Swinburne University of Technology Sarawak
Faculty of Engineering, Computing and Science
School of Information and Communications Technologies

COS10011 Creating Web Applications
Assignment 1 - *Semester 1, 2019*

Late submission penalty is 10% of the total available marks per day
This is a GROUP assignment. Individual submission will not be accepted.

Contribution to Final Assessment: 15%
Hurdle Note: You must meet the Essential Requirements of this assignment to be eligible to submit Assignment 2 (and 3), and to be eligible to pass this unit.

Purpose of the assignment

This assignment will familiarise you with the techniques and skills involved in designing and creating static webpages utilising validated HTML and CSS created with a standard text editor. You will deploy these Web pages on an Apache server. This should be done in a way that keeps the HTML content and CSS presentation separate, as discussed in the lectures. **No JavaScript is to be used in this assignment.** JavaScript will be included in your next assignment.

Scenario:

You and your team mates are starting up a new online rental business. For that purpose, a Website needs to be created. This Website should promote the rented products and/or services which may be in the form of, but not limited to, the following:

- *Cars, bicycles, motorbikes, motorhomes*
- *Rooms*
- *Shared office space / meeting rooms*
- *Costumes*
- *Videos, books*
- *Sound systems*
- *Party equipment*
- *Aquarium*
- *Water filter*
- *Vending machine*
- *etc.*

You are free to choose or propose the product / service that can be rented. Exercise your creativity. It is possible for more than one group to end up working on the same product / service theme. However, the Website's design and content must be absolutely different. An important factor to consider when selecting the theme is to ensure that the rental product / service will have sufficient varieties (i.e. range of products and services) to meet the essential requirement of this assignment.

You must register your selected theme and team members by the latest Friday, 21 Sept 2018 during the lab. Give your group name, group member name and group theme (topic) to your lecturer or tutor.

In this assignment you will develop a prototype of this Website. General requirements for the structure, presentation and content of the pages of the Web site are described below.

In order to meet the *essential requirements* of this assignment, all pages must:
- have content relevant to your products offered including text and image
- must validate to HTML5 without errors *and* be well-formed XML
- must be styled by a validated CSS file
- must be linked to each other via a menu
- must be deployed on XAMPP.

Detailed marking criteria are contained on the separated marking sheet.
In summary these are:
- Essential specified requirements (46%)
- Other specified requirements (34%)
- Enhancements to specified requirements (20%)

Guidelines for working in team

You must complete this assignment (as well as the subsequent assignments) in **a team of 3 or 4 students from the same Lab group**. Teaming up with students from another lab session is not allowed.

A team leader must be appointed for each team. The team leader is responsible for ensuring a fair and reasonable distribution of workload among the team members.

Each team member must ensure that the allocated workload allows him/her reasonably demonstrate his/her knowledge and proficiency as expected by this assignment. For instance, it is **not acceptable** for a team of four students to have *student 1* work solely on the HTML, *student 2* on CSS, *student 3* on JavaScript, and *student 4* on PHP codes. Each student must be able to demonstrate the level of proficiency in HTML, CSS, JavaScript, and PHP as expected by this Unit. Consequently, a poor workload distribution may eventually affect an individual's mark.

Although this is a team assignment, it is possible for individual marks to differ. No contribution results in no mark.

Essential & Other Specified Requirements
Note: You should design the layout of you Web pages on paper or using first before implementing them.

HTML Elements
Webpage(s) must be developed using HTML5 to describe the content and logical structure. Pages should not contain any deprecated elements/attributes. The following HTML elements should be used in the assignment

- General
  - Comment, Head, Title, Meta, Body
- Content
  - Heading levels, Paragraph
  - Ordered list, Unordered list, Table, Image and Anchor
  - A Form, with form control elements
- Structure
  - Header, Navigation, Footer, Article, Section, Aside

Other elements such as division, span, block quotes, strong, emphasis, among others can be used if deemed necessary and appropriate for the content.

