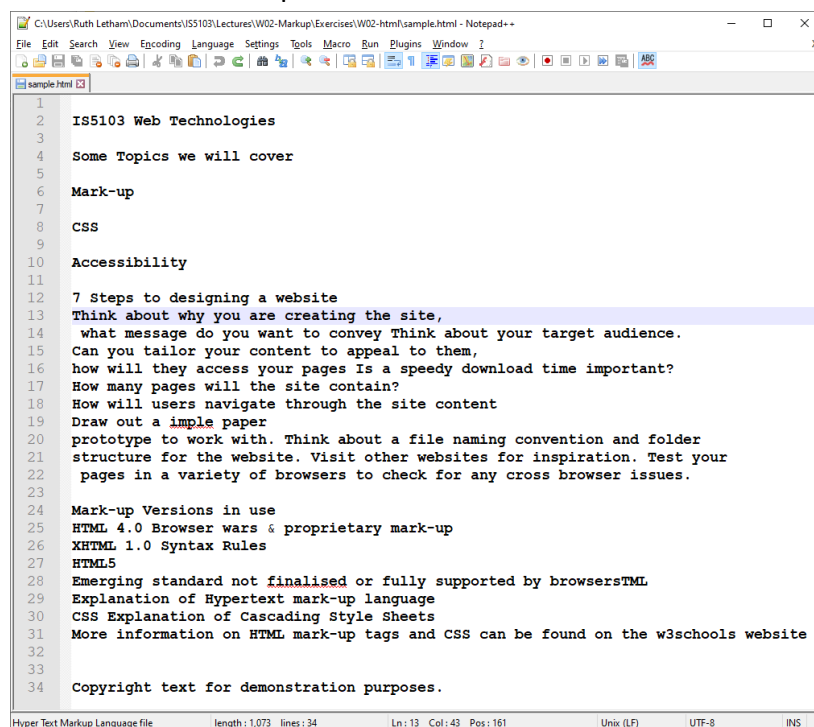


## Exercise 1: Writing HTML

In this exercise you will edit an HTML document in a text editor, preview the changes in a browser, and upload the page to the School server. You may use any text editor and browser of your choice (e.g. Notepad++, Atom, Brackets, VS Code; Chrome, Safari, Firefox).

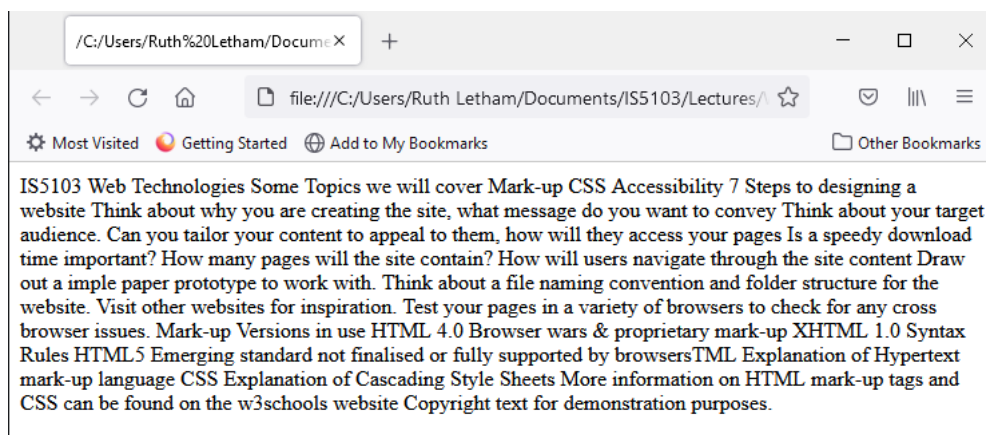
### Setup

1. Download the required source files from:  
<https://studres.cs.st-andrews.ac.uk/IS5103/Lectures/W02-Markup/Exercises/W02-html.zip>
2. Extract/uncompress the zip to a folder containing **sample.html** and **5103.jpg**
3. Check the properties of the files to make sure they are not read only
4. Open **sample.html** in a **text editor** of your choice. You will see some plain text formatted only with line breaks in suitable places.



```
1 IS5103 Web Technologies
2
3 Some Topics we will cover
4
5 Mark-up
6
7 CSS
8
9 Accessibility
10
11 7 Steps to designing a website
12 Think about why you are creating the site,
13 what message do you want to convey Think about your target audience.
14 Can you tailor your content to appeal to them,
15 how will they access your pages Is a speedy download time important?
16 How many pages will the site contain?
17 How will users navigate through the site content
18 Draw out a simple paper
19 prototype to work with. Think about a file naming convention and folder
20 structure for the website. Visit other websites for inspiration. Test your
21 pages in a variety of browsers to check for any cross browser issues.
22
23 Mark-up Versions in use
24 HTML 4.0 Browser wars & proprietary mark-up
25 XHTML 1.0 Syntax Rules
26 HTML5
27 Emerging standard not finalised or fully supported by browsersTML
28 Explanation of Hypertext mark-up language
29 CSS Explanation of Cascading Style Sheets
30 More information on HTML mark-up tags and CSS can be found on the w3schools website
31
32 Copyright text for demonstration purposes.
33
34
```

5. Open **sample.html** in a **browser** of your choice. The text will display as one long, unbroken line of text, because there is no markup in the file to tell the browser how to display it



[Add Markup](#)

**Make changes to the HTML content in the text editor and view the changes in a browser.**

Select the appropriate mark-up tags to reproduce the sample webpage displayed in Figure 1.

