LABSHEET 09

Module

Front-end Web Development

Module Code

IT43004FP

Duration

3 hours

Title:

Create CSS styles and apply CSS styles for text formatting.

Objective(s):

At the end of these lessons, students will be able to.

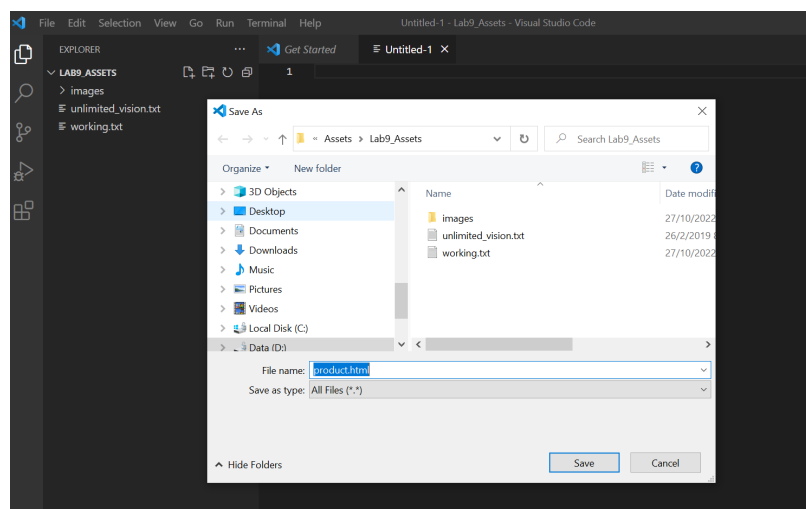- Create CSS styles and apply CSS styles for text formatting.

Tools, Equipment and Materials:

1. PCs
2. Appropriate Web Browsers installed in PCs.
3. Appropriate HTML Editor (Notepad++) or Web Authoring Tool (Visual Studio Code, Adobe Dreamweaver CC) installed in PCs.

Instructions:

Part (A) – Using CSS to style text via Code view

1 Create a folder, Lab09, in your computer. Download the asset files from Myconnexion and put into Lab09 folder and unzip it. Launch Visual Studio Code on your PC. Click File -> Open folder and link to your local Lab09 folder.

2 Create a new HTML 5 file and save the file as the product.html.

3 Type in the following HTML codes.

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```
<!doctype html>
<html>
<head>
<meta charset="UTF-8">
<title>Product:SLR Camera</title>
</head>

<body>
<h1>SLR Camera</h1>
<h2>Unlimited vision</h2>

<p>The all-new digital SLR camera will turn your imagination
into stunning still images and spectacular videos. With its
revolutionary 36.3 megapixels and the EXPEED3 image-processing
 engine, the is your ideal professional camera.
</p>
<p>
Designed for versatility and high performance, this D-SLR is
equipped to handle massive amounts of data with ultra-fast
speed. also offers superior image quality and supports ISO
sensitivities from 50 to 25600. In addition, videos can be
filmed in FX- and DX-based movie formats, creating true
cinematic experiences.
</p>
<p>back to home</p>
</body>
</html>
```

4   Save file and preview.

SLR Camera

Unlimited Vision

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5   Create an **internal style sheet** within the <head> section as follows.

```
<!doctype html>
<html>
<head>
<meta charset="UTF-8">
<title>Product:SLR Camera</title>
<style type="text/css">
</style>
</head>