All Web pages should have a consistent layout and navigation. Where "in-house" **templates** have been defined in this unit (e.g. for meta-data; tables; etc.) these should be followed. These include accessibility alternatives.

The HTML in you Web pages *must*
  - i.   validate against the W3C HTML5 validator (http://validator.w3.org/)
  - ii.   Be well-formed XML.

> **Hint:** HTML5 validators do not necessarily check that the XML is well-formed. To enable checking of your Web pages, save versions of these in your localhost folder with an .xml extension (for example a *copy* of myfile.html would be renamed myfile.xml). If well-formed no errors will show when the xml file is loaded into a browser.

CSS Requirements
Note: No style markup should be included in your HTML file.

The pages in your web site must be styled with CSS and have a consistent 'look and feel', particularly with code such as menus, headers and footers. While the emphasis is this assignment is on the appropriate application of techniques rather than graphic design, your pages should follow basic usability / accessibility principles, e.g. distinguishable foreground and background colours, and font readability, etc.

You are to create your own single *external* stylesheet to implement your design.

The following CSS Selectors should be used:
- element, #id, .class, grouping, contextual, element.class

The following CSS property groups should be used:
1. Web Typography
    - Colour
    - Fonts
    - Alignment
2. Visual Formatting
    - Box model and layout
    - Width, Height
    - Borders
    - Background image
3. Fluid Page Layout (on page resize)

Other CSS selectors and properties can also be used if deemed necessary and appropriate for the presentation. *Your menu should have its own set of styles applied.* **CSS should be commented** at beginning of the CSS file to identify author and purpose, and individual line comments should be used as necessary to explain particular styles and explain where they are applied.

For this assignment you should create a **single** CSS file that applies to *all* your Web pages. This file should be named *style.css*

> **Hint:** CSS validators will validate against a particular version of CSS e.g. CSS2.1 or 3. This assignment should be valid CSS2.1 or CSS3. Make sure that you are checking your CSS using the correct version of the validator. For example, if you include CSS3 markup and validate as CSS2.1 it will show errors. (Best to pre-set the version in the Web Developer tools – see the note on Blackboard). Do not include any proprietory CSS mark-up, such as –moz- or –webkit- etc.

Content and presentation of Web Pages

1. Introductory homepage
This page should contain appropriate title and graphic related to your rental service. This page should also contain a menu that links to the other pages on your Web site. This menu should appear on every page of your website.

The filename of this page will be **index***.html*

2. Product pages
Minimum 3 to 4 pages must be included in the Website to describe the products / services being rented (*i.e. a team of 3 students is expected to produce minimum 3 product pages; a minimum of 4 product pages for a team of 4 students*). Each page may describe a specific product sub-category. One each page, **a minimum of 5 product / service items** must be included. At least one appropriate image must be displayed for each item. The content should be appropriately structured with headings, sections, asides, lists etc.

Each page should be sufficiently described in English (at least 200 words). Use your own words. Do not copy and paste from other Web sites.

Sources / References:
• You can refer to materials (not copy and paste) and images from other web sites. In this case, the source of all materials must be acknowledged. This acknowledgement should be immediately after the material and include a hyperlinked URL to the original source. The text of the hyperlink reference can be a short name but the hyperlink must work.

The filename of these pages will be ***product1.html, product2.html, product3.html, … .***

3. Rental enquiry page
This page has a form that allows a user to place the rental enquiry. The form will have a number of input fields. The name, type and data format of these input fields are as follows.
   a. **First name**: *text* type, maximum of 25 characters, alphabetical characters only
   b. **Last name**: *text* type, maximum of 25 characters, alphabetical characters only
   c. **Email address**: *email* type
   d. **Address** (group these inputs with a fieldset and label)
      • **Street address**: *text* type, maximum of 40 characters
      • **City/town**: *text* type, maximum of 20 characters
      • **State**: use a *select* type to select from all states and federal territories in Malaysia
      • **Postcode**: exactly 5 digits
   e. **Phone number**: *text* or *tel* type, maximum of 10 digit. Use a placeholder.
   f. **Product** - from the range the user wants to enquire about: use *select* type.
   g. **Rental duration:** *number* type
   h. **Comment** field - allowing the reader to specify particular aspect they are interested in: *textarea* type

All form values, except Comment are 'required'. ***The user should not be able to submit the form if any of the required fields is blank.*** Use HTML5 form validation to check the format and completeness of the form.

