저장]



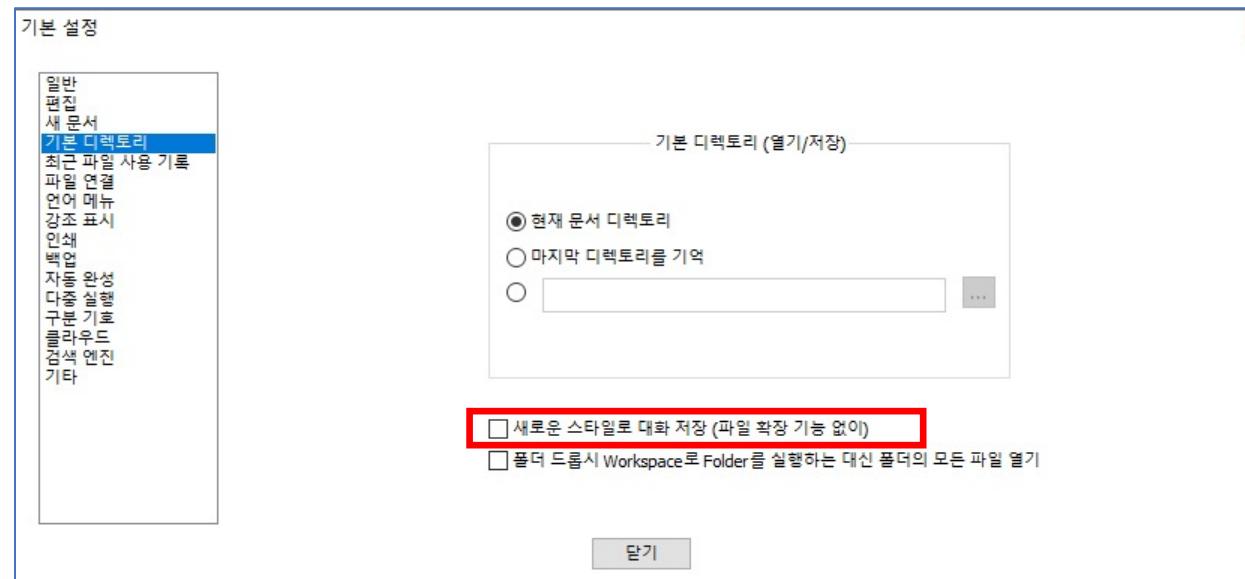


Tip

■ Notepad++ Setting

■ How to add file extension (*.html) when saving an HTML document

- [설정] – [환경 설정] – [기본 설정] select <기본 디렉토리> → uncheck <새로운 스타일로 대화 저장(파일 확장 가능 없이) → <닫기>

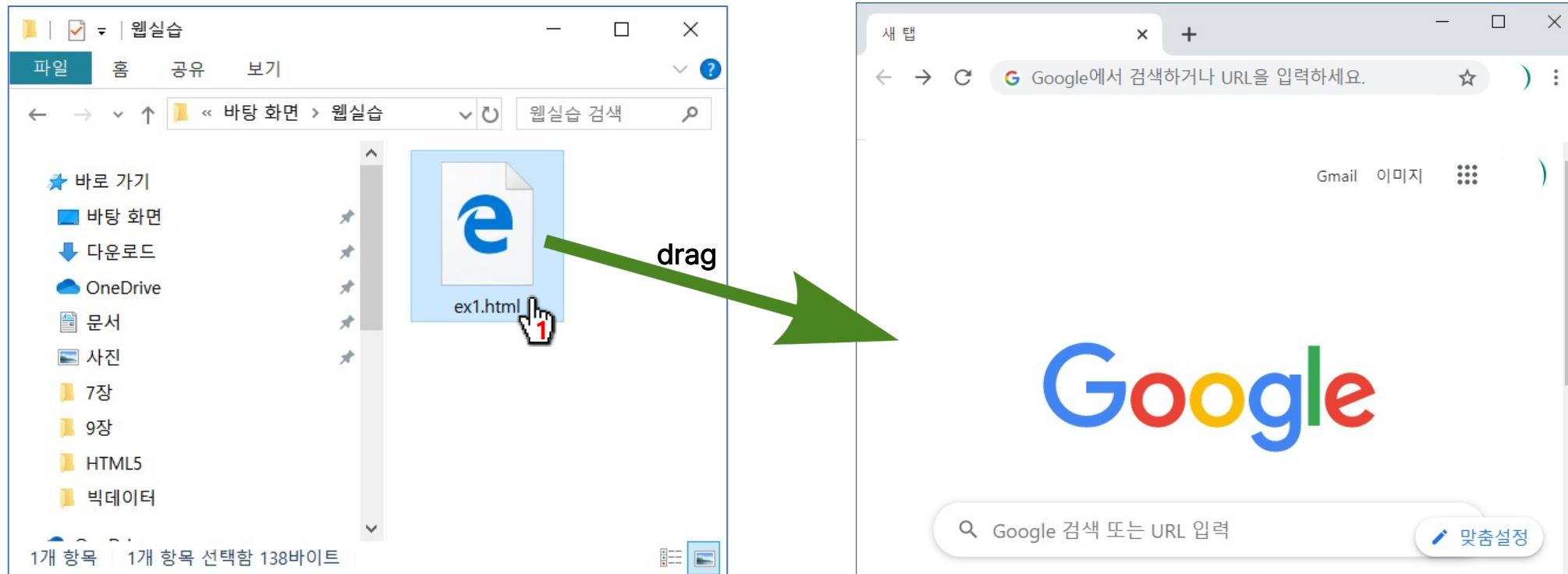




Present an HTML Page (1/2)

