Web Design and HTML

Lecture 13 – COMPSCI111/111G S1 2018

Web Page vs Web Site

► A web page is a single page viewable using web browser

   ► Should be visually appealing, informative

► A web site is a set of web pages

   ► Same theme

   ► Consistent design

Navigation

▶ Users have trouble navigating in many web sites

  ▶ Navigation should be easy - three click-rule

  ▶ Navigation bar on the left is common

  ▶ Navigation bar on the right is more ergonomic

▶ Each page should

  ▶ Tell the user what the page is about

  ▶ Clearly identify how to get to other pages (Obvious links)

▶ Familiarity

  Use layout and design that people are familiar with

Links

- Don't make the user guess where the links are
  - All links should be clearly identified

- Underlining
  - Do not underline any normal text.

- Remember that links are different colour to normal text
  - Check the appearance of links on your background

- Name of the link should indicate where it links to
  - Don't use "Click here"

Text

- Make the text easy to read
  - Keep text short – reading on screen is 15% slower than paper
  - Bullet points, headings, empty space
  - Use a word processor to prepare the text (spelling)

- Use good titles for page
  - Sensible headings

- Make the text legible
  - Font size (not too small to read, not too large)
  - Aligned to the left. Centre only used for headings
  - Colours / contrast
  - Not all uppercase / italic / bold

Bad use of colour

▶ Colour

   ▶ Use sparingly to reinforce other information

   ▶ Colour blindness (Red / Green, Blue / Yellow)

   ▶ Poor use of contrast

   ▶ Don't over use colour over just because "it is there"

Images and Backgrounds

▶ Design for low bandwidth

  ▶ Use images that have small file sizes

▶ File Formats

  ▶ JPEG for photos

  ▶ GIF / PNG for graphics

▶ Backgrounds

  ▶ Simple

  ▶ Consistent across the entire site

  ▶ Should not interfere with content

Things to avoid

▶ Keep the design simple

　　▶ Avoid making the page cluttered

▶ Avoid using Frames

　　▶ Make navigation more difficult

▶ Avoid using Flash animations

　　▶ Not all browsers support flash

　　▶ Takes too long to download

　　▶ Cannot be indexed / searched

HTML

- Hypertext Markup Language (HTML)
  - Used to format web pages
  - Contains hypertext information (links)
  - Written in ASCII / Unicode
  - Embedded format codes (tags)

Browser Wars

- HTML 1.0
  - Tim Berners Lee (1993)

- Browsers added extra features
  - Internet Explorer had unique tags
  - Netscape Navigator had unique tags

- Major problem
  - What tags should a publisher use?
  - How can this problem be resolved?

http://en.wikipedia.org/wiki/Browser_wars

Development of HTML

- HTML 2.0
  - Internet Engineering Task Force standard (1995)

- HTML 3.2 / HTML 4.0
  - W3 Consortium recommendation (1997)

- HTML 4.01
  - W3C recommendation (1999)

- XHTML 1.0
  - W3C recommendation (2000)

- HTML5
  - Fifth revision of HTML standard. Standardized October 2014.

  http://en.wikipedia.org/wiki/Html

Document Type Definition

▶ Defines which standard is being used for the page

  ▶ We use HTML5

▶ Should appear at the top of the file

```
<!DOCTYPE html>
```

Encoding methods

▶ Different character sets used to encode the page

  ▶ ASCII

  ▶ UTF-8

  ▶ Unicode

▶ Need to tell the browser which encoding is used

  ▶ Located in the *head* of the document.

```
<meta charset="UTF-8">
```

Use at the start of every file

▶ Copy and paste the code exactly as it appears

    ▶ Will be provided in tests and exams

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
</head>
```

HTML Source Code

▶ Code used by the browser to display the page

    ▶ White space is ignored

▶ Comments

    ▶ Ignored by the browser

    ▶ Allow you to document your code

    ▶ <!-- Put your comment here -->

▶ Layout

    ▶ Use tidy layout where possible

    ▶ Make code easy to understand

    ▶ Make code easy to maintain/ modify

    ▶ Use whitespace and comments to help

Overview of tags

▶ Markup achieved with "tags"

   ▶ Enclosed with angle brackets < ... >

   ▶ Use lower case

   ▶ Most come in pairs <tag> ... </tag>

▶ Tag usually applies to text between start and end tag

