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| Lab 5 – Content Structure and CSS Page Layout |
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**Aims:**

- To understand the importance of designing prior to CSS implementation.
- To mark up a document using HTML5 content models for presentation using CSS.
- To learn the techniques and skills required for assignment 1.

## Task 1: Structure and Present a Webpage (2 Marks)

**Step 1: Folder Creation**

1.1 Create a **lab05** folder on the Mercury server and upload and test your work from there.

1.2 Download the file surveyhome.html from Canvas and use it as a template for this lab work.

**Step 2: Webpage Design**

2.1 Using the home page designed Figure 1, identify the HTML elements required to structure surveyhome.html. Determine if an "id" or "class"
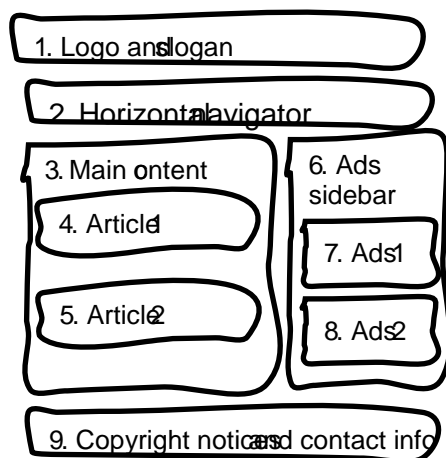


**Figure 1: Mock Up of Home Page**

attribute is needed for the HTML elements.

|  | Element | id / class / not required |
|---|---|---|
| 1. |  |  |
| 2. |  |  |
| 3. |  |  |
| 4. |  |  |
| 5. |  |  |
| 6. |  |  |
| 7. |  |  |
| 8. |  |  |
| 9. |  |  |

**Step 3: Basic HTML**

Use Notepad++ (or Sublime Text for Mac users) to open and edit surveyhome.html.

3.1 Add the HTML general structure below to the document to construct the webpage.

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Survey Service</title>
```

```
    <meta charset="utf-8" />
    <meta        name="description"        content="Web        Development"        />
    <meta     name="keywords"                    content="HTML     and     CSS"     />
    <meta name="author"        content="put your name here" />
</head>
<body>
…
</body>
</html>
```

3.2 Structure the webpage according to the mock up presented in Figure 1 using HTML5 structural elements, e.g., <header>, <nav>, <main>, <article>, <section>, <aside>, <footer> and other appropriate HTML structural elements.

3.3 Mark up the document within each HTML structural element using appropriate HTML content elements, e.g., <h#>, <p>, <ul>, <a>, <img> and other appropriate elements. Specify "id" or "class" attribute as needed.

**Step 4: Folder and CSS File Creation**

4.1 Create a new CSS file named surveyhome.css.

4.2 Create a folder named css and save surveyhome.css in that folder.

> **Note: A website might have more than one CSS file, so it is a good practice to store all CSS files in a separate folder. See Figure 2 for example.**
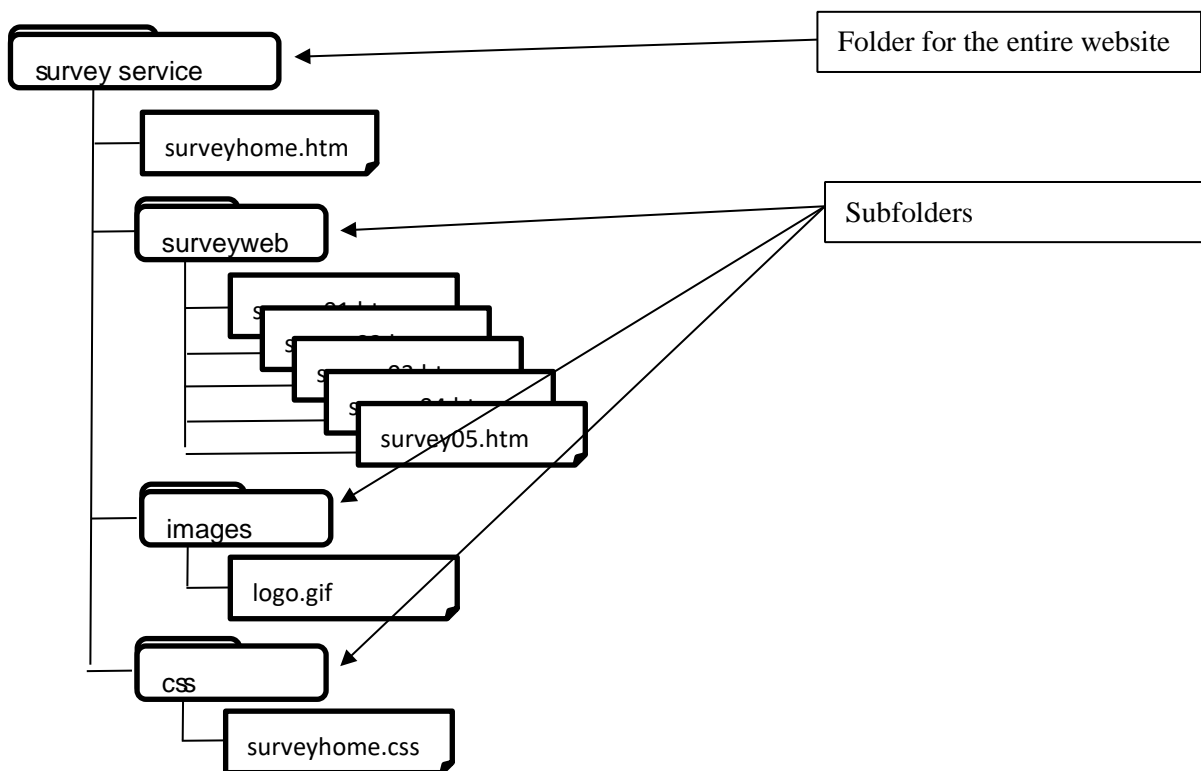


Folder for the entire website

Subfolders

**Figure 2:**
**Directory structure**

4.3 Add the following code into the head section (below the title element) of surveyhome.html. This will link surveyhome.css to surveyhome.html.

