MAS115 PRESENTATION LAB, WEEK 8

1. The basics of HTML

Go to the start menu and type 'Notepad' into the search box. Start Notepad.

> *Notepad is the basic text editor that comes with Windows. If it isn't installed on the computer, instead try Notepad++, which may need installing from the Software Center.*

In Notepad, type the following and save it in a folder as `index.html` (you will need to add the '.html' bit).

```
<html>
<body>
<p>This is index.html.</p>
</body>
</html>
```

Once you've saved your file, go to the folder it is in and open the HTML file called 'index'. This should open in a web-browser.

Return to Notepad, and add the following underneath the `<body>` command.

```
<h1>About index pages</h1>
```

Go back to your browser and refresh it (by pressing F5). You should find that it updates the page to include a heading.

(1) In Notepad, copy and paste the heading and change it to `<h2>...</h2>`.
(2) Repeat with `<h3>` and `<h4>`. (In fact, you can go as far as `<h6>`.)

The `<h1>-<h6>` tags are used to create headings of decreasing importance. Think of them as similar to the `\section`, `\subsection` and `\subsubsection` commands of LaTeX.

(3) Add a new paragraph to your page with the text

```
The index.html page is the first page that a server
will find in a web-directory. For that reason, it
should be the front page when you create for a website.
For more information, see Wikipedia.
```

(4) Search online for the Wikipedia page that discusses index.html files. Once there, copy the URL. Return to your HTML file, and change '`see Wikipedia`' to '`see <a href="...">Wikipedia</a>`', pasting in your URL instead of '...'.
(5) Try changing `<a href="...">` to `<a href="..." target="_blank">`. What does this do?

Find the Wikipedia page for HTML, and look for the picture of Tim Berners-Lee (one of the creators of HTML). Right-click on the image, and save it as `bernerslee.jpg` in the same folder as your webpage. Return to your webpage and enter the following.

```
<h2>About HTML</h2>
<img src="bernerslee.jpg">
<p>HTML is the language that powers websites. It was developed
by Sir Tim Berners-Lee, who invented the world-wide web.</p>
```

(6) Try misspelling the image source as `bernerlee.jpg`.
(7) Add `alt="Sir Tim Berners-Lee"` to your `<img>` tag. Do you notice any change? (The 'alt' attribute is seen as good practice as it will give information if your image fails to load.)
(8) Before the `<img>` tag, put `<a href="...">` and after it put `</a>`, where the dots are filled in with URL for the Wikipedia page for Tim Berners-Lee.
(9) Make the link you just created open in a new window.
(10) The image was borrowed from Wikipedia, so we should add a statement to that effect. Put `<p>(Image from Wikipedia)</p>` underneath the image.
(11) Search for a video on Youtube called 'What is the World Wide Web?'. Once you've found it, click on 'share', then 'embed'. Copy and paste the HTML code that appears to the bottom of your webpage.

2. The head of an HTML file

Between the `<html>` and `<body>` commands, add the following.

```
<head>
<title>Index pages and HTML</title>
</head>
```

What has this done? The *head* of an HTML document (that is, the bit between the `<head>` and `</head>` tags) should be thought of as similar to the preamble in a LaTeX document. Here, we set up the look of the page and control things like the title.

2.1. Controlling the look of webpages.

So far, we've used HTML in the same way that we started using LaTeX, letting the computer decide how the final page will look. Very few webpages look this plain. The look of the document is controlled using *Cascading Style Sheets* (CSS for short).

We'll cover the basics of CSS next time. For now, download the file at `http://mas115.group.shef.ac.uk/docs/week8lab.css`, saving in the same folder as your `.html` file as `week8lab.css`. Now add the following code to the head of your `.html` file.

```
<link rel="stylesheet" type="text/css" href="week8lab.css">
```

This command tells the browser to format the page according to the style sheet you downloaded. It should have changed the look of the document

noticeably. You can view the stylesheet by opening it in Notepad. Play around with it to see what you can alter. You'll need to save the file and refresh the browser each time you make a change.

2.2. **Doctype declaration.** If you are using Internet Explorer, open your page in Firefox by copying and pasting the URL. Does it look the same? (You may need to install Firefox from the Software Center.) Add the following right at the top of your HTML file.

```
<!DOCTYPE HTML>
```

Now compare the page in both browsers. Does anything change? Adding this doctype declaration makes pages appear more consistently as you change browser, so it is good practice to include it at the top of every page.

3. Linking pages

To practice making pages that interlink with each other, create a new file called `about_me.html`. Give the page a main title 'About me', then a paragraph with the text 'I am a student at the University of Sheffield'. Add a photo to the page if you want to.

> *The quickest way to do this will be to copy and paste the code from your index page, and delete the bits you don't need.*

Make 'University of Sheffield' into a link to `http://www.shef.ac.uk`. Finally, let's create a menu to navigate between the two pages. At the start of the body, add the following.

```
<nav>
<ul>
<li><a href="index.html">Home</a></li>
<li><a href="about_me.html">About me</a></li>
</ul>
</nav>
```

Also copy this to the top of `index.html`. We'll look more at the tags used here and how to make the menu look a bit better in later weeks.

4. ZIP files

ZIP files are a convenient way to bundle together multiple files, especially if they need emailing. They are useful for websites, which often consist of multiple files all of which are needed for the site to function properly.

To create a ZIP file, ZIP software is needed. Some operating systems have this built-in. Free ZIP software includes ZipCentral and Peazip; both are on the University's managed desktop. Let's ZIP up the website you've just created.

(12) Start Peazip (install it from the Software Center if necessary).
(13) In Peazip, go to the folder your website is in and select all the files.
(14) Click 'Add' in the top left-hand corner.

(15) In the 'Output' box, choose a destination and the filename `MAS115week8`.
(16) Ensure the options selected are ZIP, Normal and Single Volume.
(17) Click OK.

This will create one file containing all the files from your website. Open it to see if it's worked.

5. Learning from existing sites

One very useful feature of the world-wide web is that the HTML source for any page you visit is viewable. Go to the MAS115 webpage and view the source by right-clicking anywhere on the webpage and choosing 'View source'. You could look at some other pages too. You'll often notice lots of complicated code, but the basics of how text and images are displayed are just as we've done so far.

Homework

As explained in the lecture, this week's homework is related to the peer assessment of the mini-project. It must be completed before the Week 10 presentation lecture (Thursday 1 December, 10am, ADB-LT2).

Next week we will release the projects for marking. Once we have done this, when you log-in the upload system you will see four projects that you must read and comment on as homework. Here are some guidelines.

- You might want to print out the PDFs so that you can write on them. Print 2-to-a-page or double-sided to save money and paper.
- You should try running the Python script, by downloading it to your computer (right-click, save-as). You don't need to print this out unless you want to.
- You only need to look at the LaTeX file if you spot a problem, or are interested in how things have been done.
- **You must leave comments on what was good about the project and what can be improved in the upload system.**
- You don't need to think of a mark yet. You will, as a group, agree on marks and overall comments in the Week 10 lecture.
- Please don't be too harsh on the author. They may not speak English as a first language or may be struggling with computer programming.
- Important: Make a note of your group number and bring your comments with you to the Week 10 lecture. You will discuss the projects in groups in the Week 10 lecture.
- You will receive 2 marks for taking part in the Week 10 peer assessment. To receive these marks you must complete comments online and attend the session.

If you are unsure on what you are supposed to do, please post on the discussion board.

Please take this homework seriously! The peer assessment class is very useful when everyone prepares properly.