■ Present #1

- Drag the 'ex1.html' on 바탕화면 [web] folder to [Chrome] browser

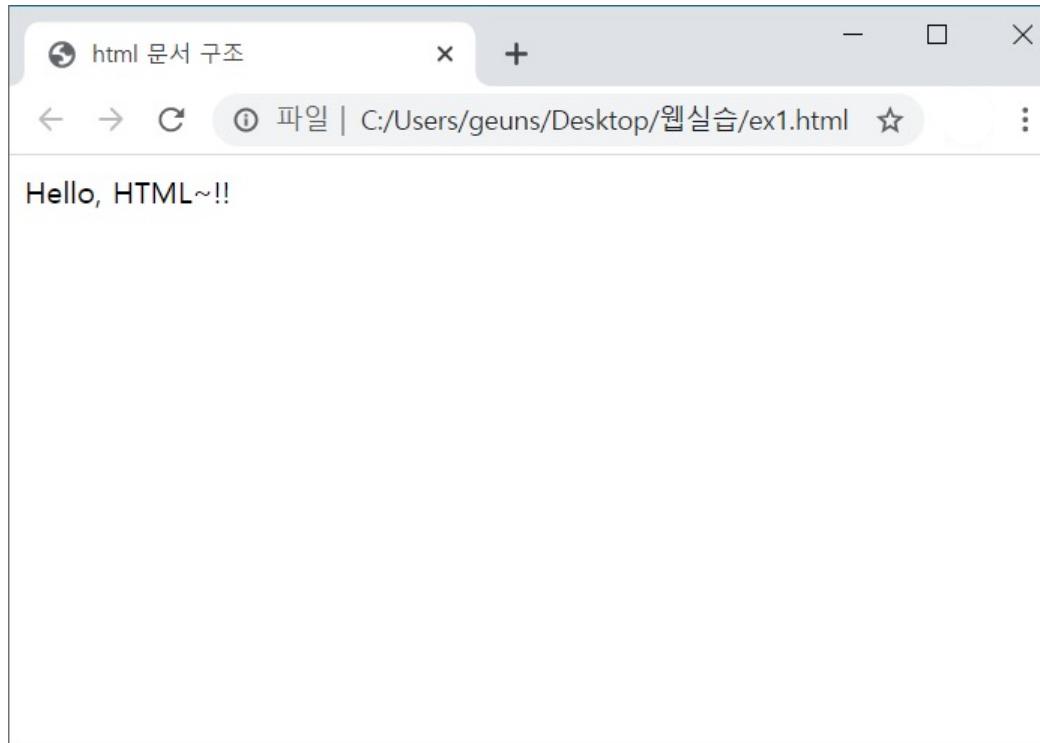




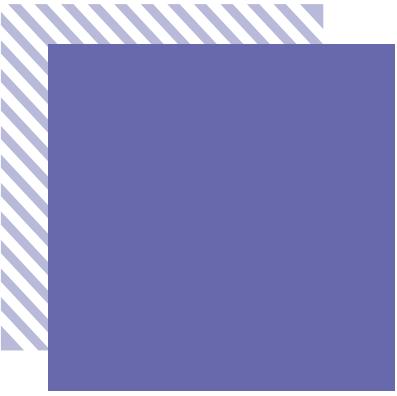
Present an HTML Page (2/2)

■ Present #2

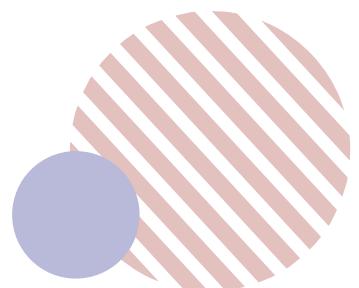
- If the HTML is correct, 'Hello, HTML~!!' will display



* If Chrome is the default browser, you may simply double click ex1.html



HTML5 Document Structure





Overall Structure of an HTML5 Document (1/3)

■ HTML5 Document

- An HTML5 document consists of <!DOCTYPE html>, <html>, <head> and <body>

```
<!DOCTYPE html>
<html>
  <head>
    <meta charset="utf-8">
    <title>html 문서 제목 </title>
  </head>
  <body>
    HTML 본문 영역
  </body>
</html>
```



Overall Structure of an HTML5 Document (2/3)

■ <!DOCTYPE html>

- All HTML documents must start with a <!DOCTYPE> or <!doctype html> declaration.
- It is an "information" to the browser that this is an HTML5 document.

■ <html> ~ </html>

- HTML tags that indicate the start and end of an HTML document
- The <html> tag is the container for all other HTML elements (except for the <!DOCTYPE> tag).
- The browser interprets all these elements and presents them.



Overall Structure of an HTML5 Document (3/3)

■ **<head> ~ </head>**

- define the head portion of the HTML document which contains information related to the document.
- This information is not the contents of the HTML document, and the browser does not display it, except for the "title".

■ **<body> ~ </body>**

- The **<body>** tag defines the document's body.
- The **<body>** element contains all the contents of an HTML document, such as headings, paragraphs, images, hyperlinks, tables, lists, etc.



Tags (1/3)

■ What is Tag?

- A Web page is also called an HTML document, and the Web browser displays one HTML page at a time.
- An HTML document consists of tags.
- A tag consists of tag name and attributes.

```

```

tag name attribute name attribute value attribute name attribute value



Tags (2/3)

■ HTML Tags

- HTML tags defines that how web browser will format and display the content.
- When a web browser reads an HTML document, browser reads it from top to bottom and left to right.
- Most HTML tags contain three main parts: opening tag, content and closing tag.
 - (e.g.) <title> ... </title>
- Some HTML tags are unclosed tags.
 - (e.g.) ,
, <hr>
- All HTML tags must be enclosed within <> these brackets.