```
<link href="css/surveyhome.css" rel="stylesheet" type="text/css" />
```

**Step 5: CSS Positioning**

Complete and apply the CSS rules below applicable HTML structural elements shown in Figure 3.

> **Note: You might need to specify the *id* or the *class* attributes of applicable HTML elements so that they can be properly selected in the CSS file for CSS application.**
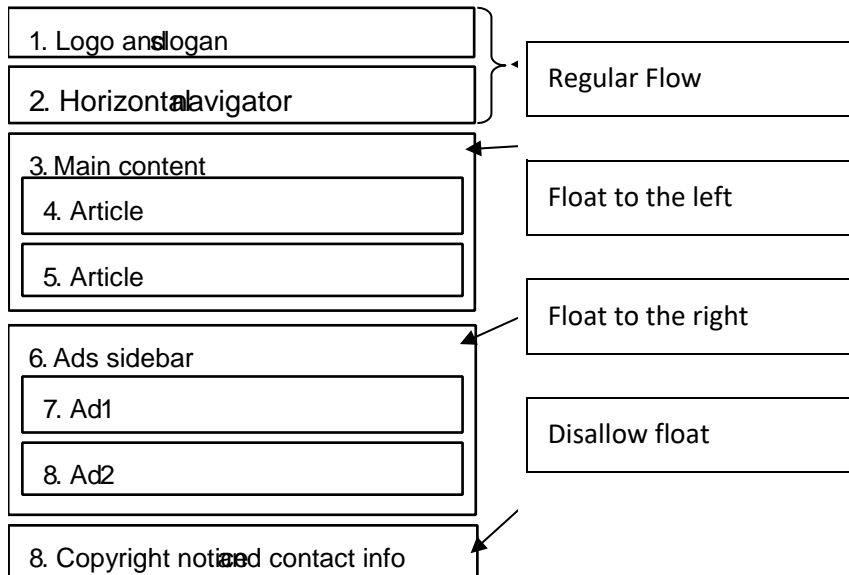
| | | |
|---|---|---|
| 1. Logo and slogan | | Regular Flow |
| 2. Horizontal navigator | | |
| 3. Main content | | Float to the left |
|   4. Article | | |
|   5. Article | | Float to the right |
| 6. Ads sidebar | | |
|   7. Ad1 | | Disallow float |
|   8. Ad2 | | |
| 8. Copyright notice and contact info | | |

**Figure 3. Webpage structure**

5.1 For the **<main>** element:
- Float to the left;
- Set width to be 65%;

```
_____ { /*CSS Selector*/
    float       : _____;
    width       : _____;
}
```

5.2 For the **<aside>** element:
- Float to the right;
- Set width to be 30%;
- Set font size to be 8px;
- Set font style to b italic;
- Set font color to be green;

