MAS115 PRESENTATION LAB, WEEK 9

1. Cascading style sheets

See if Notepad++ is installed on the computer; if not, install it from the Software Center. If this isn't possible, just use Notepad.

> *Notepad++ is a more advanced text-editor that will help you in creating HTML and CSS documents. It also allows* ALT+CTRL+SHIFT+X *as a shortcut to launch an HTML file in Firefox and* ALT+CTRL+SHIFT+I *to launch in Internet Explorer.*

Go to the course website, right-click on the page, select 'view source' and copy and paste the HTML code into your text editor. Save it as 'week9.html' and check that it opens in a browser. The page will have lost its formatting because it can no longer find a stylesheet. We will build one from scratch. Near the top of the HTML code is a line reading

```
<link rel="stylesheet" type="text/css"
href="css/course_pages.css">
```

Change the stylesheet URL to `href="week9lab.css"` and save the file. Now start a new text file (you can have more than one tab open in Notepad++) and save it as 'week9lab.css' in the same directory as your HTML file. Enter the code

```
body
{
    background-color:#fdf;
}
```

and save the file. Return to your browser, refresh the page and check that it has changed. Google 'CSS colour chart' and pick a colour of your choice for the background. Type 'stock.xchng' into Google, find the stock.xchng site, and search for a small, royalty-free picture of a Python. Right-click and save it as 'mas115.jpg' in your folder.

> *Every image that is created or photo that is taken has a copyright belonging to the author, and they can control how the picture is used. The site stock.xchng contains a library of images that people have donated to be used free of charge for non profit-making purposes.*

By looking at the stylesheet for MAS115 found at `http://mas115.group.shef.ac.uk/css/course_pages.css`, try find out how to do the following by adding style specifications to the body selector in your `week9.css` file.

(1) Change the text color of everything (except the links) to red.

(2) Limit the width of the body to 600 pixels.

(3) Give the body a dashed border in white.

(4) Pad the body of your document by 1em (that is, one font-width).

(5) Try to get the body of the document central on the page.

All of these effects are used on the course webpage, so keep experimenting until you find the right commands.

1.1. **Margins, borders and padding.** HTML builds up pages by means of *boxes*. That is, every HTML element that you put on a page comes with an invisible box around it. Every box has an associated *margin*, *border* and *padding*. Add the following to your CSS file.

```
h1
{
    margin:1em;
    border:1em #000 solid;
    padding:1em;
    background-color:#fff;
}
```

This will affect the main page heading. There should now be a black border of 1em around the heading. Also there is a margin of 1em outside of the border, and padding of 1em inside the border. These margin, border and padding specifications can be altered one side at a time by specifying `margin-left` or `padding-top`, for example.

(6) Give the image a 2 pixel outset border in black. Give it 2 pixels of padding at the top and bottom, and 5 pixels of padding at the sides and change its background colour to `#efe`.

(7) Try to center the image with respect to the body. (Hint: the same method that you used to get the body centered works here, but you need to also change the image's `display` property to `block`.)

1.2. **Inline and block display types.** HTML elements come in two types: *inline* and *block*.

Block elements are things like paragraphs (`<p>`) and headings (`<h1>`, `<h2>` etc), which always start on a new line and take up the full width available.

Inline elements are things like images (`<img>`) and emphasised text (`<em>`) which display inline (like using single-dollars in LaTeX). The `display` property in CSS can switch this type, useful for centering images.

An image is centered by changing its margins to 'auto', which makes the browser calculate equal margins on left and right. On the other-hand, things inside block elements (such as text in a paragraph) are centered using `text-align:center`.

1.3. **Classes and IDs.** Look at the HTML for the course website, and find the subtitle that states the lecturers' names. Notice that it's an `h2`, but it has been given the *class* 'subtitle'. This singles out the fact that this `h2` is different to the other `h2`s on the page. The class name 'subtitle' was my choice.

Because it has been given a class, this `h2` can be styled differently from the other `h2`s if necessary.

(8) On the course webpage, I have made the subtitle `h2` be centered. Find the CSS code that does that and use it on your page.

You should have found a selector that starts with a full-stop. This type of selector targets classes. That is, the specifications will apply to any element given the class 'subtitle'.

There is a variation on this. HTML elements can instead by given *IDs*. Whereas classes can be used multiple times in the HTML, each ID must only be used once. IDs are added with `id="contact_details"` in the html, for example. To alter the style of the ID `contact_details`, use `#contact_details` in the CSS.

(9) Look for the section where the contact details appear in the HTML file. You will see a `<div>` with the ID `contact_details`. Use the above ideas to change the formatting of this division. Change the background colour and font, and make it central.

1.4. **Divs.** *Divisions* or *divs* are what are sometimes called 'meaningless' HTML elements. That is, on their own they do nothing. However, by giving divs IDs or classes, and using CSS, they can be used to control the look and function of sections of websites.

Divs are created using the `<div>` and `</div>` tags.

(10) Create a div surrounding the section concerning 'Course information'. Give it the id `course_info` and use CSS to give this section a white background with a width of 500 pixels.

1.5. **Menus.** In the Week 8 lab, you created a menu (or *navigation bar*) at the top of your page using some plain HTML. What you probably didn't realise was that the CSS file you added controlled how it looked.

Find your Week 8 lab attempt (or download the finished Week 8 HTML and CSS files from the course webpage) and play around with the look of the menu. The page `http://www.w3schools.com/css/css_navbar.asp` will give much more on making navigation bars.

2. FURTHER READING

We have only covered the basics of CSS, but already these ideas can do a lot. If you have got this far, I recommend reading the excellent HTML and CSS tutorials made by HTML Dog available at `http://www.htmldog.com/`

`guides`. Those who want a challenge may like to look at the instructions on CSS positioning on `barelyfitz.com` (second hit with the Google search term 'CSS positioning').

Homework

As explained in the lecture, the Week 10 presentation lecture will be replaced with the peer assessment session for the mini project (Thursday 1 December, 10am, Alfred Denny Building LT2).

Please get there as punctually as you can.

It is your job as homework to read and comment on the four submitted projects you are shown in the upload system. Please see the Week 8 lab sheets (or the Week 8 lecture slides) for detailed instructions.

Post any questions you may have on the discussion board.