Tags (3/3)

Note

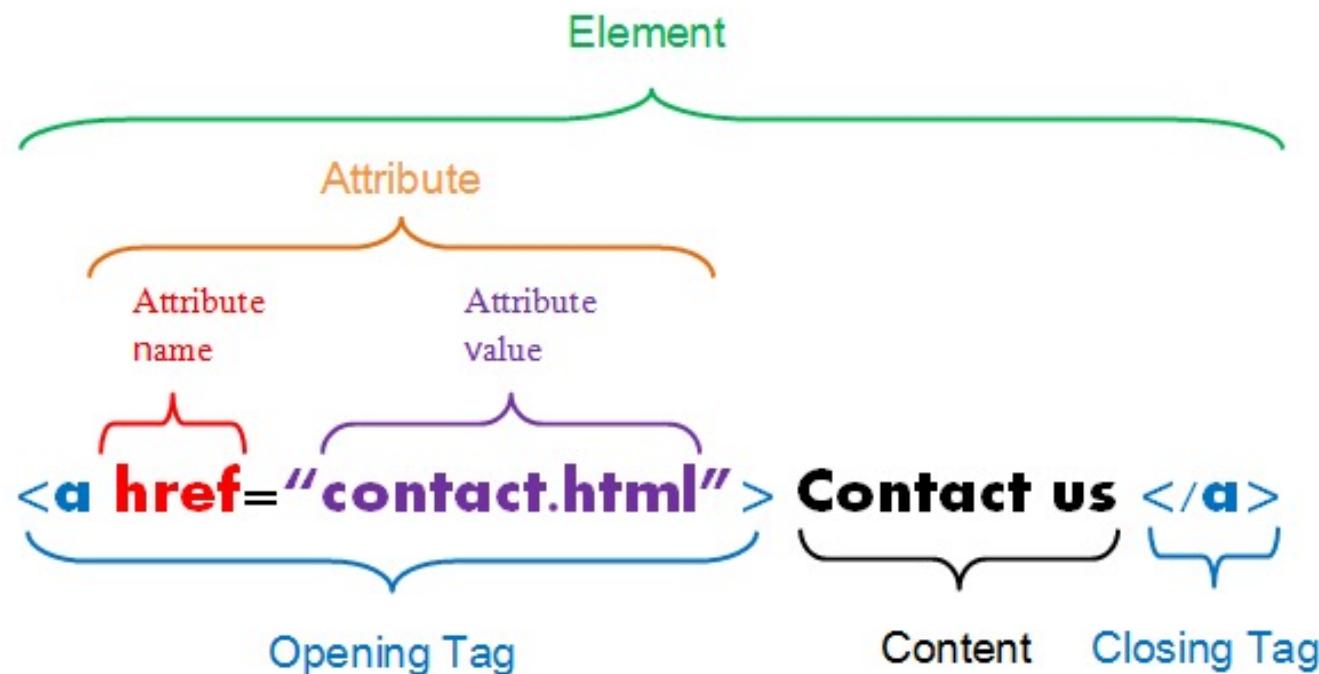
- Two pairs of tags must not overlap.

```
1  <!DOCTYPE html>
2  <html>
3  <head>
4  <meta charset="utf-8">
5  <title>잘못된 태그 중첩
6  </head>
7  </title>
8  <body>
9  Hello~, HTML!!
10 </body>
11 </html>
```



Main HTML Elements (1/3)

- <!DOCTYPE html>
 - DOCTYPE TYPE:html5
- <HTML> ... </HTML>





Main HTML Elements (2/3)

■ <HEAD> ... </HEAD>

- Has many sub-elements (only TITLE is required):

- <TITLE> the title </Title>
 - <title>My test page</title>
 - <META ...>
 - <meta charset="utf-8">
 - charset = character set
 - <BASE HREF="someURL">
 - <base href="/index.html">
 - <BGSOUND SRC="URLofSoundFile">
 - <SCRIPT TYPE="...">
 - (later with JavaScript)
 - <STYLE TYPE="...">
 - (later with Style Sheets)



Main HTML Elements (3/3)

■ <BODY> ... </BODY>

- Many HTML attributes
 - BGCOLOR, BACKGROUND
 - TEXT
 - LINK, VLINK, ALINK
 - OnLoad, OnUnload, OnFocus, OnBlur

```
<body background="img01.jpg"
      bgcolor="#ff9999"
      link="#ff0000"
      vlink="#00ffff"
      alink="#0000ff"
      text="#000000">
```

■ Elements inside BODY element

- <BODY>
Remaining HTML elements
</BODY>

Sets default link color to "#0066CC".
This changes the color of the links on
the page that has not yet been visited.

```
<body link="#0066cc" vlink="#CC33CC" alink="#336666">
```

Sets default active link color to "#336666".
This changes the color of those links that
are being clicked.



Sets default visited link color to "#CC33CC".
This changes the color of the links on the
page that already has not yet been visited.

* RGB color code: <http://www.hipenpal.com/tool/html-color-charts-rgb-color-table-in-korean.php>



META Element

META (inside Header)

- Records document information, forward and refresh pages
- Examples

```
<META NAME="author" CONTENT="John Doe">
<META NAME="keywords" CONTENT="www. html">
<META NAME="description" CONTENT="Web Programming">
<META HTTP-EQUIV="REFRESH" CONTENT="600">
<META HTTP-EQUIV="REFRESH" CONTENT="5; URL=http://www.gachon.ac.kr/">
```



Nested Tags (1/2)

Nested Tags

- Whenever we nest an HTML tag inside of another tag, we indent the inner tag so that the overall tag hierarchy is clear.
- Keeping your HTML well indented so that every tag and "level" of nesting is aligned will make your code easier to read and maintain.

```
<!doctype html>
<html lang="en">
  <head>
    <meta charset="UTF-8">
    <title>Document</title>
  </head>
  <body>
    <div>
      <p><em> Nested Tags </em></p>
    </div>
  </body>
</html>
```

* em : emphasized text

**** Tags should *never* overlap!**

Burn down more forests

Correct!

