



The  
University  
Of  
Sheffield.

# COM1008: Web and Internet Technology

## The assignment: an overview

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# 1. Introduction

- The Assignment is worth 80% of the module mark.
- The Task:
  - Use Mobile First Responsive Web Design to develop a website about yourself and your degree programme
- Three parts:
  - Part 1: Planning & Design document (15%)
  - Part 2: Website (70%)
  - Part 3: Development & Testing document (15%)
- Handout will be available on Blackboard before the end of the week
- Handin (zip file) via Blackboard
  - Deadline: 3pm, Tue 15 December

## 1.1 Process

- Requirements – given in the assignment handout
- **Planning**
- **Design**
- **Development**
- **Testing**
- Delivery – handin via MOLE
- Maintenance – not necessary

## 2. Requirements

- You will develop a website about *yourself and your degree programme*.
- You need to decide who the target audience is.
  - Will it just be for the purposes of this assignment and then be deleted?
  - Will it be for fellow students of Computer Science?
  - Will it be for your friends and family so they know something about your degree programme?
  - Will it be for the whole world?
  - (Do not put the website onto a public server until after the assignment has been handed in, marked and returned to you.)
- It should be clear that the website is written by you and represents your view (as a student of Computer Science), i.e. it is not an official University site.

## 2. Requirements

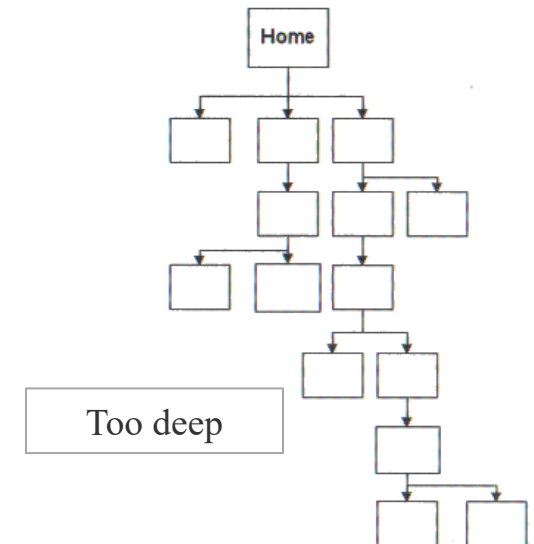
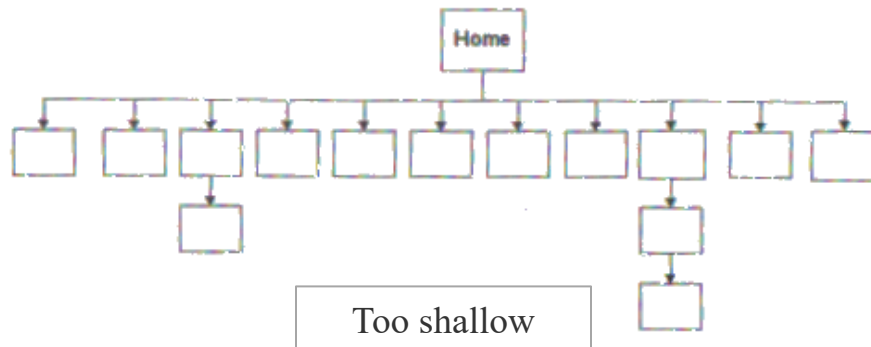
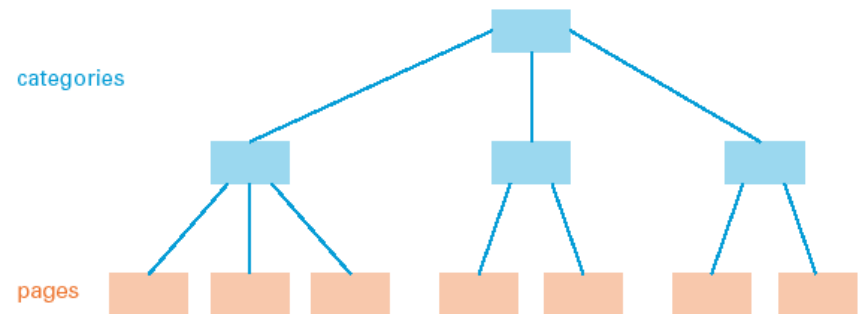
- A home page that welcomes people to the website
  - A page that focuses on your degree programme
  - A pictorial quiz page
  - A page that demonstrates the JavaScript and Canvas work you have learnt on com1008 – the topic for this page is ‘Data Visualisation’
  - A contact page, which includes your contact details and a form for users to send comments to you via your University e-mail address
  - An accessibility page
- 
- More details about each of these pages is given in the assignment handout.

