

# Correctly structuring and presenting a technical document

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## Introduction

This document indicates how a report should be correctly formatted in Word. Students submitting work that contain some technical aspects (such as markup or programming code), should pay particular attention to the layout techniques discussed.

## Formatting a document correctly

A correctly structured document will have many parts, with Headings, Sub-Headings and paragraphs. Rather than individually formatting the individual parts of the document using the features in the font part of the Home tab in Microsoft Word (Figure 1), a better formatted document uses the Style options shown in the Home tab (Figure 2).

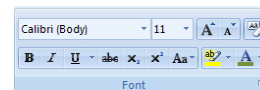


Figure 1

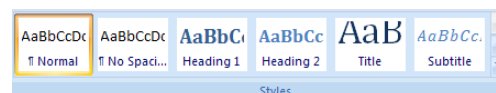


Figure 2

Highlight each heading and subheading and then select the appropriate style.

If the headings / sub headings are not styled as required, right mouse click on the style that is to be changed (on one of the large white squares in Figure 2), and choose Modify from the context sensitive menu (Figure 3).

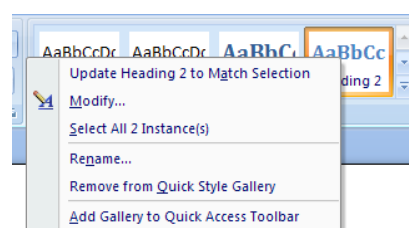


Figure 3

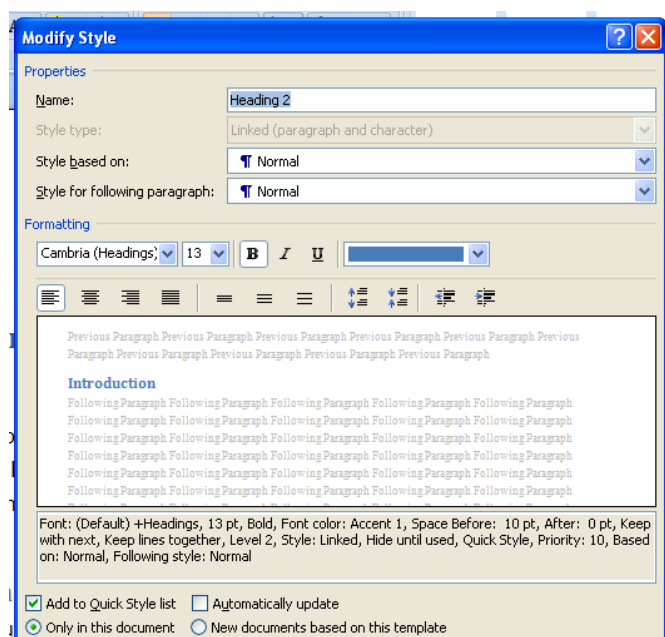


Figure 4

The Modify Styles dialog (Figure 4) enables style changes to be performed across the whole document (i.e. if you change the style for Heading 2, every Heading 2 will be consistently styled across the document).

More sophisticated style options can be altered through the Format button at the bottom of the panel.

Choose an appropriate business report font (avoid gothic or stylised fonts), and aim for 10 or 11pt unless otherwise specified. Keep the overall number of fonts used to a minimum (perhaps no more than 3), and avoid significant colour change and inconsistency.

## Inserting a Table of Contents

If the headings, subheadings and paragraphs have been correctly styled, then a table of contents can be automatically generated (this option is in the References tab, Figure 5).



Figure 5

The Table of Contents (TOC) in this document was generated this way. If

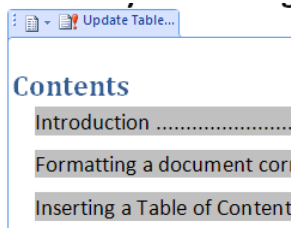


Figure 6

during the document construction the TOC needs to be regenerated, single click on the TOC and use the *Update Table* option (Figure 6).

## Inserting an Image

Particular care should be taken when inserting an image. Images (particularly screenshots), should be cropped to show the part of the image that is of relevance, and should be placed in the main flow of the text with appropriate figure numbers. Maintaining the aspect ratio of images is also important.