Burn down more forests

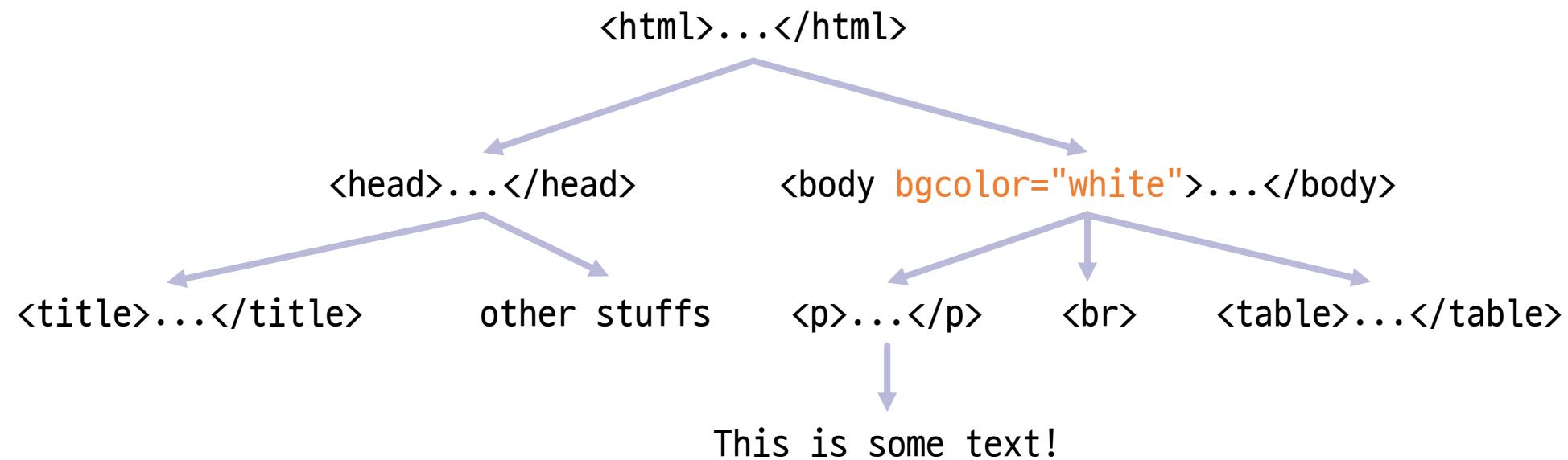
Wrong!

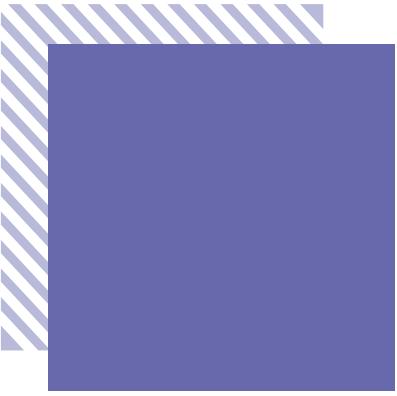


Nested Tags (2/2)

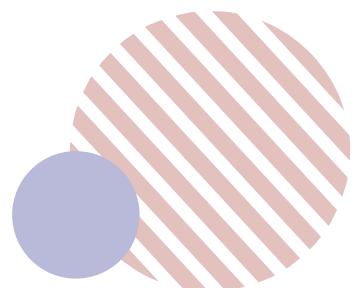
Hierarchy

- Like a tree, an element is contained in the parent element
- An element may have any number of attributes





Text Formatting





Text-Centric Web Page

The screenshot shows a web browser window with the title bar "W Web - Wikipedia". The URL in the address bar is "https://en.wikipedia.org/wiki/Web". The main content area displays the Wikipedia article for "Web". The article starts with the heading "Web" and a summary from "From Wikipedia, the free encyclopedia". Below the summary, there are two sections: "Web usually refers to:" and "Web or WEB may also refer to:". The "Web usually refers to:" section lists "Spider web, a silken structure created by the animal" and "World Wide Web or the Web, an Internet-based hypertext system". The "Web or WEB may also refer to:" section lists "People", "Arts, entertainment, and media", "Fictional entities", and "Films". The "People" section includes a link to "W. E. B. Du Bois (1868–1963)". The "Arts, entertainment, and media" section includes links to "ReBoots" and "The Web (2013 film)". The "Fictional entities" section includes links to "Web (comics)" and "The Web, a dangerous region of space in the *ReBoot* universe". The "Films" section includes links to "Web (2013 film)", "Webs (film)", and "The Web (film)". A sidebar on the right contains a "Contents [hide]" section with a hierarchical list of categories such as People, Arts, entertainment, and media, Fictional entities, Films, Literature, Music, Radio, Television, Other uses in arts, entertainment, and media, Computing, Engineering, Mathematics, and See also. At the top of the article, there is a banner for "Wiki Loves Love: Documenting festivals and celebrations of love on Commons. Help Wikimedia and win prizes by sending photos." with a blue puzzle piece logo.