The filename of this page will be **enquiry***.html*

4. Profile pages of team members

One profile Web page must be created for each team member (i.e. three pages for a 3-member team, four pages for a 4-member team). Information in these Web pages **must be consistently formatted** with CSS in the following way:

Information	Format requirement
Your name	Centre aligned to the page, bold, font size 200%
Student number	Right aligned Arial font (default to San Serif if Arial not available)
Course you are doing	Colour specified as a RGB number
Photo of you	Floating Groove border with 20px padding Size in bytes less than 100k
A table enlisting your individual contribution to the assignment. You must describe each contribution with some details.	Centred Headings in bold Table cells have a background colour specified in hexadecimal number
A **mailto** link to their email.	Centred at the bottom of page in the footer

It could also include personal profile, such as resume, interests, or information that is related to you. This extra information gives you an opportunity to extend the techniques you apply in your assignment, and could include:
- Demographic information about you
- Description of hometown
- A list of your favourite books, music, films etc.

The filename of these pages will be ***aboutme1.html, aboutme2.html, aboutme3.html, … .***

5. Disclaimer page

Include and format the following page properly in the disclaimer page:

> - *This website is created mainly for educational and non-commercial use only. It is a partial fulfilment for completion of unit COS10011 - Creating Web Applications offered in Swinburne University of Technology, Sarawak Campus for Semester **<X>, <Year>**.*
> - *The web-master and author(s) do not represent the business entity.*
> - *The content of the pages of this website might be out-dated or inaccurate, thus, the author(s) and web-master does not take any responsibility for incorrect information disseminate or cited from this website.*
> - *If you believe that information of any kind on this website is an infringement of copyright in material in which you either own copyright or are authorized to exercise the rights of a copyright owner, kindly contact the web-master (your email address) for removal.*

The filename of this page will be ***disclaimer.html***.

Enhancements to the Specified Requirements
Note: Make sure you meet all essential requirements before attempting this.

You can develop enhancements on your Web site that go beyond the requirements specified above. This is an opportunity to demonstrate your ability to discover techniques from a range of sources and apply them in a standards compliant manner.

These enhancements need to be implemented on your *existing* Web pages (index.html, <product pages>.html, enquiry.html, disclaimer.html, and <about me pages>.html). The extra feature needs to enhance your Web site in a relevant way.

On a separate Web page called ***enhancements.html*** list and describe each enhancement you have made and how you have significantly extended the basic HTML and CSS beyond what is covered in the Labs. Hyperlink from the list to where the feature is implemented on your Web site. If it is a CSS feature, hyperlink to an example of the html that is selected by the CSS rule.

Any enhancements that are not listed and linked on the Enhancements page will not be assessed. Note: Do not implement your extra features within the enhancements.html page.

Examples of HTML/CSS enhancements you might make that will contribute a higher mark include:
- *Embedding External Content* in your webpage i.e. Google Maps (about.html), related Youtube video, Photo gallery engine, widgets etc.
- *Effective and appropriate* use of other HTML5 elements not covered in tutorials (e.g. Canvas, Video, Audio). Note: some HTML5 elements may not be fully supported by Firefox, so make sure you check first as the assignment will be tested on Firefox.
- An additional CSS file(s) that presents your Web site specifically for mobile phone / tablet sized displays.
- Additional CSS properties or selectors (e.g. support for interactivity) not covered in the tutorials. For example the use of CSS pseudo-elements and classes, child or siblings combinators, attribute selectors, etc.
- Additional comments in the CSS files to show how to edit the declaration values to, for example, change the colour scheme. Comments must be in the context of its application, and not general comments.

Note: Do not include JavaScript in this assignment. This will be covered in your next assignment.