## IS5103 Web Technologies



### Some Topics we will cover

- Mark-up
- CSS
- Accessibility

### 7 steps to designing a website

1. Think about why you are creating the site, what message do you want to convey?
2. Think about your target audience.
3. Can you tailor your content to appeal to them?
4. How will they access your pages?
5. Is a speedy download time important?
6. How many pages will the site contain?
7. How will users navigate through the site content?

Draw out a **simple** paper prototype to work with. Think about a file naming convention and folder structure for the website. Visit other websites for inspiration. Test your pages in a variety of browsers to check for any cross browser issues.

#### Mark-up Versions in use

HTML 4.0	Browser wars & proprietary mark-up
XHTML 1.0	Syntax Rules
HTML5	Emerging standard not finalised or fully supported by browsers

#### HTML

Hypertext mark-up language

#### CSS

Explanation of Cascading Style Sheets

More information on HTML mark-up tags and CSS can be found on the [w3schools website](https://www.w3schools.com/)

© Copyright text for demonstration purposes.

Figure 1: Finished webpage

6. Create the document outline using html, head, title and body tags.
7. Make use of html mark-up tags to produce the following - headings, paragraphs, a table, an ordered, unordered and definition list, an external hyperlink, an image displayed on the page, character entities and embolden or emphasize words within paragraphs.
8. Remember to save any changes in your html file and open/refresh the page in a browser to view the changes.

**Note:** You may find the HTML tutorial a useful reference when looking up what tags to use and how to use them <https://www.w3schools.com/html/default.asp>

### Publish your page

**Upload the page to a WWW server: SFTP – For example you can use a client such as FileZilla**

9. Create a folder *nginx\_default* within your home directory
10. Copy the **sample.html** and **5103.png** files to the *nginx\_default*. If all has gone well, your page is now uploaded to the web server.

**View the uploaded page in a browser using a URL:**

11. View your uploaded page using the address below - make sure **username** is your own username:

`http://username.host.cs.st-andrews.ac.uk /sample.html`

**Everything as expected?**

## Exercise 2: XHTML

In this exercise you will test your knowledge of XHTML. Examine the markup in Figure 2 and answer the questions below.

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>XHTML and Structure</title>
</head>
<body>
  <article>
    <header>
      <h1> XHTML</h1>
      <hr />
    </header>
    <section>
      <h2>A reformulation of HTML 4 in XML 1.0</h2>
      <p>Documents must be well formed. Element and attribute names must be
        in lower case. XHTML is case sensitive. For non-empty elements, end tags
        are required. Attributes must always be quoted.</p>
      <p>Use the <code>p</code> element for paragraphs. Don't use the <code>br</code>
        element to provide paragraph-like breaks.</p>
      <p>Use heading elements for headings: <code>h1</code>, <code>h2</code>,
        <code>h3</code>, <code>h4</code>, <code>h5</code>, <code>h6</code>.
        Don't use <abbr title="Cascading Style Sheets">CSS</abbr>, the
        <code>strong</code> element, or other markup to fake your headings.</p>
      <p>Use definition list elements for terms and their corresponding
        descriptions. Another possible use is for marking up dialogues, with each
        <code>dt</code> element naming a speaker followed by the <code>dd</code>
        element containing the speaker's words.</p>
      <h3>So why bother with using semantic markup? What's the big deal?</h3>
      <ol>
        <li>User agents can draw meaning from your structure;</li>
        <li>Presentation can be change more easily if content & meaning
          are separate from it;</li>
        <li>Your markup will make sense to anyone else, whether today or
          later;</li>
      </ol>
      <p><a href="http://www.w3.org/TR/xhtml1/">More about XHTML</a></p>
    </section>
  </article>
</body>
</html>
```

Figure 2: Markup

### Markup Elements

1. What is the page title? Explain its significance?
2. Why add Meta elements if they are not displayed on the page?
3. Which text is in the lowest-level header used in the example markup?
4. What does the `</li>` tag indicate?
5. Does the page contain valid mark-up?
6. What does the `<hr />` tag do?

### Images and Hyperlinks

1. Identify any images included in the markup.
  - a) What file format is in use?
  - b) What is the purpose of the alt tag?
  - c) Where are the images being stored in this website? Think about folder structure.
2. List the destination of hyperlinks from the sample webpage.

### Tables

Examine the markup in Figure 4

1. Draw a rough sketch of the table as it would be presented or rendered by a browser.
2. Extend the mark-up to include a caption and footer for the table.

### XHTML

1. Why was XHTML introduced as a web standard?
2. List the important differences between HTML and XHTML.
3. List the XHTML Syntax Rules.

```
<table>
  <tr>
    <td>Language</td>
    <td>Working Draft</td>
    <td>Recommendation</td>
  </tr>
  <tr>
    <td>HTML 4.01</td>
    <td>1998</td>
    <td>1999</td>
  </tr>
  <tr>
    <td>XHTML 1.0</td>
    <td>2000</td>
    <td>2002</td>
  </tr>
  <tr>
    <td>HTML 5.2</td>
    <td>2015</td>
    <td>2017</td>
  </tr>
</table>
```

Figure 3: HTML table