W Web - Wikipedia

https://en.wikipedia.org/wiki/Web

WIKIPEDIA
The Free Encyclopedia

Main page
Contents
Featured content
Current events
Random article
Donate to Wikipedia
Wikipedia store

Interaction
Help
About Wikipedia
Community portal
Recent changes
Contact page

Tools
What links here
Related changes
Upload file
Special pages
Permanent link
Page information
Wikidata item
Cite this page

Print/export
Create a book
Download as PDF

Wiki Loves Love: Documenting festivals and celebrations of love on Commons.
Help Wikimedia and win prizes by sending photos.

Web

From Wikipedia, the free encyclopedia

Web usually refers to:

- Spider web, a silken structure created by the animal
- World Wide Web or the Web, an Internet-based hypertext system

Web or **WEB** may also refer to:

People [edit]

- W. E. B. Du Bois (1868–1963), African-American sociologist, historian, civil rights activist, author and editor

Arts, entertainment, and media [edit]

Fictional entities [edit]

- *Web* (comics), a comic book character
- The Web, a dangerous region of space in the *ReBoot* universe

Films [edit]

- *Web* (2013 film), a documentary
- *Webs* (film), a 2003 science-fiction movie
- *The Web* (film), a 1947 film noir thriller

Contents [hide]

- 1 People
- 2 Arts, entertainment, and media
 - 2.1 Fictional entities
 - 2.2 Films
 - 2.3 Literature
 - 2.4 Music
 - 2.5 Radio
 - 2.6 Television
 - 2.7 Other uses in arts, entertainment, and media
- 3 Computing
- 4 Engineering
- 5 Mathematics
- 6 See also



Text Formatting

■ HTML Text Formatting

- HTML includes several elements that are used to format the text in the HTML page. For instance, there are elements to markup headlines, paragraphs, bold, italic, underlined text etc.
- The elements include the following:
 - h1 to h6 elements (content heading)
 - the p element (paragraph)
 - the br element (line break)
 - the hr element (horizontal ruler)
 - the b element (bold font), the i element (italic font), the u element (underlined font)
 - ...



Content Header Tags

■ <h1> ... </h1>, <h2> ... </h2>, ... , <h6> ... </h6>

- “h” stands for “heading. Header tags are used for title or to introduce the content below them.
- Header tags follow a hierarchy, from <h1> to <h6>. <h1> is the largest; <h6> is the smallest.
- H1 tag is used to denote the most important text, such as the main theme or title of a content. H2 and H3 tags are commonly used as subheadings”.

```
<h1>The most important heading</h1>
<h2>The second important heading</h2>
<h3>The third important heading</h3>
```

The most important heading

The second important heading

The third important heading



Content Header Tags with Attributes (1/2)

■ Align attribute

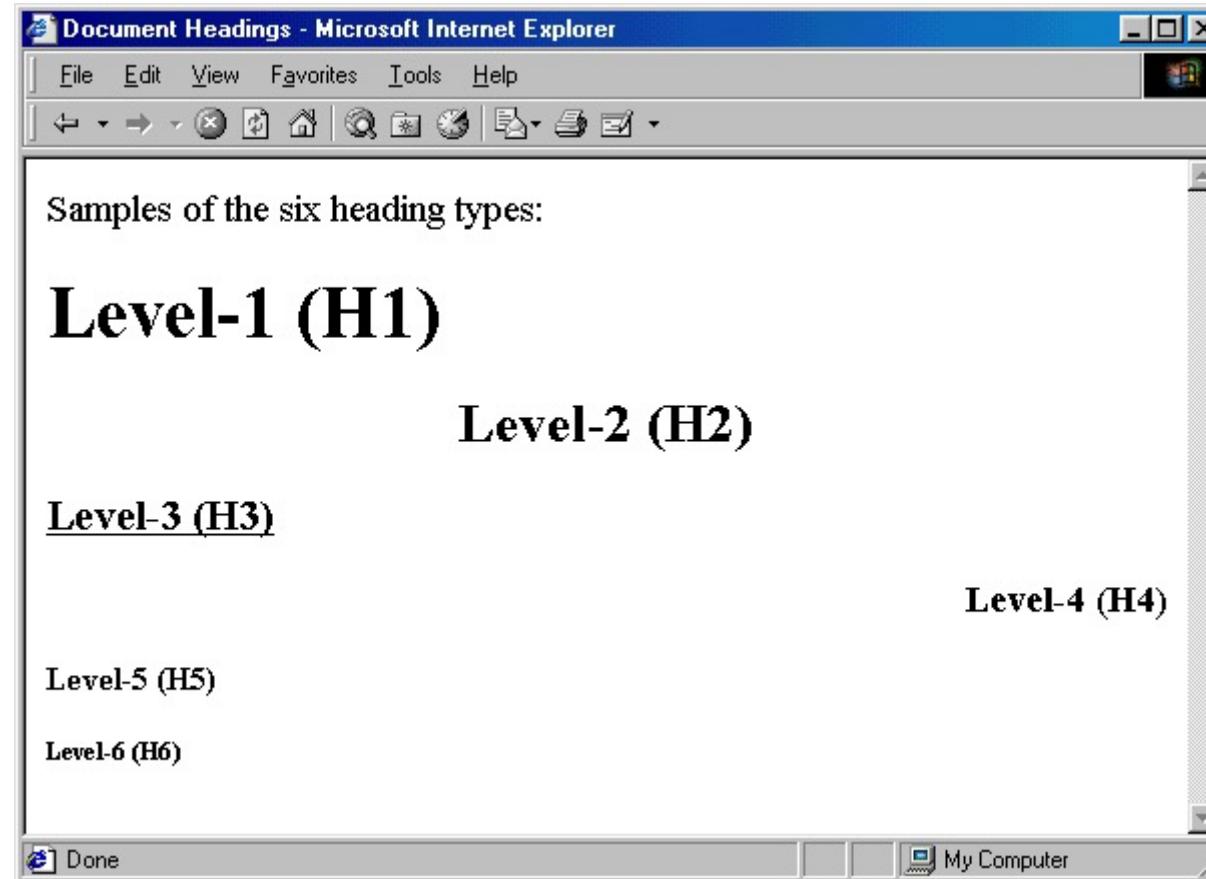
- Values: LEFT (default), RIGHT, CENTER
 - <H1 align=center>Centered Header</H1>

