



SWINBURNE
UNIVERSITY OF
TECHNOLOGY

Swinburne University of Technology
School of Science, Computing and Engineering Technologies

Web Development
COS10005

Assignment 1, Semester 1, 2023

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| Due Date | Friday 10th April 2023, 11:59 PM |
| Submission Method | Canvas |
| Contribution to Final Assessment | 30% |

Purpose of the assignment

An individual assignment to familiarise students with the techniques and skills involved in creating webpages using validated HTML5 and validated CSS; loading and testing the website on the server; and demonstrating an understanding of HTML5 elements and attributes, CSS selectors and properties and their proper use. Moreover, it is to provide students with an appreciation of the importance of the separation of structured content from presentation as discussed in the lectures.

To highlight this, the assignment is specified and evaluated in three sections.

- The development of validated HTML5 webpages.
- The development of validated CSS files to present webpages on various devices.
- The development of accessible webpage
- The implementation of CSS animations.

Section One: HTML5 (40 Marks)

Create at least **THREE** web pages using HTML5 and with at least **one image on each web pages, three images in total minimum**. All images must be original, meaning you own those images.

The Information content on these webpages should be information about you. Please make sure to include:

- Demographic information about you;
- A description of your hometown;
- A great achievement in your life (so far);
- A list of your favourite books, music and films or games;
- A HTML table to present your weekly academic timetable at Swinburne.

[IMPORTANT] All webpages must be fully validated against HTML5 without errors, on <http://validator.w3.org>.

The following HTML elements **MUST** be used in this assignment. Some will be used on all pages while others might only be used once.

- General elements ○ `<head>`, `<title>`, `<meta>`, `<body>`
- Structural elements ○ `<header>`, `<nav>`, `<main>`, `<footer>`, `<aside>` ○ `<article>`, `<section>`, `<aside>`
- Content elements ○ `<h#>`, `<p>`, `<hr />`
 - ``, ``, `<table>`, `` and `<a>`
- Form elements ○ `<form>`
 - `<input>`
 - `<label>`

[IMPORTANT] The use of the form must fit the context of the web page.

Form data should be submitted to:

<http://mercury.swin.edu.au/it000000/cos10005/surveytest.php>

Other HTML elements such as `<div>`, ``, `<blockquote>`, ``, ``, `<fieldset>` and more can be used as necessary and appropriate for the content.

Each page must have a skip link so the user can navigate back to the main page.

A menu must be created on each web page that allows users to navigate through all the webpages on your website. This menu must be properly styled using CSS.

Please organise your HTML code properly and annotate the source code with comments as necessary.

Section Two: Basic CSS (30 Marks)

Develop **TWO** CSS files that style the web pages, one for a desktop and another for a mobile phone. The webpages must be styled to suit the corresponding device, e.g., the layout, font size and the sizes of the major components of the webpages.

Demonstrate a range of selectors, including but not limited to:

- element *e.g., `h1 {}`, `p {}`*
- class, *e.g., `.image {}`, `.highlighted {}`*
- id *e.g., `#tbName {}`*
- grouping *e.g., `h1, h2, h3 {}`*
- contextual *e.g., `ul li {}`*
- pseudo-classes *e.g., `:hover {}`*

Demonstrate the following groups of CSS properties:

- Menu *e.g., style a navigator that contains links to all web pages*
- Web Typography *e.g., fonts, colors, text alignment*
- Box Model and Visual Formatting *e.g., border, margin, padding, width, height, background image*
- Liquid Page Layout *i.e., page layout adapts as you resize the browser window*

Use of other CSS selectors and CSS properties are encouraged, as necessary and appropriate for styling the webpages.

Please properly organise your CSS code and include comments within your CSS code as needed. e.g., `/* banner style */`.

Creativity is strongly encouraged in the web site design. Creative designs will be rewarded with bonus marks.

