

CMPT 165

Unit 2 - Making webpages

May 20th, 2015

Admin

- First set of TA office hours today!
 - Wed. at 2:30-4pm
 - Extra one today: 1-2:30pm
 - Hours posted on course website
 - Attendance not required; just for you to get help

CMPT 165 (D1 Summer 2015) Intro to the Internet and the World Wide Web

GRADING SCHEME

The grading scheme for the Summer 2015 D1 session is shown as follows:

Components	Portion of final grade
9 Lab Exercises	9%
3 Assignments	21%
1 Midterm Exam	20%
1 Final Exam	50%

You can follow your progress using the [CourSys Website](#).

Lab Exercises Marking Policy: Each lab exercise that is correct and submitted on time is worth 1 point. Partial marks may be awarded at the discretion of the TA. *Late submissions will not be accepted.*

Assignments Marking Policy: Each assignment is marked based on the tasks described in that assignment. Partial marks are awarded for the correctness of each task. Late assignments will have a 10% penalty for each day late. *Assignments submitted later than 2 days will not be accepted.*

COURSE CALENDAR

Summer 2015 : Calendar

	A lab exercise is due					An assignment	
				MAY			
Week #	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	S.
						1	2
	3	4	5	6	7	8	9
1	10	11 Slides	12	13 Slides	14	15 Slides	16
2	17	18 No class	19	20	21 E1	22	23
3	24	25	26	27	28	29	30

Lab exercise 1

Q: “Forbidden” error even after the tip??

- Problem with cmpt165.csil.sfu.ca web server
- CSIL is fixing it now...
- If you see this error, ignore it this time

Q: What text to use?

- Random text generator (see course website)
- <http://www.inspirational-quotes.info/favorite-quotes.html>

Today's Agenda

- Components of good webpage designs
- Markup
- Convert a document to an HTML
- ...
- Lab exercise

Good Webpage (Design)

CONTENT

- Messages to convey to your audience • **Proper grammar** 😊
- Elements: text, images, videos, audios, supplements (e.g. pdf)

INTERACTION

- Provide appropriate response/reactions to audience
➔ Via web programming
e.g. Python, Javascript

STRUCTURE

- Give meaning to each element
- Hyperlinks (to link pages)
- “Meta” data (about the data)
➔ Via markup, i.e. XHTML

STYLE

- Enhance message
- Describe visual properties of each element
➔ Via style sheets (CSS)

Markup

- Webpages are described using “markup language”
- Tells web browser how to display webpage content
- Defines the ***structure*** of a document
- Name of this language:

HyperText Markup Language (HTML)

- HyperText (Hyper → dynamic)
- Markup = annotate

- Versions:
 - Newer version: XHTML (eXtensible HTML)
 - Latest version HTML5

High-level structure of a webpage

1. Document type declaration (DTD) ...more later
2. Header: provides “meta” information, i.e. things about the webpage, not displayed in window of browser
3. Body: Actual content

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"  
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
```

```
<html>
```

```
<head>
```

```
<title>
```

Page Title

```
</title>
```

An element

```
</head>
```

```
<body>
```

```
<h1>
```

Page Heading

```
</h1>
```

An element

```
</body>
```

```
</html>
```


About “elements”

- Most elements consist of 1-2 components

`<h1>This is a heading</h1>`

- Opening (+ closing) tags + content

- Some elements do not have content:

- e.g. horizontal rule (=line), line breaks

- Use empty tags

`<hr/>`

`
`

e.g. `<p>This is a paragraph.</p>
`

`<p>This is another paragraph.</p>`

A simple XHTML

HTML Tags
(in < > angle brackets)

An opening tag

DTD

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"  
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
```

```
<html xmlns="http://www.w3.org/1999/xhtml">
```

```
<head>
```

```
<title>
```

Page Title

```
</title>
```

```
</head>
```

```
<body>
```

```
<h1>
```

Page Heading

```
</h1>
```

```
</body>
```

```
</html>
```

Content

A closing Tag

DEMO...

Tools

Interactive editor

<http://www.cs.sfu.ca/CourseCentral/165/lisat/tools/editor.html>

XHTML validator

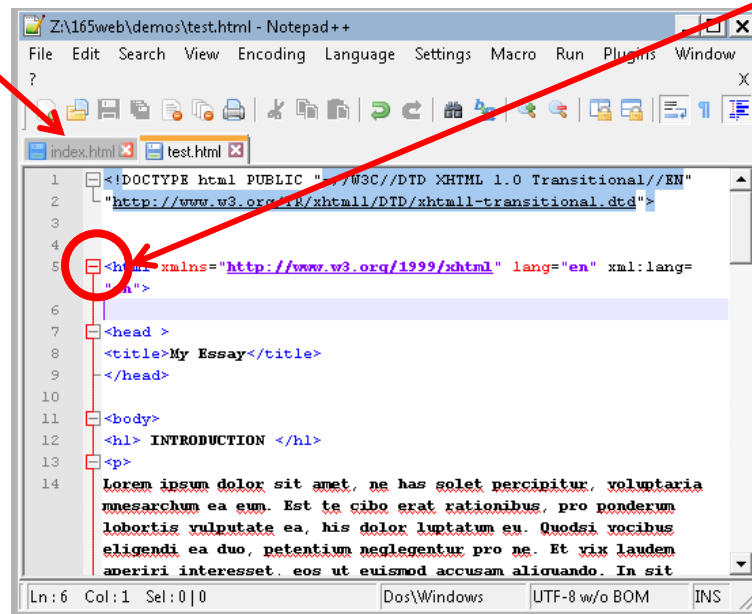
- Use it to ensure all your assignments/labs contain valid XHTML
- <https://validator.w3.org/>

Tools

Do not use MS Word! Use NotePad++, Sublime, etc.