■ Title attribute

```
<!DOCTYPE HTML>
<HTML>
<HEAD>
    <TITLE>Document Headings</TITLE>
</HEAD>
<BODY>
Samples of the six heading types:
<H1>Level-1 (H1)</H1>
<H2 ALIGN="CENTER" TITLE="test1">Level-2 (H2)</H2>
<H3><U>Level-3 (H3)</U></H3>
<H4 ALIGN="RIGHT" TITLE="test2">Level-4 (H4)</H4>
<H5>Level-5 (H5)</H5>
<H6>Level-6 (H6)</H6>
</BODY>
</HTML>
```



Content Header Tags with Attributes (2/2)





Exercises

■ Use a text editor

- Notepad, Notepad++, NetBeans IDE, EditPlus, ...
- Eclipse, Visual Studio, VS Code

■ Create a working folder

- e.g., "C:\work"
- Save the HTML document with an extension .html or .htm

■ Display your HTML using a web browser

- Internet Explorer, Chrome, Safari, ...



Exercise 1: Text Formatting

■ Create a web page

- An HTML document with a title “Web Programming”
- In the header, Meta name=“author” and content=your name (“John Doe”)
- Heading Tag Level 1: align center “Web Programming”
- Heading Tag Level 3: underline align center “First Exercise”





Paragraph Tag (1/3)

■ <p> ... </p>

- A paragraph is a collection of related sentences.
- </p> means the end of a paragraph, and a blank line is added automatically.

```
<p>This is a paragraph.</p>
<p>This is another paragraph.</p>
<p>
In an HTML document, spaces, tabs, and returns
are all treated as a single space.
</p>
```

This is a paragraph.
This is another paragraph.
In an HTML document, spaces, tabs, and returns are all treated as a single space.



Paragraph Tag (2/3)

■ Example

```
1  <!DOCTYPE html>
2  <html>
3  <head>
4  <meta charset="utf-8">
5  <title>단락 태그</title>
6  </head>
7  <body>
8  <h2>나라꽃 무궁화 이야기</h2>
9  <p>예로부터 우리 민족의 사랑을 받아온 무궁화는
   우리나라를 상징하는 꽃으로 '영원히 피고 또 피어서
   지지 않는 꽃'이라는 뜻을 지니고 있어요.</p>
10 <p>옛 기록을 보면 우리 민족은 무궁화를 고조선
    이전부터 하늘나라의 꽃으로 귀하게 여겼어요. </p>
11 </body>
12 </html>
```



Paragraph Tag (3/3)

Result

The screenshot shows a browser window with the title "단락 태그". The main content area displays the following text:

나라꽃 무궁화 이야기

예로부터 우리 민족의 사랑을 받아온 무궁화는 우리나라를 상징하는 꽃으로
'영원히 피고 또 피어서 지지 않는 꽃'이라는 뜻을 지니고 있어요.

옛 기록을 보면 우리 민족은 무궁화를 고조선 이전부터 하늘나라의 꽃으로
귀하게 여겼어요.

Two paragraphs of text are highlighted with blue dotted boxes. The first paragraph ends with a period, and the second paragraph ends with a句号 (Hangeul full stop). To the right of each highlighted paragraph, the word "paragraph" is written in blue text, indicating the type of tag being used.



Comments Tag

■ <!-- write your comments here -->

- Ignored by the browser
- Used to improve readability of the source code

```
<!-- This is a comment. -->
<p>This is a paragraph.</p>
```

```
<!-- Here is another comment. -->
<p>This is another paragraph.</p>
```

Comments

This is a paragraph.

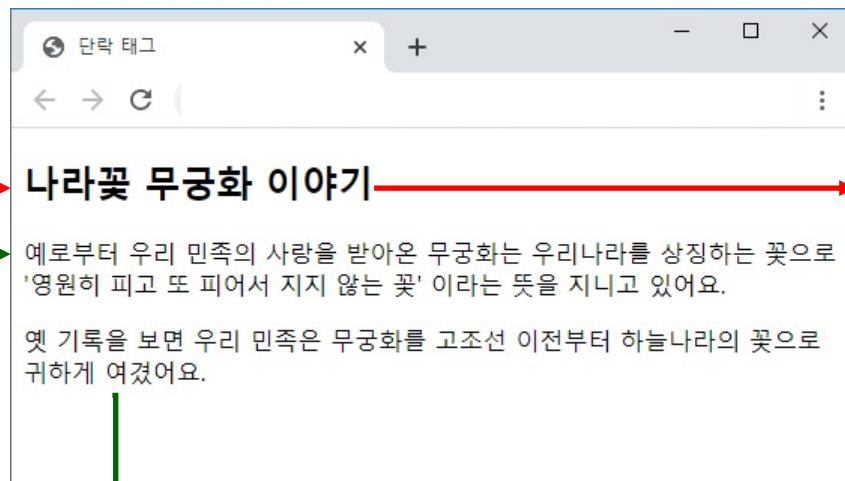
This is another paragraph.

