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
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

```html
<!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.

```html
<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

```html
<!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

```html
<tag>
  Text only affected by "tag"
</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
</head>
<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.)
</title>

<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