```
_____ { /*CSS Selector*/
    float       : _____;
    width       : _____;
```

```
       font-size      : _____;
       font-style     : _____;
       color          : _____;
   }
```

5.3 For the **<footer>** element:
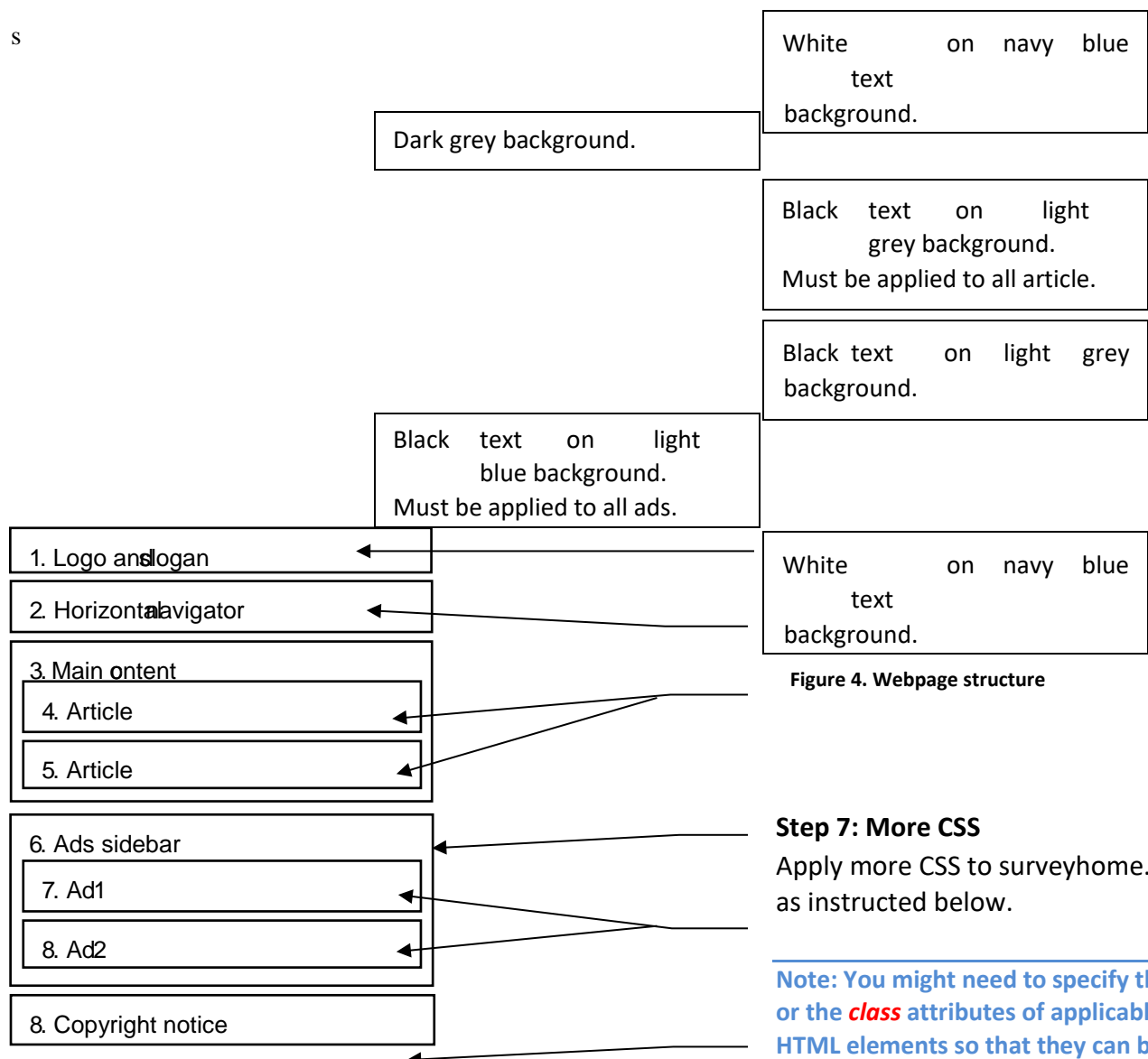   • Disallow other floating elements on both the left and right sides.