Advantages:

Tabbed windows, syntax highlighting, code folding, etc.



Important notes

- Tags must be in lower cases, e.g. <body>, ~~<BODY>~~
- Most tags should be closed:

```
<h1>This is a heading
```

```
<p>Validator will complain.</p>
```

- Semantics should be respected:

~~<p><h2>Bad annotations</h2>Validator will complain.</p>~~

```
<h2>Good annotations</h2>
```

```
<p>Validator will <em>approve</em> it.</p>
```



- Ordering matters! “proper nesting”

```
<p><i>Validator will <em>not</i></em> approve this.</p>
```



Another note

- White spaces ignored:

```
<h1>This is a heading</h1>
```

```
<h1>This      is a heading</h1>
```

```
<h1>This  
      is a  
      heading</h1>
```

...will be displayed in same manner

Basic tags

<h1>, ..., <h6>	<u>h</u> eadings	
<p>	<u>p</u> aragraph	*preferred over <i>
	<u>b</u> old	**preferred over
<i>	<u>i</u> talic	(as it gives semantic meaning of content)
<u>	<u>u</u> nderline	
	<u>e</u> mphasis*	
	<u>s</u> trong emphasis**	
<blockquote>	indented <u>q</u> uoting	
<q>	<u>q</u> uoting text (for citations)	
<pre>	<u>p</u> re-formatted text	
<tt>	<u>t</u> ypewriter <u>t</u> ype (“monospace”), not equivalent to <pre>	
 	line <u>b</u> reak	
<hr/>	<u>h</u> orizontal <u>r</u> ule (rule=line)	

DEMO...

doctype (document type)

XHTML:

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0  
Strict//EN"  
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-  
strict.dtd">
```

DTD = document type definition

HTML5 (simpler):

```
<!DOCTYPE html>
```

- <figure>
-
- <footer>
- <form>
- <frame>
- <frameset>
- <h1> - <h6>
- <head>
- <header>
- <hr>
- <html>
- <i>
- <iframe>
-
- <input>
- <ins>
- <kbd>
- <keygen>
- <label>
- <legend>
-
- <link>
- <main>
- <map>
- <mark>
- <menu>
- <menuitem>
- <meta>

Common DOCTYPE Declarations

HTML 5

```
<!DOCTYPE html>
```

HTML 4.01 Strict

This DTD contains all HTML elements and attributes, but does NOT INCLUDE presentational or deprecated elements (like font). Framesets are not allowed.

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN" "http://www.w3.org/TR/html4/strict.dtd">
```

HTML 4.01 Transitional

This DTD contains all HTML elements and attributes, INCLUDING presentational and deprecated elements. Framesets are not allowed.

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" "http://www.w3.org/TR/html4/transition.dtd">
```

HTML 4.01 Frameset

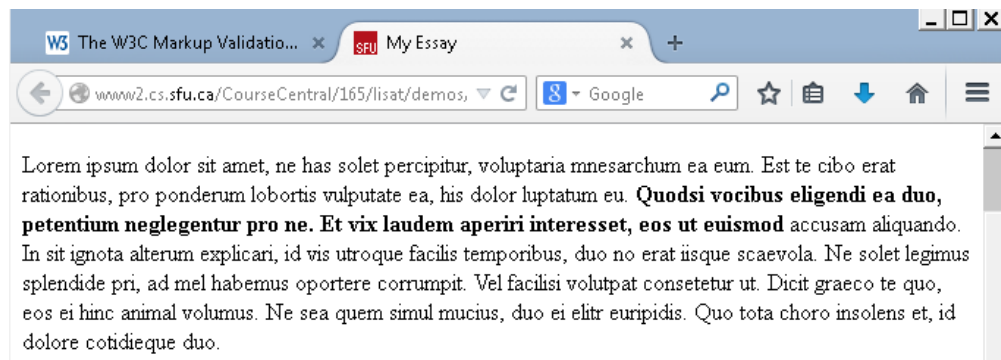
This DTD is equal to HTML 4.01 Transitional, but allows the use of frameset content.

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Frameset//EN" "http://www.w3.org/TR/html4/frameset.dtd">
```

XHTML 1.0 Strict

Why do markup?

1. Browsers interpret markup differently
 - Markup gives you more control over browsers
2. Encourages you to focus on content (no formatting yet)
3. Allows you to reuse code (we'll see why/how later)
4. Visual properties of webpages are not accessible to some people, e.g.:
 - Software like “[JAWS](#)” is used to read out webpages to the blind
 - Bolded text like this image is therefore not meaningful to the blind:



- Using e.g. `` tags:

`Quodsi vocibus eligendi...`

Makes your webpages more accessible, e.g.

“JAWS” will speak with a lower tone for contents of `` tags

Questions?