Your Enhancements page **must** list the enhancements you have implemented. For each feature briefly explain:
- ☑ how it goes beyond the basic requirements of the assignment
- ☑ what code is needed to implement the feature
- ☑ if you have sourced your technique from a third party the source of this technique (e.g. URL) **must be cited**.
- ☑ **a hyperlink *to where you have applied that extension in your Web site*** (this is need so the tutor can quickly assess your enhancements during the demonstration).
- ☑ All enhancements must be able to run on Firefox. Make sure you check this.

To gain a full 5 marks for a feature it must:
- Be relevant to / enhance the content of the Web site
- Be well described (as explained above)
- Be non-trivial. Judging this will be at the *sole* discretion of your tutor/marker. As a guide if the enhancement has only taken a couple of lines of code it is likely to be trivial.

A maximum of 4 enhancements will be assessed.

Web Site Folder Structure and Deployment Requirements

Create a website structured as described below. You can create additional HTML files for your content (depending on what your content requires), but the following is needed:

```
assign1/       You must have this folder – case sensitive!
      index.html
      product1.html etc…
      enquiry.html
      aboutme1.html etc…
      disclaimer.html
      enhancements.html
      ...other html pages (if any)
      images/              Folder for images for your page content
      styles/              Folder for style.css other css files
      styles/images/       Folder for images referred to by your css files e.g. background
      xml/                 Folder for the XML version of the webpages
```

Notes:

- HTML files should only be in the root "assign1/" folder – not anywhere else.
- **All** images used for the **content** should be stored in the "assign1/images/" folder.
- There should be a "style.css" file in the "assign1/styles/" folder.
- All links to your files (CSS or images) should be *relative*. ***Do not use absolute links***, as these links will be broken when files are transferred for deployment/marking. No marks will be allocated if links are broken.

Assignment Submission

An electronic copy of your assignment should be submitted through blackboard at https://blackboard.swinburne.edu.my on or before the due date.

- Make sure all you files are in the correct folders and compress your root folder contains all your sub-folders with HTML, CSS, and images into a zip file named "assign1.zip".
- You can submit a maximum of 3 times through the Blackboard. The latest attempt will be marked.
- Note that all deliverables must be submitted as softcopy. You are only required to submit the hardcopy of your report, marking scheme and assignment cover sheet.
- Each group should only submit one copy

Demonstration Procedure

*Note: During the demonstration, your tutor will not only review the functionality and appearance of your Website but will also examine how the source codes are **written**. Display the source codes along with the Website during the demonstration.*

1. Make sure you attend your allocated lab. You are required to demonstrate your assignment to the tutor in your allocated Tutorial in **Week 7**. <u>Every member</u> in your team must attend this session to receive a mark for this assignment. If you cannot attend your allocated tutorial due to illness you must provide a copy of the medical certificate to the convener.

2. Bring the following to your demonstration:
    a. The hardcopy of your printed report, marking scheme, attached with the assignment cover sheet

3. Before your demonstration starts
    a. Fill in and sign the Declaration on the Marking Sheet.
    b. Make sure your web site is running **on the local server (XAMPP)**.
    c. Load the Web site into **Firefox**. All demonstrations will be done on Firefox.
    d. Load Firefox with the appropriate extension for **validating** the HTML and CSS.
    e. Validate all your pages in advance and leave the validation result pages in separate browser tabs so the tutor can quickly see these.
    f. In a separate window display the **source code** for your HTML and CSS.

4. **During** the demonstration your tutor will ask you to run through the steps set out below.
    a. Load *index.html* then click through the link to each page you have created, and validate them as you go using the Firefox developer extension.
    b. Validate your CSS using the Firefox developer extension.

5. As you demonstrate your Web site your tutor ***will ask you to show the HTML and CSS code*** in your browser and explain how you have implemented various aspects of it.

6. If there is time you may have an opportunity to demonstrate and explain your enhancements page. If not, your tutor will mark this from your Blackboard submission.

Following the demonstration, your tutor will subsequently mark your source code and documentation.