Lab 4 – More HTML and Introduction to CSS

Your mock-up and completed Web pages with CSS should be checked by your tutor.

Aims:

- To design a web page mock up
- To create a form using HTML elements
- To understand and use HTML structure elements
- To use CSS for the presentation of a web document
- To gain some skills and knowledge to complete Assignment 1.

Task 1: Design a survey

Do this task with the person sitting next to you in the lab.
Alternatively, create the mockup for your survey at home and get it checked off in class.

"Pencil" is an open-source GUI prototyping sketch tool that's available for all platforms. (Alternatively you can create a real pencil and paper sketch)

If you are going to use Pencil, go to "Pencil Project" home page at http://pencil.evolus.vn/ and download the Pencil Firefox Extension from http://pencil.evolus.vn/Downloads.html or directly from http://evoluspencil.googlecode.com/files/Pencil-2.0-5-fx.xpi. Install the extension into Firefox, after downloading, by "drag and drop" the .xpi file into an open Firefox window.

Create a 'paper-based' mock-up design of a **3 page survey**.
Use various shapes from the available collections (e.g. 'Sketchy GUI') and create the mock-up of the Web pages in your browser. ***The mock-up should be saved, so you can show it to your tutor.***

The *topic* of the survey is *your choice*.

1. Page 1, **surveyhome.htm**
   An introductory page with a graphic (your choice) explaining what the survey is about.
2. Page 2, **register.htm**
   On this first page the user registers their Personal details: name, sex, date of birth, etc, *using appropriate form controls* (text boxes, radio buttons, HTML5 calendar?, submit, etc.)
3. Page 3, **questions.htm**
   This page is to have a form that asks 3 questions related to your topic of interest (e.g. music, sport, programming, computer games, etc.). A *different form control type* should be used for each question, and should include at least two check boxes and one drop down list (select), and submit.

Each page should have a:

- A header (with a logo)
- A navigation area (with either forward/back links, or a menu)
- A content area – with instructions and/or form(s)
- A footer area – document information including the author's name

Common information structures for website organisation are:

- **Hierarchical** - *Tree*
- **Linear** - *Linear, Tutorial*
- **Network** (Exploratory) – *Web, Cluster, Catalogue*
  See "Web Style Guide – Information Architecture"
  http://webstyleguide.com/wsg3/3-information-architecture/index.html

The basic structure of ***this*** Website will be a **Linear** information structure.

Task 2: Implement the survey using HTML forms

Step 1 Document Structure:

Use any text editor on your local computer (e.g. NotePad++), create a template for your survey pages. The content (graphics, instruction, survey form etc.) will be placed between the `<body>...</body>` tags.

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="utf-8"/>
  <meta name="description" content="Creating Web Applications Survey"/>
  <meta name="keywords"    content="HTML, CSS"/>
  <meta name="author"      content="put your name here"/>
  <title>Internet Technology Survey  - [your topic here] </title>
</head>
<body>
            <!-- Survey content -->
</body>
</html>
```

Save this html as **surveytemplate.htm.**
Load it into Firefox and validate it locally using the Web Developer Extension.

Extending this document structure, create a document template you will use for the pages of your survey. This template should include HTML5 structure tags including:

```
<header>
<nav>
<section>
<footer>
```

For any content that will be the ***same*** for all pages (e.g. header, nav, footer) add the appropriate text and image content. For example if you are using a menu to navigate, for every page if you may want it as a list:

```
<nav>
  <ul>
    <li><a href="surveyhome.htm">Home</a></li>
    <li><a href="register.htm">Register</a></li>
    <li><a href="questions.htm">Survey </a></li>
  </ul>
</nav>
```

or like this if you want the menu in a single line:

```
<nav>
  <a href=" surveyhome.htm">Home</a> |
  <a href=" register.htm">Register</a> |
  <a href=" questions.htm">Survey</a>
</nav>
```

Alternatively you could make a navigation section with “Next” and “Previous” links
(or have both styles of navigation on your page).

Re-save this html template**.**
Load it into Firefox and validate it locally using the Web Developer Extension.
Check that it is well-formed XML using the procedure described in Lab 2.

Step 2 Upload the Survey Template to Mercury

Create a new folder 'lab04' under the unit folder on the mercury server ~/*{your unit code}*/www/htdocs.
Upload the file **surveytemplate.htm** to the folder using WinSCP.

To view the page through Firefox at the following address,

http://mercury.ict.swin.edu.au/*{your unit code}*/*<username>*/<folder/.../filename>

The <*username*> is **s**< *your 7 or 10-digit Swinburne ID* >. For example

http://mercury.ict.swin.edu.au/*{your unit code}*/*<username>*/lab04/surveytemplate.htm

When the authorization request dialog pops up, use your ***SIMS username and password*** to confirm access.

Re-validate on the server this time using the 'File Upload' interface at http://validator.w3.org or the 'Validate HTML' tool in the Web Developer Extension.

Step 3 Adding content to the pages.

Take a copy of the template **surveytemplate.htm** you created in Step 2 and for each of your survey pages save it in turn as **surveyhome.htm, register.htm** and **questions.htm.**
For each page fill in the appropriate content based on the design you did in Task 1.

Make sure text is placed inside an appropriate HTML text container element like <p>, <h1>, <h2>, etc.
Use other HTML elements as needed.

*Loaded the pages into Firefox, as you incrementally add content, refresh the page and **revalidate.***

For the web pages that require user input use the `<form> … </form>` element.
You can refer to Lecture 3 for reference:

- <label>s within the form should link with their <input> controls using **for** attributes that references the id of the associated input control.
- Use form elements such as <input …>, <select> … </select> , <text area> … </text area> as appropriate.
- Use a range of input controls to match the design you created in Task 1.
- Use <fieldset> … </fieldset> and <legend>…</legend> to appropriate group input controls and labels.

For example, the first question page for the user's personal details could be marked up as follows.

```
<form id="survey" method="post"
          action="http://mercury.ict.swin.edu.au/it000000/surveytest.php ">
  <p><label for="username">Enter your name</label></p>
  <input type="text" name="username" id="username" size="20" />

  <fieldset>
      <legend>Sex:</legend>
      <input type="radio" name="gender" id="mgender" value="M" />
      <label for="mgender">Male</label>
      <input type="radio" name="gender" id="fgender" value="F" />
      <label for="fgender">Female</label>
  </fieldset>

<!-- Insert a HTML5 input to show a calendar to get date of birth. See Lecture 3 -->

  <p><input type="submit" value="OK" />
     <input type="reset" value="Reset" />
  </p>
</form>
```

A processing script has been set up at the server with the following URL:

```
http://mercury.ict.swin.edu.au/it000000/surveytest.php
```

This allows you to test whether your form correctly passes the inputted data (name = value pairs), to the server. ***Note that none of the sample data entered will be saved at the server.***

Step 4: Check Navigation

If they are not already in your template, create the hyperlinks in your <nav> sections so that the user can navigate between pages in the survey.

Test all the hyperlinks work and the all pages display correctly.

Remember: don't worry about the presentation or layout of the *individual web pages* yet.
We will style them with CSS in the next task.

Load the Web pages to your folder* lab04 *on Mercury then test and revalidate. Check the XML is well-formed

Task 3: Applying CSS

In this task you will apply some simple styling to the Web pages you create in Task 2.

Step 1 Create CSS file and link to the web pages.

In Notepad++ or similar editor, create a new text file called “survey.css” and save it in the same local directory as your web pages.

Create links to this file from each of your web pages by adding a reference to the external stylesheet in each of the <head> elements as follows:

```
<head>
        <!--  other meta stuff -->
        <link href= "survey.css" rel="stylesheet"/>
</head>
```

Revalidate your web pages as you go.

Step2. Add content to the CSS file.

Using */* [comment here] */*, add a comment to the top of the CSS file stating its name, purpose, author and data created.

1. Format <h1> to the colour blue and bold:
   h1 { color: blue; font-weight: bold; }
2. Centre the footer, change the variant to small caps, and change the font family:
   footer { text-align: center; font-variant: small-caps; font-family: Arial, Helvetica, sans-serif; }
3. Put a border around the navigation hyperlinks and create a pseudo elements over the hyperlinks:
   nav { border: medium solid}
   a:hover { background-color : #2288ff; }
4. Add some other style rules to your enhance you survey. Lecture 4 can be used as a reference.
5. Resave your CSS file, and refresh the Web pages.
6. Upload your CSS file the lab04 folder in Mercury and retest.

Step 3. Validate your CSS

1. Go to the W3C Validation Service web site at http://jigsaw.w3.org/css-validator/
2. Upload you CSS file and check it for errors.
3. Fix any errors.
4. Do the same this time using the Web Developer Extension of Firefox.
   a. Load a web page(s) locally and check the local CSS.
   b. Load the web pages from the server and check the CSS from there.

Show your completed styled web site to your tutor so your work can be marked off as complete.