**Fakulti Teknologi Kejuruteraan Kelautan dan Informatik, Universiti Malaysia Terengganu (UMT)**

**Lab Manual Week 4**

**Web Programming**

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| **Semester:** | **3** |
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# Instructions:

This lab manual is for use by students of the School of Informatics and Applied Mathematics, Universiti Malaysia Terengganu (UMT) only. Not allowed to print and distribute this manual without official permission of the author.

# Please follow the step by step as described in the manual. Tick ​​(√) each step has been created and write the conclusion of each activity has been completed. Conclusion of each activity must be written in a file named according to the following format:

# [nomatrik] \_ [LabX]. docx. Replace the 'X' with your lab session. Examples of correct file name is 'UK12345\_Lab1.docx'.

# Please prepare assignments with individual effort without any 'copy-paste' from other parties.

Best of luck!

**E. Page Structure Elements**

**Objective**: Apply page structure elements (PageStructure)

**Description:** The creation of HTML5 is to support the concept of semantic web. In the semantic web, tags not only serve to rank content on the browser alone - ‐ points, but it also serves to describe the type of content itself. For example, the <article> tag explains that the content contained between the opener and the closing tag is an article. That way, the browser can find out type --‐ type of content displayed.

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| **Steps** | | **Finish? (√)** |
| Step 1: | Create an HTML file called structure.html | **√** |
| Step 2: | Type the HTML5 code as below: | **√** |
| Step 3: | Save the structure.html file and open the file using the Chrome browser. Note the resulting output.  Note: There are many more page elements you can explore. Refer to your textbook or website and experiment with those elements. | **√** |

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| **Conclusion** | This figure shows how we can structure a website, although there is many tags to show how structure our website but here we show used meter and copyright symbol link tag <a> to send email to user , header and sections, The main advantage of the section tag is, it is a semantic element, which describes its meaning to both browser and developer. |

**F. Video Inside HTML5**

**Objective:** Insert Video into HTML5 Document

**Description:** The tag used to insert a video into an HTML5 document is <video>. By using this tag as well, errors for browsers that do not support video can be displayed to the user. The best practice of using video elements is by setting the attribute width and height so that the browser can allocate enough space for the video display. To date, there are 3 video formats supported by browsers namely MP4, WebM and Ogg.

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| **Steps** | | **Finish? (√)** | |
| Step 1: | Create an HTML file called video.html | **√** | |
| Step 2: | Type the HTML5 code as below: | **√** | |
| Step 3: | Download the video A few tips on the Posture of your body.mp4 from epembelajaran. Make sure the video file is in the same location as the video.html. | **√** | |
| Step 4: | Save the file and open the video.html file using the **Chrome** browser. Note the resulting output. Modify the width and height values to see the space differences provided by the browser. Chrome supports mp4 format videos but not Mozilla. Do an internet search to find video formats supported by browsers.  MP4, WebM and Ogg | **√** | |
| **Conclusion:** | In this activity we learned how to display a video on an internet browser using a video tag in different widths and heights, we also added an autoplay attribute to automatically play the video. | | |
| **Cascading Style Sheets**  **Objective:** Introduction to CSS & Syntax  **Description:**  • CSS is known as Cascading Style Sheets (CSS).  • CSS determines how to display HTML elements better and organized and so on in troubleshooting.  • Using CSS, the look and layout of the website can be changed by just editing one file.  • CSS has 2 main parts, namely "selector" and "declaration".  • "Selector" is an HTML element to be styled.  Each "declaration" has "property" and "value". "Property" is an attribute style to be changed and there is a "value" for each "property". | | |

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| **Steps** | | **Finish? (√)** |
| Step 1: | Create an HTML file called stail.html. | **√** |
| Step 2: | Type the HTML and CSS code as below:  css.JPG | **√** |
| Step 3: | Save the file and click on the icon to view the output. | **√** |

Note: The syntax for this CSS Code is: [p {color: red; text-align: center;}]

p is "selector", color & text-align is "property", red & center is "value".

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| **Conclusion:** | We learned in this activity how to use CSS style to decorate the website. Here we defined a <p> tag with this attribute: color would be red and the text will be aligned to the center. |

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| **Objective:** | Recognize ID and Selector Class |
| **Description:** | * Selector ID is used to determine the unique style of each element. * ID Selector uses the HTML ID element attribute and is defined as "#". * Selector classes are used to determine styles for elements in a group. This allows the style to be set according to specific HTML elements with the same class. * The Selector class uses HTML class attributes and is defined by "." |

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| **Steps** | | **Finish? (√)** |
| Step 1: | Create a file named stailId.html. | **√** |
| Step 2: | Type the HTML and CSS code as below:  id.JPG | **√** |
| Step 3: | Save the file and click on the icon to view the output. | **√** |
| Step 4: | Create a new HTML file called Class.html style | **√** |
| Step 5: | Type the CSS code as below:  kelas.JPG |  |
| Step: | Save the file and click on the icon to view the output. | **√** |
| **Conclusion** | Class.html stailId.html  This activity is similar to the previous one, the difference here is just if we are dealing with a tag id or a class. In the CSS if we are dealing with a class, we can reach that class with ‘.’ Symbol. however, if we want to reach a tag id we can do it by ‘#’ symbol. | |

Note: Based on the CSS code example above, all HTML elements with class = "center" will be positioned in the center of the page.

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| **Objective:** | Creates a navigation bar using CSS |
| **Description:** | Navigation Bars are easy to use and are important in websites. With CSS, the HTML menu can be changed to better navigation. |

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| **Steps** | | | | | **Finish? (√)** |
| Step 1: | | Create a file named navigation.html. | | | **√** |
| Step 2: | | Type the CSS code as below:  nav.JPG | | | **√** |
| Step 3: | | Save the file and click on the icon to view the output. | | | **√** |
| **Conclusion:** | | | Here we learned how to create navigation using unordered list <ul> tag, along with its CSS format like padding and margin = 0 which will be to the top left corner, and how to adjust the colors of links. The purpose of links is not to take us to another websites only(like google.com) but it can also serve as teleporter to take us to another page in our website(like mian page, about us , etc) . | | |
| **Objective:** | | Recognizing Text Decoration | | | |
| **Description:** | | Property text-decoration is used to set or remove decorations from text.  Text-decoration properties are mostly used to remove lines from links (hyperlinks) for the purpose of improving website design. | | | |

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| **Steps** | | **Finish? (√)** |
| Step 1: | Create a file named Teks.html. | **√** |
| Step 2: | Type the HTML and CSS code as below:  textdec.JPG | **√** |
| Step 3: | Save the file and click on the icon to view the output. | **√** |

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| **Conclusion:** | In this activity, we learned how to define a decoration or any CSS attribute for a particular tag like h1, h2, <a>, etc. |

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| **Objective:** | Recognizing Styling Links |
| **Description:** | Links can be styled with any CSS Property (e.g. color, font-family, background, etc.).  The four types of links are as follows:  • A: links are normal, and unvisited  • A: The user-visited link has been visited  • A: hover-link when clicked  • A: active -link when clicked |

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| **Steps** | | **Finish? (√)** |
| Step 1: | Create a file called stailLink.html. |  |
| Step 2: | Type the HTML and CSS code as below:  styLink.JPG |  |
| Step 3: | Save the file and click on the icon to view the output. |  |

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| **Conclusion:** | **Hover clicked**  Lastly, this activity showed us how to alter the color of links in a website using CSS to set the color of visited to green, and unvisited to red, if we hovered over the link it becomes purple and the last one clicked it would become blue. |