Problem with Spaces and New Lines

Problem

- The browser ignores the new lines and spaces entered using the <enter> key and <space> key

```
1  <!DOCTYPE html>
2  <html>
3  <head>
4  <meta charset="utf-8">
5  <title>단락 태그</title>
6  </head>
7  <body>
8  <h2>나라꽃 무궁화 이야기</h2>
9  <p>예로부터 우리 민족의 사랑을 받아온 무궁화는
10 <br>우리나라를 상징하는 꽃으로
11
12
13  '영원히 피고 또 피어서 지지 않는 꽃'
14  이라는 뜻을 지니고 있어요.</p>
15  <p>옛 기록을 보면 우리 민족은 무궁화를 고조선
16 <br>이전부터 하늘나라의 꽃으로
17 <br>귀하게 여겼어요.</p>
18 </body>
19 </html>
```



Multiple spaces are regarded as a single space.

The uses of the <Enter> key does not result in a line break.



Line Break Tag

■

- Inserts a single line break in a paragraph

```
<p>  
The line break tag is used to  
break <br> a line in a paragraph.  
</p>
```

The line break tag is used to break
a line in a paragraph.



Use of Character Entity (1/3)

■

- To break a line (without creating a new paragraph), the
 tag must be used.
- To display multiple spaces, the special character entity must be used.
- A commonly used entity in HTML is the non-breaking space
 -
 - it is a space that will not break into a new line.
- Two words separated by a non-breaking space will stick together (not break into a new line). This is handy when breaking the words might be disruptive.

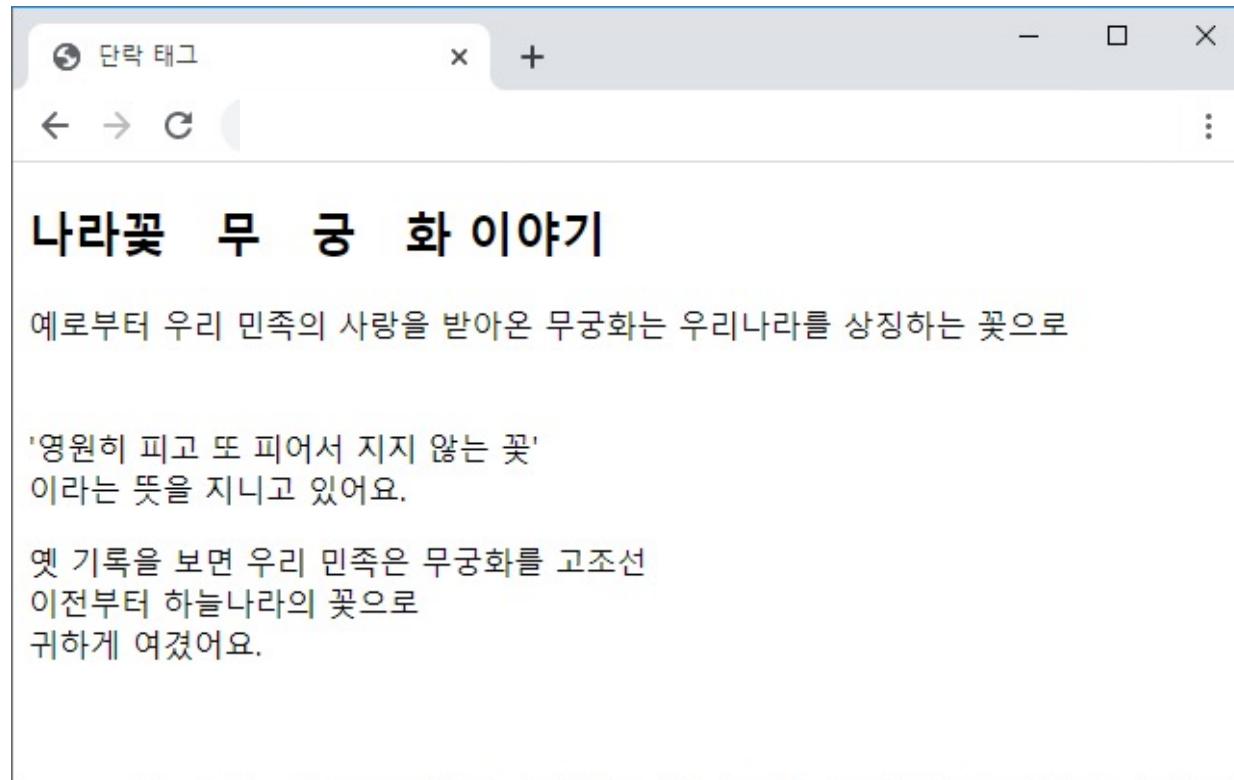
Use of Character Entity (2/3)

Example

```
1  <!DOCTYPE html>
2  
3  
4  
5  <title>단락 태그</title>
6  </head>
7  
8  <h2>나라꽃 &nbsp; 무&nbsp;&nbsp;&nbsp;궁&nbsp;&nbsp;&nbsp;화 이야기</h2>
9  <p>예로부터 우리 민족의 사랑을 받아온 무궁화는
10 <br>
11 <br>
12 <br>
13 <br>
14 <br>
15 <p>옛 기록을 보면 우리 민족은 무궁화를 고조선<br>
16 <br>
17 <br>
18 <br>
19 </body>
</html>
```

Use of Character Entity (2/3)

Result





Special Characters (1/3)

■ Special Characters

- Special characters (symbols) are displayed using HTML entities
- Some characters are reserved in HTML
 - If you use the less than (<) or greater than (>) signs in your text, the browser might mix them with tags
 - To display a less than sign (<) we must write: `<` or `<`
- Character entities are used to display reserved characters in HTML
 - A character entity consists of three parts:
 - ampersand (&)
 - entity name, or # and an entity code number
 - semicolon (;)

`&entity_name;`

OR

`&#entity_number;`



Special Characters (2/3)

■ HTML Entities

Result	Description	Entity Name	Entity Number
	non-breaking space	 	
<	less than	<	<
>	greater than	>	>
&	ampersand	&	&
"	quotation mark	"	"
¢	cent	¢	¢
€	euro	€	€
©	copyright	©	©

■ Example

```
<p>The tag &lt;html&gt; defines an HTML document.</p>
<p>
The character entity &amp; displays the special character &.
</p>
```

The tag <html> defines an HTML document.

