

# INFS3202/7202 Practical 1 – Web Page Design

The goal of this practical is to explore HTML & CSS. This Practical counts 5% towards your assessment. You must present this practical to your lab tutor during your scheduled lab sessions in week 4. (Week Starting 22/03/2010)

This practical exercise is divided into 4 Tasks:

- Development of a HTML Page (1 Mark)
- Attaching a CSS Stylesheet for Style and Layout (2 marks)
- Validating your HTML & CSS (1 Mark)
- Challenge Task – Write CSS files for presenting your page on a mobile device. (1 Mark)

## Preparation

Before attempting this Practical you should have a good working knowledge of how to create a basic site using HTML & CSS. You should know how to use style sheets to change both the style and layout of a page and the advantages of using CSS over inline styling and table layouts.

Before Attempting this Practical Please Ensure:

- You have covered the material in Lectures 1 - 3.
- You have a good understanding of Basic HTML mark-up and how to create pages using markup notation. Students should understand how to use the following markups:  
<HTML><HEAD><TITLE><META><BODY><P><IMG><A><DIV><TABLE><TR><TD><LI>
  - A quick introduction is here: <http://www.w3.org/MarkUp/Guide/> & <http://www.w3.org/MarkUp/Guide/Advanced>
- You Should know how to use a CSS file to apply a consistent set of styles to objects in a HTML page or a set of HTML Pages
  - A quick introduction with examples is available here: <http://www.w3.org/MarkUp/Guide/Style>
- You should know how you can use CSS to apply and change the layout of objects on a HTML page or a set of HTML Pages
  - A quick tutorial is available here: <http://www.communitymx.com/content/article.cfm?cid=3B56F&print=true> & [http://www.w3schools.com/css/css\\_positioning.asp](http://www.w3schools.com/css/css_positioning.asp)
- Students should also understand what Markup and CSS validation are and why it is important to write "correct" HTML files:
  - <http://validator.w3.org/docs/why.html>
- Additionally <http://www.w3schools.com> is a good reference for HTML & CSS.
  - <http://www.w3schools.com/html/default.asp>
  - <http://www.w3schools.com/css/default.asp>

## Task 1 (1 Mark)

For this task students should use HTML to create a page resembling the following;

