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Web Design and HTML
Lecture 14 – COMPSCI111/111G SS 2018

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Slide 2

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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

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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"

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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

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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

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HTML

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

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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

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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

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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>
```

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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">
```

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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>
```

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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

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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>
```

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Attributes

- ▶ Some tags require additional information
  - ▶ Properties or attributes of the tag
  - ▶ `<tag property="value"> </tag>`

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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>
```

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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>
```

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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>
```

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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>
```

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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>
```

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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**

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