### Examples

Image far too wide so very little detail can be seen- no figure number shown

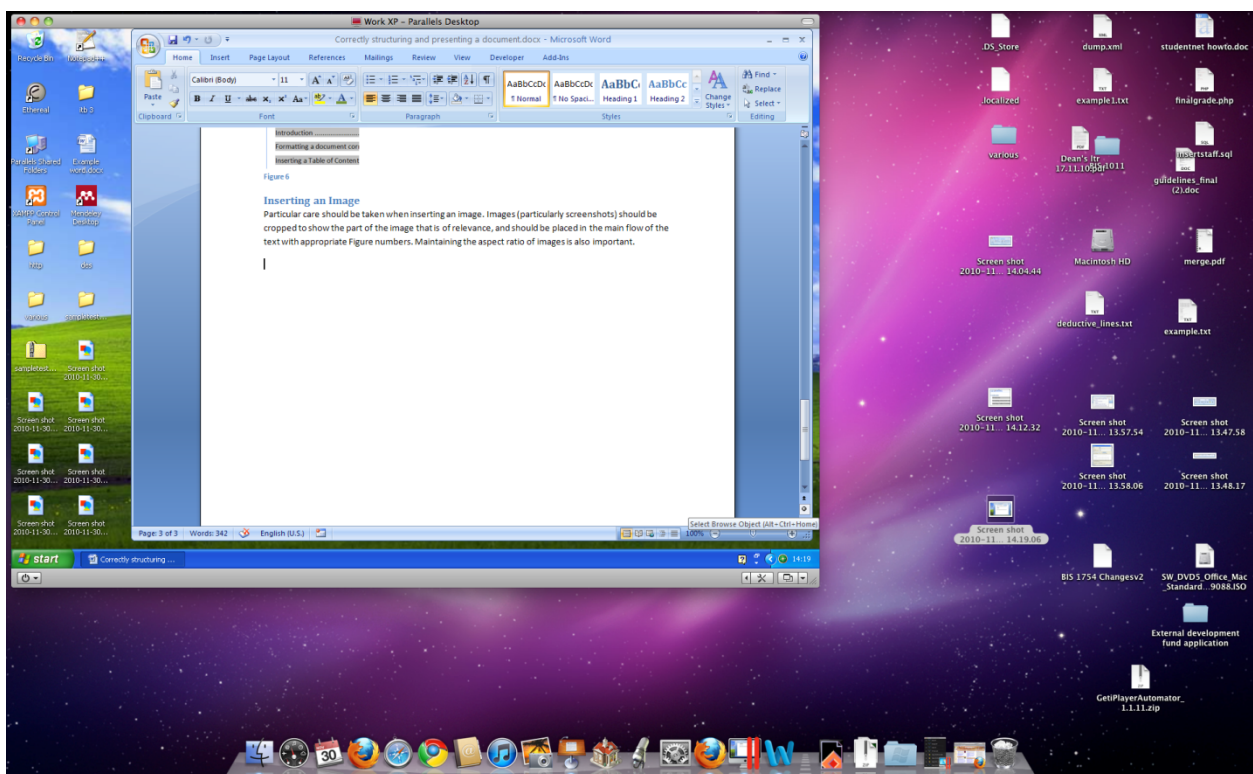
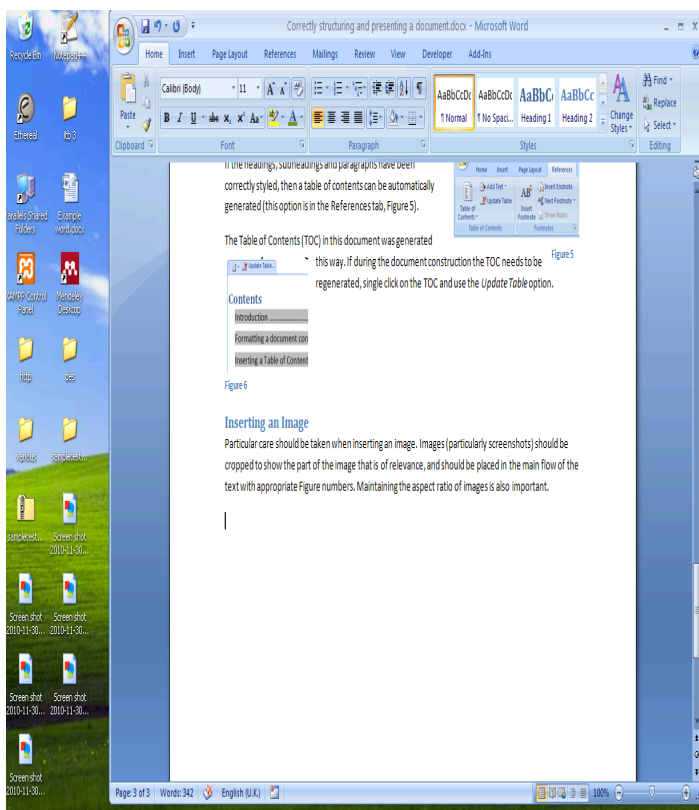


