

Introduction to the Use of Computers
HTML authoring and understanding
Friday 26th October 2012

This lab session is about the Hypertext Markup Language, covering the creation of HTML documents, validation of their well-formedness, and their publication.

1. This part of the lab requires you to create and publish a minimal html document, in such a way that it can be viewed by a web browser.
 - (a) Using whichever operating system you choose, create a directory called 'is50004a' (letters in lowercase) as a subdirectory of your 'public_html' directory within your home space on the Department server. (Remind yourself where this directory might be from your notes from lab session 1).
 - (b) Within your new directory, create a minimal html file, named 'index.html', which should have the following contents:
 - a title of 'Study Skills and Introduction to the Use of Computers'
 - a body consisting of:
 - a first-level header with the text 'Introduction to the Use of Computers';
 - a second-level header with the text '[Your Name]'s Notes' (replacing [Your Name] with your own name);
 - a paragraph containing the text 'This is where my notes go'.
 - (c) Verify that you can use a web browser to view your file: make sure it is saved in the right place (inside your new directory, which must be a subdirectory of the 'public_html' directory on igor. Then visit the url <http://www.doc.gold.ac.uk/~<userid>/is50004a/index.html>, replacing <userid> with your user id.
2. This part of the lab introduces tools that help to understand and validate HTML pages.
 - (a) The W3C (the standards body behind the technologies of the Web) provide an online HTML document validator, which checks whether a document follows the restrictions laid down for conforming to the published standards. Browse to <http://validator.w3.org/>, and submit the URL to your own web page from part for validation. (In the event of any failure to validate, read the analysis carefully and try to understand and correct the problem.)
 - (b) Web browsers internally construct objects which represent the document structure, which can be inspected and modified on the fly using 'smart bookmarks' and other browser extensions. One such can be found at <http://hackasaurus.org/en-US/goggles/>; install it to your browser, and then browse to the url of your page from part once more and activate it. Make modifications to your document on the fly, and examine the new source code of your document.
3. This part of the lab suggests extensions to your HTML page to demonstrate aspects of web publishing that may be useful in future.

- (a) If you have a digital camera with you, take a picture of yourself, and upload it to the same directory that contains your HTML page. Name the image file `me.jpeg`. (If you do not have a digital camera with you, either borrow someone else's – with their permission – or use an image from the Internet, provided that there is an explicit right for you to use it (either because it is yours or because the photographer has granted permission, for example by licencing the photo under Creative Commons terms).
 - (b) Create in your html page a reference to that image, using the `img` tag. View the resulting page in your browser. Does your modified file still validate?
 - (c) Create in your html page a link to that image, using the `a` tag. View the resulting page in your browser. What happens when you click the newly-created link? Does your modified file still validate?
4. This part of the lab asks some open-ended questions about the lecture materials.
- (a) What are the benefits of a separation of markup and presentation (as in for example the use of meaningful tags such as `em` and `code`, and the use of style sheets to control display)? Are there any downsides?
 - (b) Is it necessary to write valid HTML documents? If it is not necessary, under what circumstances is it desirable?