```
   _____ { /*CSS Selector*/
       clear:  : _____;
   }
```

**Step 6: CSS Web Typography and Coloring**

6.1 Create and apply CSS rules to HTML elements as indicated in Figure 4.

> **Note: You might need to specify the *id* or the *class* attributes of applicable HTML elements so that they can be properly selected in the CSS file for CSS application.**

s

| White on navy blue text background. |
| --- |

| Dark grey background. |
| --- |

| Black text on light grey background. Must be applied to all article. |
| --- |

| Black text on light grey background. |
| --- |

| Black text on light blue background. Must be applied to all ads. |
| --- |

| 1. Logo and slogan |
| --- |
| 2. Horizontal navigator |

| White on navy blue text background. |
| --- |

| 3. Main content |
| --- |
| 4. Article |
| 5. Article |

**Figure 4. Webpage structure**

| 6. Ads sidebar |
| --- |
| 7. Ad1 |
| 8. Ad2 |

| 8. Copyright notice |
| --- |

**Step 7: More CSS**

Apply more CSS to surveyhome.html as instructed below.

> **Note: You might need to specify the *id* or the *class* attributes of applicable HTML elements so that they can be**

7.1 Complete and apply the following CSS rule to the list element in the **\<nav\>** part of surveyhome.html using an appropriate selector:
- Float the list element to the left;
- Remove all bullet point symbols;
- Eliminate padding and margin; and
- Make the list occupy the entire width.

```
_____ { /*CSS Selector*/
    float            : _____;
    list-style-type  : _____;
    padding          : _____;
    margin           : _____;
    width            : _____;
}
```

7.2 Complete and apply the following CSS rule to all the **\<a\>** elements in the **\<nav\>** part of surveyhome.html using an appropriate selector:
- Float those \<a\> elements to the left;
- Set width to be 6 times the current font size;
- Remove the underline;
- Set font color to be white;
- Set background color to be blue;
- Set the top and bottom padding to be 0.2em;
- Set the right and left padding to be 0.6 em;
- Set the border to be 1px, solid and white;

```
_____ {                /*CSS Selector*/
    float             : _____;
    width             : _____;
    text-decoration   : _____;
    color             : _____;
    background-color  : _____;
    padding           : _____;
    border-right      : _____;
}
```

7.3 Complete and apply the following CSS rule to all the **\<a\>** elements in the **\<nav\>** part of survyhome.html using an appropriate **pseudo class selector**:
- Set the background color of the **\<a\>** elements to be brown on mouse over

```
_____ {              /*CSS Selector*/
    background-color         : _____;
}
```

7.4 Complete and apply the following CSS rule to all the **<article>** elements on survyhome.html using an appropriate selector:

- Set appropriate width and height; and
- Set the text box shadow to be 3px 3px 3px 2px #797979;

```
_____ { /*CSS Selector*/
 width                    : _____;
height              : _____;
    box-shadow            : _____;
}
```

7.5 Complete and apply the following CSS rule to all the <h#> elements in all the **<article>** elements on survyhome.html using an appropriate an appropriate selector:

- Set the text shadow to be #aaa 2px 2px 2px;

```
_____ {          /*CSS Selector*/        text-
shadow            : _____;
}
```

## Step 8: Webpage Testing

8.1 Using WinSCP, upload your files, including HTML, css files and images (if any), onto Mercury.

8.2 To view the pages through http, use any Web browser and type in the following address,

http://mercury.swin.edu.au/<your unit code>/**s**<your Swinburne ID>/<folder>/<filename>

Please refer to the following examples to identify the URLs of your webpages.

| Folder on Mercury Web Server | URL |
|---|---|
| ~/cos10005/www/htdocs/index.html | http://mercury.swin.edu.au/cos10005/s1234567/index.html |
| ~/cos60002/www/htdocs/lab05/surveyhome.html | http://mercury.swin.edu.au/cos60002/s1234567/lab05/surveyhome.html |

Note: You can copy the URLs in the table, but remember to replace the unit codes and student id in the above examples with yours to obtain the URLs of your webpages on Mercury.

[IMPORTANT] When the browser authorization request dialog pops up, use your SIMS username *and* password to confirm access, NOT your mercury username and password.

## Step 9: HTML and CSS Validation

To validate the HTML file, either add in the Web Developer toolbar and use 'Tools'/ 'Validate Local HTML' or use the validator at http://validator.w3.org and for webpages pages on the server validate via 'URL'.

To validate the CSS file, either use the Web Developer toolbar and use 'Tools'/ 'Validate Local CSS' or use the CSS validator at http://jigsaw.w3.org/css-validator/ and for CSS on the server validate by 'URL'.