Image showing too much detail and aspect ratio ruined - no figure number shown



To insert an image correctly drag and drop the image into the document at (roughly) the correct place. Single click/select the image and choose the Picture Tools->Format tab (Figure 7). From here the image can be cropped (use the crop button, Figure 8) or resized (use the *corner* handles on the image to resize without changing the aspect ratio).

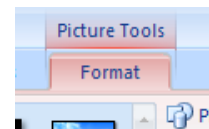


Figure 7

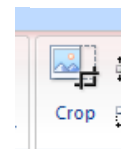


Figure 8

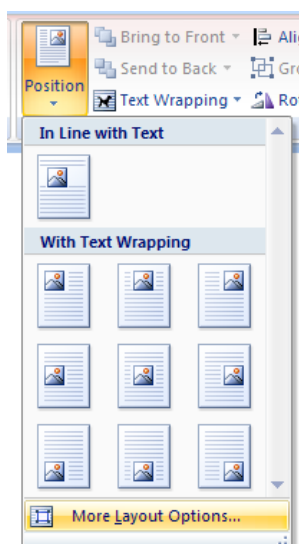


Figure 9

To change the position of an image in the flow of the document, select the Position button, and then choose *More Layout Options* (Figure 9).

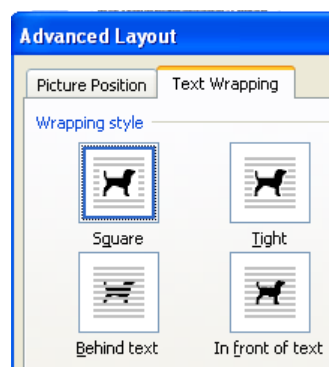


Figure 10

From here select *Square*, which will allow images to be precisely placed in the text (Figure 10).

Finally, single click/select the image and right mouse click to *Insert a caption*, such as a figure number.

## Inserting Page Numbers / Footers

To insert page numbers or to add a footer, use the Insert Tab. Various options are available through the Header & Footer panel (Figure 11).

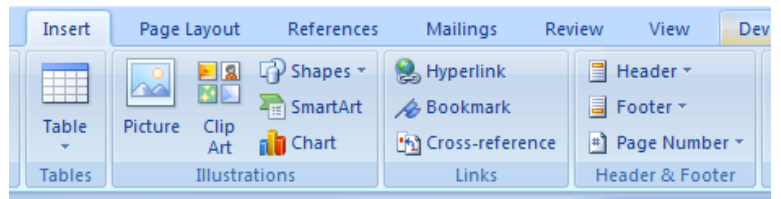


Figure 11

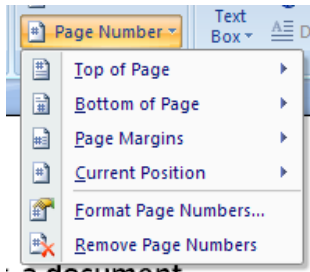


Figure 12

Choose *Page Numbers* (Figure 12) to add and place a number in the footer. A standard technique involves having no page number on the first page (for example on title pages). To do this set the page numbering to start from 0, then select *Different First Page* and delete the number shown in the footer on the first page (Figure 13).