Section Three: SEO (20 marks)

You want to improve your website's search engine ranking. You need to research about Search Engine Optimisation techniques (SEO) in relation to your website code and content and come up with five points (including using tags) to improve the ranking of your website. Prepare a document to explain these five techniques. In addition, you need to provide references to your code to show us how as a result of your research you implemented/improved your code. This document must be at most 2 pages long. The relevant code can be included as an image or text within the 2-page limit.

Section Four: CSS Animations (10 marks)

Implement a CSS animation. There are many types of CSS animations. Take your pick and make sure it is applied to appropriate HTML elements. Feel free to use Google or any source of information you deem appropriate to look up the code you need to implement the CSS animations.

Create a fourth page named `animation.html` and incorporate it into the menu navigator. On this webpage, list the animation that you have implemented and provides hyperlinks to where the animation is implemented.

[IMPORTANT] All CSS files must be fully validated against CSS3 without errors, on <http://validator.w3.org>.

Assignment Submission

The assignment should be submitted as an individual work through **Canvas** on or before the deadline.

- Create a folder/directory “wd_assign1” for your website files and folders. In folder “wd_assign1”, create a sub-folder “images” for images used for content and a sub-folder “style” for your CSS files.
- Compress folder “wd_assign1” and all your HTML files, images files and CSS files into a zip file named “wd_assign1.zip” and submit it through Canvas.
- All deliverables except must be submitted in this zip file.
 - You can submit through Canvas and the latest submission overwrites the previous one.

Before submitting the assignment, please ensure that you have completed or considered the following:

- Check if you have fulfilled the requirements and avoided the deductions in the Marking Scheme
- Check the Canvas for announcements related to the assignment.
- The assignment is your original work. If your assignment is not your original work, your result will be zero marks for this assignment.
- Validate and test your webpages on the Mercury server. If your assignment cannot be fully validated or properly displayed on the Mercury server, penalties will apply.
- Ensure that you submit before the due time to avoid penalties.

Marking Scheme

The assignment will be marked out of 100.

| | Mark | Requirements | Deductions |
|-----------------------|------|--|--|
| HTML5 | 40 | <ul style="list-style-type: none"> • All required HTML elements created (10) • At least 3 HTML pages of original content (15) • Webpages fully validated against HTML5 (5) • Source code properly indented, commented and organised (5) • At least 3 images in appropriate sizes (5) | <ul style="list-style-type: none"> • Web pages not fully validated against HTML5 • Web pages not displayed properly • Not enough web pages • Lack of required HTML elements • Lack of required contents • Deprecated HTML elements/attributes used • Embedded or inline CSS • Links on web pages not working • Unoriginal contents • Lack of required images • Unoriginal images • Images too large or too small |
| Basic CSS | 30 | <ul style="list-style-type: none"> • All major components of web pages properly styled, e.g., <code><header></code>, <code><main></code>, <code><footer></code> and <code><aside></code> (8) • All required CSS selectors demonstrated (3) • All required property groups demonstrated. (3) • 2 CSS files, one for desktop and the other for mobile phones. (3) • Appropriate and fluid page layout. (3) • CSS files fully validated against CSS3 (3) • CSS code properly indented and organised (2) • CSS properties logically grouped (2) • Consistent styles for all web pages (3) | <ul style="list-style-type: none"> • CSS files not fully validated against CSS3 • CSS files not properly applied to web pages • Lack of required CSS file(s) • Not all major components of web pages properly styled • Inappropriate web page layout • Inappropriate contrast between foreground and background text colour • No major difference in page layouts for desktop and mobile phones • No comments or unclear comments • Lack of required CSS selectors • Inconsistent styles for different web pages |
| SEO | 20 | <ul style="list-style-type: none"> • Enough research has been performed and the content has enough depth (5) • At least 5 points are provided (5) • Document is written clearly and has several references (5) • Student provided at least 3 references to their code and how tags can be used to improve SEO (5) | <ul style="list-style-type: none"> • Too many words • Irrelevant items to Web Development • Lack of references • No reference to their own code |
| CSS Animations | 10 | <ul style="list-style-type: none"> • CSS animation implemented. (10) | <ul style="list-style-type: none"> • CSS animation do not work properly. |
| Total | 100 | | |