

Web Design and HTML

Lecture 14 - COMPSCI1111/111G SS 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

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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

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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"

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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 `italics`

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>  
  
</tag>  
Text only affected by "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?

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

Exercise 3: What is "white space"?