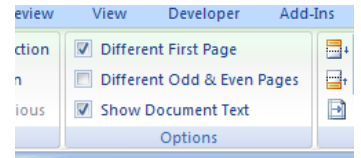


Figure 13

To exit from Header and Footer edit mode, use the *Close Header and Footer* button on the Design tab (Figure 14).

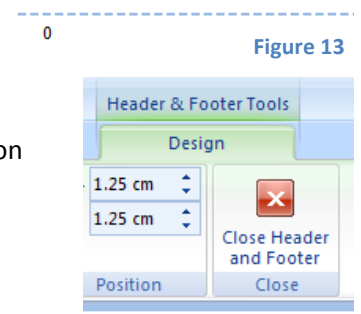


Figure 14

## Inserting code or markup examples

Markup (HTML with CSS) or programming languages are typically included in a document using a fixed width font (such as Courier), which should be different from the body font. Note how the following markup (which uses the same Calibri font as the document) isn't easily distinguishable from the surrounding explanatory text.

```
<html>
<head>
<link rel="stylesheet" type="text/css" href="style.css" />
<title>Flash drive</title>
```

This example is better, as it uses Courier (9pt) and is indented slightly

```
<body>
  <h1>Flash drives</h1>
  <h2>Flash drive capacities</h2>
  <p>Here is a picture of a 128MB flash drive which was popular at one time. Note the
  USB connector. 128MB is regarded as being rather small now.</p>
  
```

By indenting and changing the font, the different nature of the included markup becomes much clearer.

## First Line indent, Hanging indents and Left indents

The best way to alter the layout of paragraphs is via the *ruler*. If the ruler is not displayed click the *View Ruler* icon (on the right *above* the scroll bar, Figure 15).

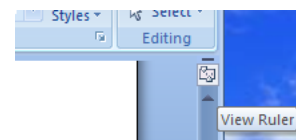
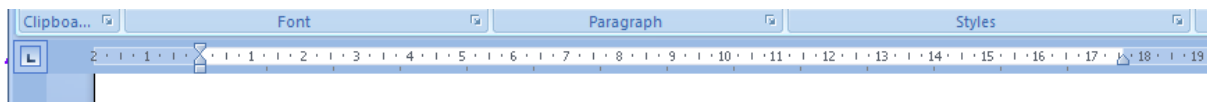



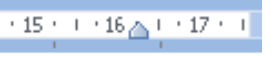


Figure 15



The important thing to remember is to *select the whole area to be styled* before changing any of the indent settings.

			
Markup (HTML) width font (such as Courier) isn't easily	Markup (HTML or C) font (such as C) document) isn	Markup (H) width font ( document):	ent using a ne Calibri t.
Move the First Line indent (the top triangle) to create a traditional indented first line. Note that this can be regarded as old fashioned and is infrequently used in report style documents.	Move the Hanging indent (the middle triangle) to indent other lines excluding the first line	Move the Left indent (the square) to indent the left side of the whole selected section	Move the Right indent (the triangle on the right hand side of the ruler) to indent the right side of the whole selected section

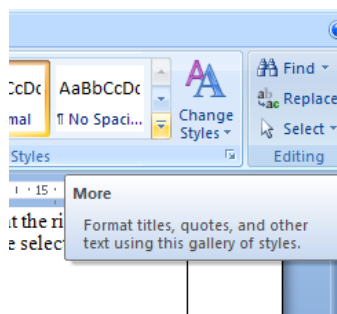
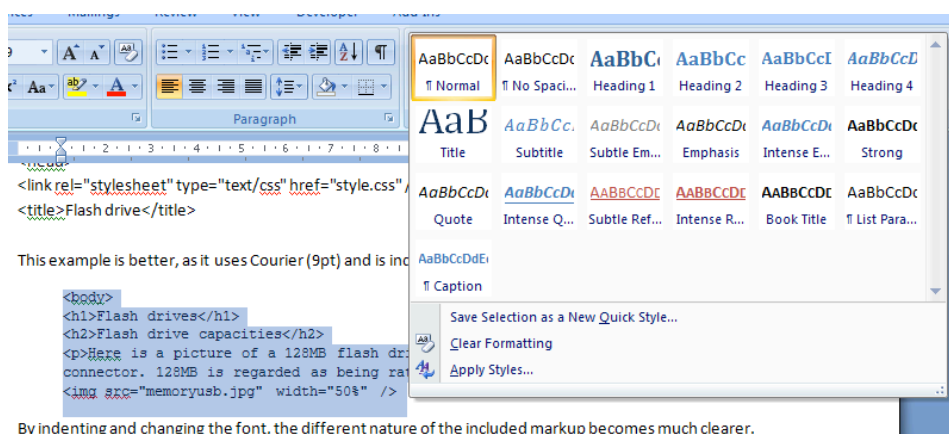