### 3. Part 1: Planning and Design (before implementation!!)

- Document: 500-1000 words long; use images; use references
- Include the following sections:
  - General ethos: A brief statement about the general ethos behind your design and why it suits the requirements.
  - Site Map: draw the site map for your website and **justify** the structure.
  - Legal issues: e.g. copyright of images
  - Accessibility: describe how you address accessibility issues on your website
  - Design mock-ups – consider at least mobile and desktop and discuss breakpoints
  - Menu System – discussion of the menu system used
    - <http://responsivenavigation.net/index.html>
    - <http://bradfrost.com/blog/web/responsive-nav-patterns/>
- Cite references to justify your decisions
  - E.g. <https://developers.google.com/webmasters/mobile-sites/>

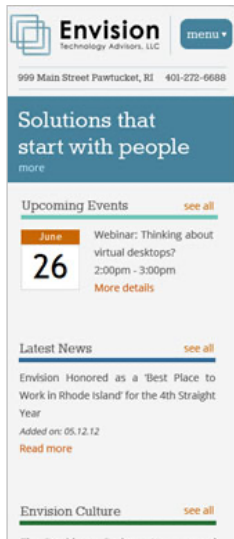
## Site map logical structure

- Relationship between pages
- A hierarchy provides order by grouping pages into categories



Chapman and Chapman, 2006

# Design mock-ups: examples (Remember: mobile first)



*The “extreme” versions of the new website design*

From: Building A Better Responsive

Website by Jeremy Girard,

<http://www.smashingmagazine.com/2013/03/building-a-better-responsive-website/>

<http://webdesignerwall.com/tutorials/responsive-design-with-css3-media-queries>



## Other considerations

- Accessibility
  - <https://www.w3.org/TR/WCAG/> - Eg. “Guideline 1.1: Provide text alternatives for any non-text content...” but heed the RNIB advice too.
  - <https://developer.mozilla.org/en-US/docs/Learn/Accessibility>
  - <http://wave.webaim.org/>
  - <https://www.smashingmagazine.com/2016/06/improving-color-accessibility-for-color-blind-users/>
  - <http://leaverou.github.io/contrast-ratio/>
- Consider Fitts’s Law when designing the size and spacing of navigation menu items
  - <https://www.smashingmagazine.com/2012/12/fittss-law-and-user-experience/>
- Consider copyright concerns
  - <https://www.bitlaw.com/internet/webpage.html>

## 4. Part 2: The Website

- This section demonstrates your skill to build a website using HTML and CSS and JavaScript
- Mobile First Responsive Web Design
  - The <head> element must include an element identifying the author(s).
  - You must use the HTML5 semantic elements when structuring each webpage. These must then be styled in the relevant stylesheet(s).
  - A responsive navigation area must be included for the Web site.
  - Appearance must be controlled by linked stylesheet(s), *not* by inline styles.
  - Use of @media queries – structured, controlled
  - Economic use of properties in a stylesheet, e.g. margin a b c d, rather than setting the top, right, bottom and left margin separately
  - JavaScript pages – you may need extra stylesheets for specific pages
  - All source code should be well organised and neatly laid out, e.g. using indentation, with comments, where necessary

## 5. Part 3: The development and testing document

- Document: 500-1000 words long; use images; use references
- Include the following sections:
  - Changes: briefly describe any design changes and why you made them.
  - Organisation: Templates for the HTML and CSS? Organised file structure? Use of debugging tools? Menu implementation? Use of JavaScript? Discuss.
  - Optimisation: E.g. image loading times? Discuss.
  - Security: The contact page uses a form – are there any security issues? Did you use http or https?
  - Debugging: Did you make use of html and css validators? Results and explain?
  - Testing: Some *screenshots* of different (simulated) device and browser tests. Accessibility testing results? Illustrations of results?
- Cite any references for software tools, articles, research papers.

## Example development and debugging tools

- W3C tools – HTML and CSS validation
  - <http://validator.w3.org/>
  - <http://www.css-validator.org/>
- Browser specific tools
  - [https://developer.mozilla.org/en-US/docs/Tools/Page\\_Inspector/UI\\_Tour](https://developer.mozilla.org/en-US/docs/Tools/Page_Inspector/UI_Tour)
  - [https://developer.mozilla.org/en-US/docs/Learn/CSS/Introduction\\_to\\_CSS/Debugging\\_CSS](https://developer.mozilla.org/en-US/docs/Learn/CSS/Introduction_to_CSS/Debugging_CSS)
  - [https://developer.mozilla.org/en-US/docs/Tools/Responsive\\_Design\\_Mode](https://developer.mozilla.org/en-US/docs/Tools/Responsive_Design_Mode)
  - <https://developers.google.com/web/tools/chrome-devtools/inspect-styles/>
  - <https://developers.google.com/web/tools/chrome-devtools/css/>

## 6. Marking

- **Part 1 (15%)**
  - Diagrams, justification, reasons, cite references
- **Part 2 (70%)**
  - General (15%) – includes look & feel, RWD behaviour, content, use on different browsers;
  - HTML and CSS (30%)
    - HTML includes comments, layout, content of <head> element, semantic elements, menu, validation;
    - CSS includes organisation, layout, comments, economic use of properties, RWD, @media, validation;
  - JavaScript and canvas demo (and any JavaScript on the quiz page) (25%) – includes comments, layout, code structure and quality, completeness, creativity;
- **Part 3 (15%)**
  - Diagrams, justification, reasons, cite references

## 7. Summary

- Pay careful attention to the requirements on the assignment sheet
- In the 'Planning and Design' document and the 'Development and Testing' document
  - Do not waste words describing what the diagram obviously shows
  - Use the words to justify your decisions and cite references
  - Any references do not count towards the word limit
- HTML and CSS
  - Pay attention to the layout of your files and organisation of the code
  - Do not make the code more complicated than it needs to be
- JavaScript
  - Pay attention to the layout of your files and structure of your code
  - Use relevant features of the language that you have learnt
- **Use Mobile First Responsive Web Design**

# Questions?