```
This word is in <span>italics</span>
```
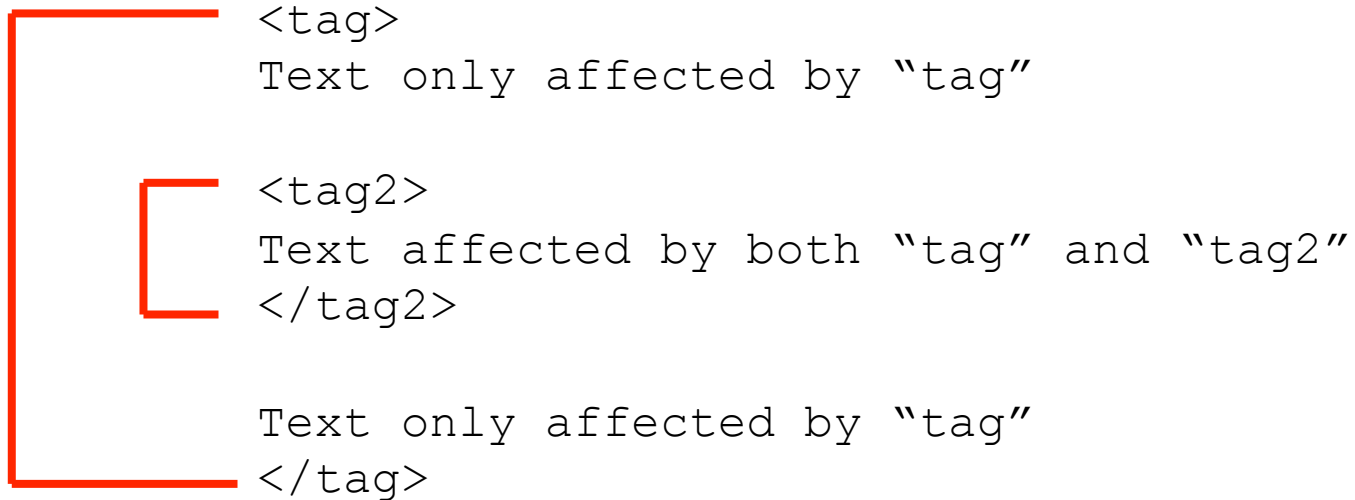
Attributes

- Some tags require additional information

    - Properties or attributes of the tag

    - `<tag property="value"> </tag>`

Nested Tags

▶ Tags must be correctly nested

  ▶ Cannot close an open tag until all the open tags that it affects are also closed

```
<tag>
Text only affected by "tag"

<tag2>
Text affected by both "tag" and "tag2"
</tag2>

Text only affected by "tag"
</tag>
```

Essential tags

`<html lang="en">`

- ▶ Encloses the entire document

- ▶ Specifies that the document uses html

- ▶ lang attribute is used to specify the primary language of a webpage – en is the code for English

```
<html lang="en">
.
.
.
.
.
.
.
</html>
```

Essential tags

`<head>`

- ▶ Contains information for the browser
    - ▶ E.g. character encoding used

- ▶ Does not contain any content to be displayed on the page

```
<html lang="en">
<head>
<meta charset="UTF-8">
</head>
.
.
.
.
.
</html>
```

Essential tags

`<body>`

▶ Contains all the content that will appear on the page

```
<html lang="en">
<head>
<meta charset="UTF-8">
</head>
<body>
.
.
.
</body>
</html>
```

Essential tags

`<title>`

▶ Part of the head

▶ Specifies the title to be used by the browser

▶ Name of the window

▶ Used in navigation (bookmarks, history, etc.)

```
<html lang="en">
<head>
<meta charset="UTF-8">
<title>Introduction to tags</title>
</head>
<body>
.
.
.
</body>
</html>
```

HTML5 Exercise

Exercise 1: What does HTML stand for?

- *Hypertext Markup Language*

Exercise 2: What is a document type definition used for?

- *Defines which standard is being used for the webpage*

Exercise 3: What is "white space"?

- *Characters or series of white space characters that define horizontal or vertical spaces*