Figure 16

If there are likely to be many code sections then it may be worthwhile defining a style for *code* – highlight the area of the document that contains the style you wish to save and click on the *More* icon to the side of the Styles panel (Figure 16).



By indenting and changing the font, the different nature of the included markup becomes much clearer.

Figure 17

Choose *Save Selection as a New Quick Style* and give the style a name (Figure 17).

This style can then be used in other places in the document.

## How much to include

Rather than including long sections of code or markup in the main body of the document, place listings in appendices and use descriptions of what the code does/how it works along with code extracts for explanation.

## HTML/CSS example

For example: discussing the layout of the logical blocks in an HTML document doesn't require the whole code – use a diagram (for example Figure 18 or Figure 19), a sample of one of the DIV blocks and then point to the appendix for the rest of the code (perhaps by page number).

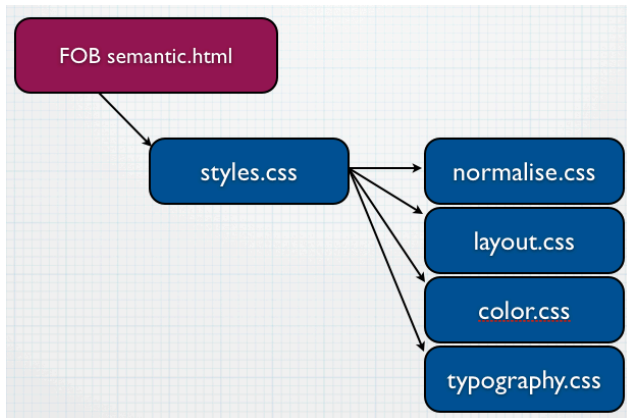


Figure 18

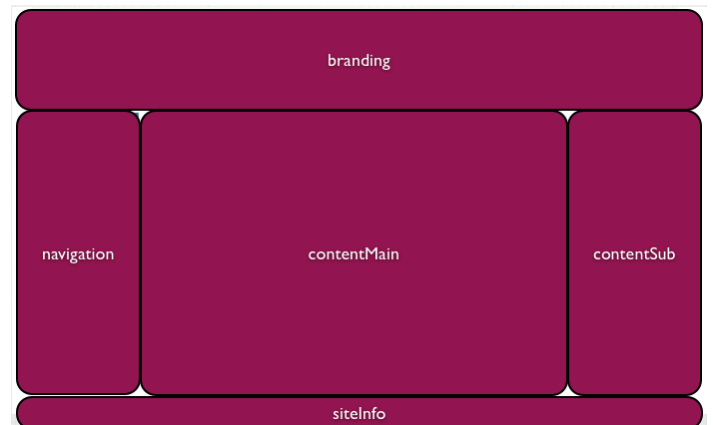


Figure 19

Code sample to indicate how the logical areas have been marked up in the document (styled and indented appropriately).

```
<div id="branding">


</div>
```

## PHP/Code examples

Rather than list all the PHP, use pseudo English to explain how the code works, with snippets of PHP to indicate the important points. For example a PHP response page might

- Retrieve the values from the form from the GET array
- Create the SQL query string
- Retrieve the response from the database
- Format the response in a print statement