The character entity & displays the special character &.



Special Characters (3/3)

■ HTML Entities

- Some mathematical symbols

Char	Number	Entity	Description
∀	∀	∀	FOR ALL
∂	∂	∂	PARTIAL DIFFERENTIAL
∃	∃	∃	THERE EXISTS
∅	∅	∅	EMPTY SETS
∈	∈	∈	ELEMENT OF
∉	∉	∉	NOT AN ELEMENT OF
∋	∋	∋	CONTAINS AS MEMBER
∏	∏	∏	N-ARY PRODUCT
Σ	∑	∑	N-ARY SUMMATION

- Some Greek letters

Char	Number	Entity	Description
Α	Α	Α	GREEK CAPITAL LETTER ALPHA
Β	Β	Β	GREEK CAPITAL LETTER BETA
Γ	Γ	Γ	GREEK CAPITAL LETTER GAMMA
Δ	Δ	Δ	GREEK CAPITAL LETTER DELTA
Ε	Ε	Ε	GREEK CAPITAL LETTER EPSILON



Horizontal Ruler Tag

■ <hr>

- Inserts a horizontal rule

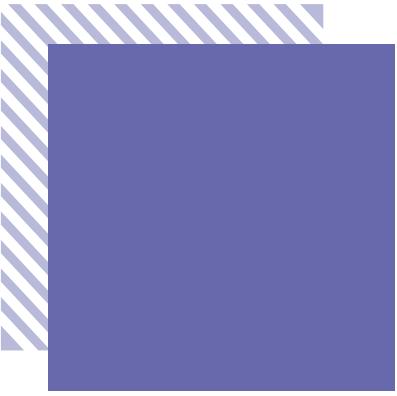
```
<h1>This is the first heading</h1>
<p>This is a paragraph.</p>
<!-- Insert a horizontal rule. -->
<hr>
<h2>This is the second heading</h2>
<p>This is another paragraph.</p>
```

This is the first heading

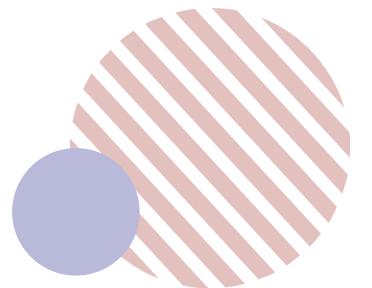
This is a paragraph.

This is the second heading

This is another paragraph.



Lists





■ Lists

- HTML lists allow web developers to group a set of related items in lists.
- HTML lists include unordered list, ordered list, and description(definition) list
- List tags

Tag	Description
<code></code>	Defines an unordered list
<code></code>	Defines an ordered list
<code></code>	Defines a list item
<code><dl></code>	Defines a description list
<code><dt></code>	Defines a term in a description list
<code><dd></code>	Describes the term in a description list



Unordered List

■ ...

- Collection of related items without special order
- Item tag
 - ...

```
<ul>
  <li>apple</li>
  <li>fish</li>
  <li>butter</li>
</ul>
```

- apple
- fish
- butter



Ordered List

■ ...

- Collection of related items with special order
- Item tag
 - ...
- Attributes: type
 - Value: 1,A,a,I,i

```
<ol type=1>
  <li>apple</li>
  <li>fish</li>
  <li>butter</li>
</ol>
```

```
1. apple
2. fish
3. butter
```



Definition List

■ <dl> ... </dl>

- Collection of terms and their definitions/descriptions
 - e.g. dictionary, encyclopedia

- Term tag
 - <dt> ... </dt>

- Definition tag
 - <dd> ... </dd>

```
<dl>
  <dt>HTML</dt>
  <dd>HyperText Mark-up Language</dd>
  <dt>CSS</dt>
  <dd>Cascading Style Sheet</dd>
</dl>
```

HTML
HyperText Mark-up Language
CSS
Cascading Style Sheet



Nested List

A list can contain other lists

```
<h2>BIT programme</h2>
<ol>
    <li>Computer Science
        <ul>
            <li>CO321</li>
            <li>CO331</li>
            <li>CO332</li>
        </ul>
    </li>
    <li>Business
        <ul>
            <li>CB302</li>
            <li>CB306</li>
            <li>CB307</li>
        </ul>
    </li>
</ol>
```

BIT programme

1. Computer Science
 - CO321
 - CO331
 - CO332
2. Business
 - CB302
 - CB306
 - CB307



Exercise 2

■ HTML Text Formatting & Lists

- In the web page created in Exercise 1, add an ordered/unordered nested list.

Web Programming

First Exercise

An ordered/unordered nested list:

1. Book genres:
 - Fiction
 - Non-fiction
 - Adventure
 - Education
2. Vehicle types:
 - Car
 - Van
 - Truck
 - Trailor



Exercise 3

■ HTML Text Formatting & Special Tags

- Create a new web page that prints your name in different sizes
 - use heading tag 1, 3, and 5
- In the web page, create a comment saying "This is a comment"
- In the web page, create a paragraph saying "This is a paragraph".
 - Insert three tabs between "This" and "is", and insert enter between "is" and "a".
 - Check no difference in the web page
- Print the message "When was this web page created? Check this page's title for the answer.", and set the title of the page to the current date.



Exercise 3 [cont'd]

■ HTML Text Formatting & Special Tags

- Result





End of Class