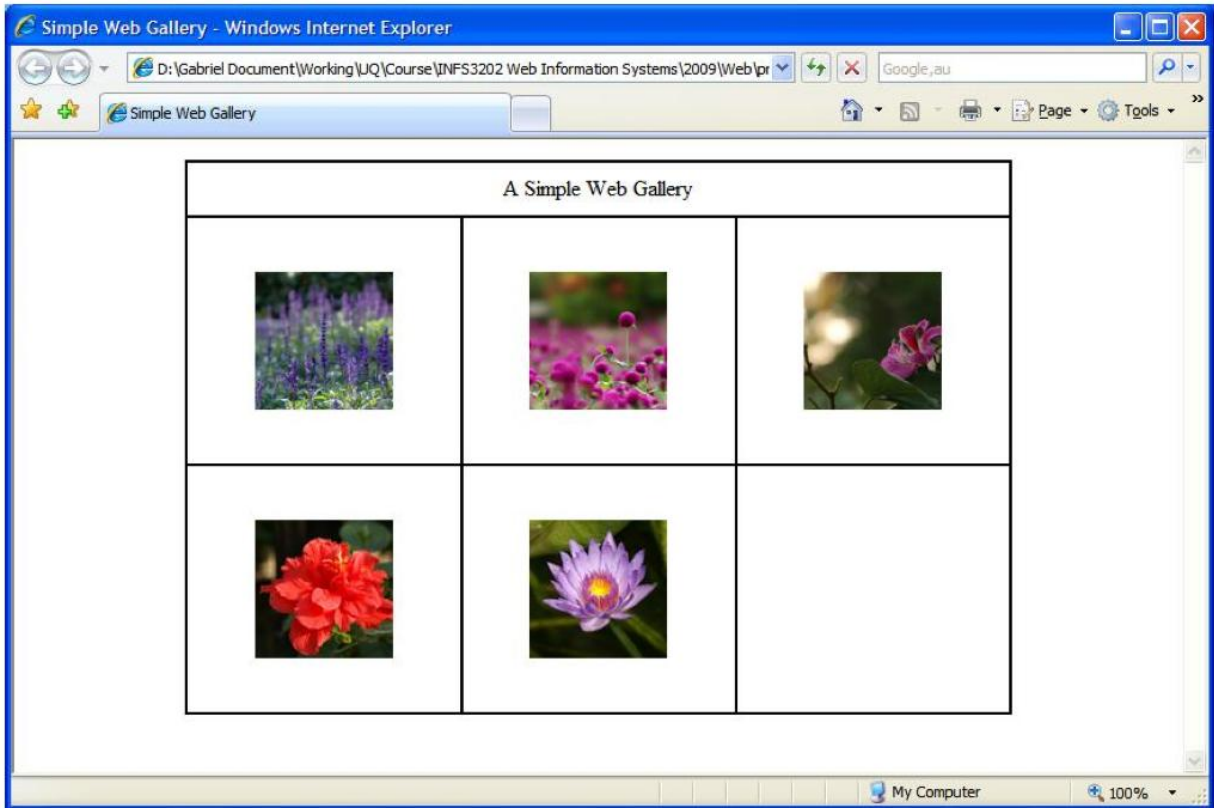


Figure 1

The page should contain an arrangement of images as pictured in Figure 1. When an image is selected, a new page (popup) should appear that contains a larger version of the image:

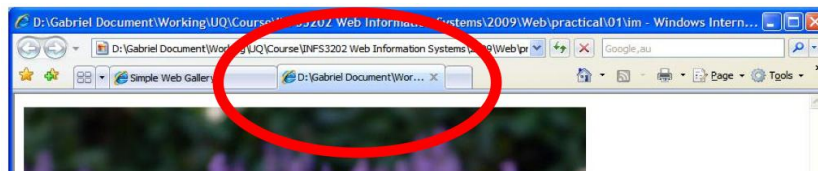


Figure 2

Students should avoid using Dreamweaver, Frontpage or another WYSIWYG Editor for this task. Using such an editor may allow you to quickly put together a page with the required elements, however the purpose of this Practical is to gain experience with the basic concepts of web development, plus students may find it difficult to complete the following tasks using automatically generated code.

**Guide:**

1. For this task there is no need for students to place their files on a webserver – they can be opened from a local directory.
2. Students can create the pages within their H drives (ie. H:\INFS3202\websites)
3. Select 5 or 6 images you would like to use – these images could be your own or from the web.
4. Create a new HTML document prac01\_1.html - This can be created in any text editor or IDE.
5. Create your version of the page in Figure 1.

**Requirements:**

1. You should make sure the title of the page is correct & the page and layout is as in to Figure 1.
2. Each image should be a hyperlink which opens the image in a new window (or tab) as shown in Figure 2.
3. The page language is English (Australia) and the HTML encoding is US (ASCII). They must be set in the header.
4. Each image is in the centre of the cell.

## Task 2 (2 Marks)

You will now make some alterations to your page. Including adding a menu and attaching a stylesheet:

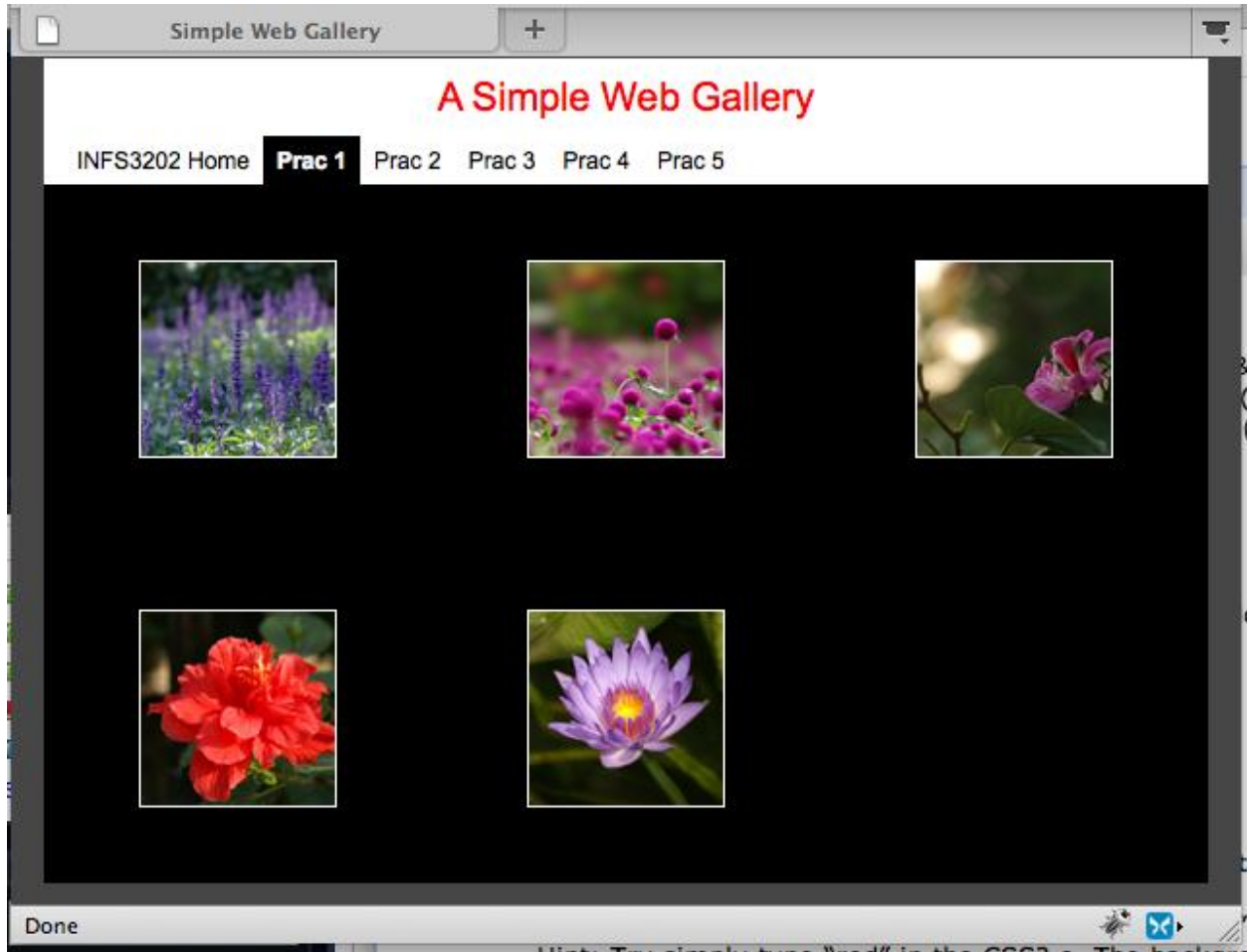


Figure 3

## Guide:

1. Create a CSS style sheet and link to it from your HTML page.
2. Add styles for each of the page's objects as required, you may also need to create some style classes and link objects on the page to them.
3. Add the menu to the page. You should create an unordered list and have each link as an item.
4. Style your list to appear as in figure 1. You may find this guide a useful starting point:
5. [http://www.webreference.com/programming/css\\_style2/](http://www.webreference.com/programming/css_style2/)
6. Modify your styles to show the "active" or selected menu item with a black background and white text.
7. Have the background of each menu item change colour when the user's mouse point rolls over it. As shown in Figure 4



Figure 4

## Requirements:

1. A Stylesheet must be externally attached.
2. The Menu must be written as a set of list items.
3. The Stylesheet should manage the colours and styles of all the pages content.
4. Your tutor will ask you to change various styles in the CSS file to verify that the page is updated.

## Hints:

- Define a class: "background-color: #464646" in the CSS file.
- Define a class: "border: 1px solid #FFFFFF;" in the CSS file. Use this class in all image tags.

### Task 3 (1 Mark)

For this task you should run your code through a Markup Validator:  
<http://validator.w3.org/>

#### Guide

1. Open your HTML file in notepad or another text editor.
2. Copy the source.
3. Open <http://validator.w3.org/>
4. Select The Validate by Direct Input Tab
5. Paste your code and select the check button Check
6. Investigate a few of the validation errors you receive – understand why you are receiving them and what the consequences may be.
7. Resolve as many errors as you can and re-run your report for your tutor.

Do the same for your CSS file: <http://jigsaw.w3.org/css-validator/>

#### Requirements

1. Review the page and answer these questions:
  - i. What impact do these errors have on the presentation of your page?
  - ii. Why is it important to develop pages adhere to these standards?
2. Students will receive 1 mark if they can show tutors which errors they have corrected and explain any remaining errors – you do not have to correct every error and warning – but you should be able to explain most of the errors to your tutor.

## Task 4 (1 Mark - Challenge Task)

This task is designed for students who have a very good understanding of HTML & CSS and how they can be applied to separate form from function and content from layout and style.

This task requires students to develop a CSS file to present the HTML page from Task 2 on a mobile browser interface. (320x480px) The contents of the HTML & CSS file from Task 2 can be modified to allow for this task to be completed, however it must still appear as it does in Figure 3 with the CSS file from Task 2 applied. You must demonstrate to your tutor that the only change you make between the two formats is the change of the CSS stylesheet.

### Requirements:

1. The Page (and content) Should be viewable when the browser (on your PC) window is resized to 320x480px
2. The menu items should appear vertically - rather than horizontally.
3. The pictures should appear in a single list vertically.
4. The contents of the HTML page should not be changed to demonstrate the task to your tutor (Apart from which style sheet is used) between the layout of Task 2 and Task 4
5. As per 2 & 3 above the user should simply need to scroll down the the page to view all its content - there should be no horizontal scrolling required.

### Hints:

- You used a list (<li> etc.) for your menu in Task 2. You may find it easier to modify the layout of other elements of the page with the stylesheet by organising them the same way.
- You can comment out (<!-- -->) one stylesheet while you demonstrate the other to your tutor, then switch them over.

Demonstrate your solution to a tutor and explain to your tutor how this example relates to real word mobile websites – what parts of this exercise would you apply to a real site for mobile viewers and what else could you do? Why is it important to use CSS for the page layout?