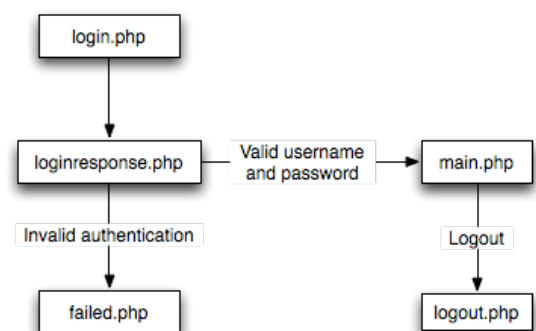


Figure 20

Snippets shown here might show the SQL query string being constructed and discuss the structure of the database table revealing what is being retrieved (using a diagram). The reader can then be redirected to the appropriate appendix for the whole code listing (perhaps by page number). Diagrams could show the different pages used within a site and how they connect (Figure 20).



## Referencing

The built in referencing tools offered by Word are rather limited. A better option is to store references in a third party application, which comes with add-ons for Word that allows citation insertion and automatic Bibliography creation.

Mendeley ([www.mendeley.com](http://www.mendeley.com)) offers free software to perform this task. References associated with an account are synchronised with the Web, which can then be shared. This is particularly useful for collaborative work.

To use Mendeley you will need to

- Create a free Mendeley account via the Web site
- Download the client software (available for Windows and Macs)
- Install the Word plugin

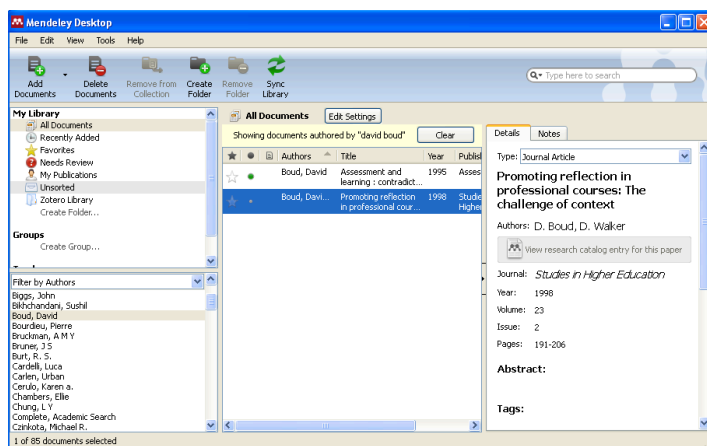


Figure 21

When PDF files are added to Mendeley, it will attempt to automatically generate the correct reference for the document (use the *Add Documents* icon, Figure 21). Details can be manually added if required.

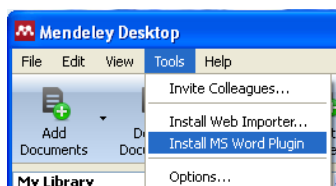


Figure 22

To use the reference library in Word, install the Mendeley add-ins using Tools – Install MS Word Plugin (Figure 22). In Word *Insert Citation* and *Insert Bibliography* will be available in the *Add-Ins* tab (Figure 23).

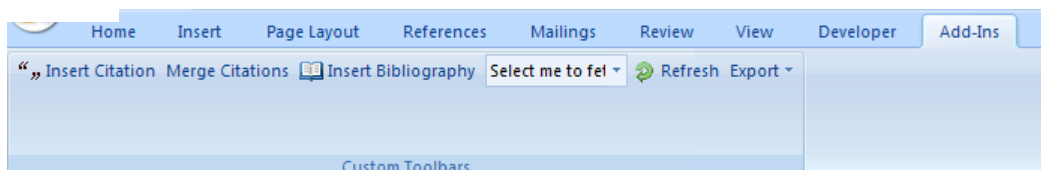


Figure 23

Here's an example citation about promoting reflection created from Mendeley using the *Insert Citation* button (Boud & Walker 1998).

Here's the Bibliography (normally placed at the end of the document), automatically created by the *Insert Bibliography* button:

Boud, D. & Walker, D., 1998. Promoting reflection in professional courses: The challenge of context. *Studies in Higher Education*, 23(2), pp.191-206.