<body>
```

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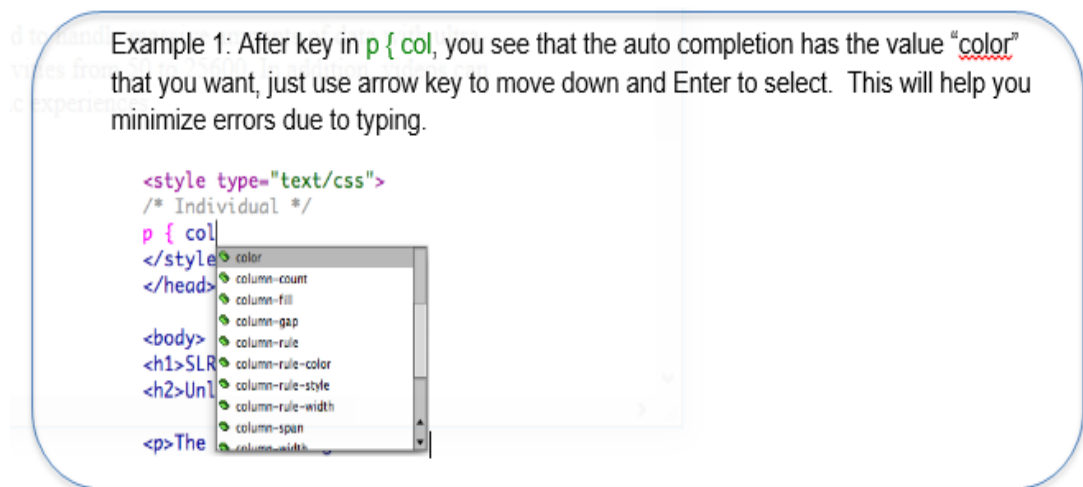6   Add three style definitions for p, h1 and h2 individually and also a common style definition for h1, h2 and p together.

```html
<!doctype html>
<html>
<head>
<meta charset="UTF-8">
<title>Product:SLR Camera</title>
<style type="text/css">
/* Individual */
p { color:#666;}
h1 { color:#00F;}
h2 { color:#F00;}
/* Common to both tags */
h1, h2, p { font-family:Georgia, "Times New Roman", Times, serif;}
</style>
</head>
```

Always use the auto completion to help you do the typing.

Example 1: After key in p { col, you see that the auto completion has the value "color" that you want, just use arrow key to move down and Enter to select. This will help you minimize errors due to typing.

```html
<style type="text/css">
/* Individual */
p { col
</style
</head>

<body>
<h1>SLR
<h2>Unl

<p>The
```
```
color
column-count
column-fill
column-gap
column-rule
column-rule-color
column-rule-style
column-rule-width
column-span
column-width
```

7   For the above definitions, since there is only one property being defined each, it is not necessary to end with ";". However it is a best practice to put in the ";" so that we will not make the mistake of not putting ";" when we add a second property later on.

```html
<style type="text/css">
/* Individual */
p { color:#666;}
h1 { color:#00F;}
h2 { color:#F00;}
/* Common to both tags */
h1, h2, p { font-family:Georgia, "Times New Roman", Times, serif;}
</style>
```

8   File save and preview. Observe the effect of the style definitions.

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Part (B) – Understanding Style Sheets

There are three ways to define style:

1. External style sheet
2. Internal style sheet
3. Inline style sheet

In part A, we have define an Internal style sheet within the <head> section. Now we will cover the other two types.

1.   Add an inline style for one <p> element as follows.

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```
<style type="text/css">
/* Individual */
p { color:#666;}
h1 { color:#00F;}
h2 { color:#F00;}
/* Common to both tags */
h1, h2, p { font-family:Georgia, "Times New Roman", Times, serif;}
</style>
</head>

<body>
<h1>SLR Camera</h1>
<h2>Unlimited vision</h2>

<p>The all-new digital SLR camera will turn your imagination into
stunning still images and spectacular videos. With its revolutionary
 36.3 megapixels and the EXPEED3 image-processing engine, the is
your ideal professional camera.
</p>
<p style="color:#093;">
Designed for versatility and high performance, this D-SLR is
equipped to handle massive amounts of data with ultra-fast speed.
also offers superior image quality and supports ISO sensitivities
from 50 to 25600. In addition, videos can be filmed in FX- and
DX-based movie formats, creating true cinematic experiences.
</p>
<p>back to home</p>
```

2   File save and preview. Observe the effect of the inline style definition that affect only one paragraph (in green colour).

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Part (C) – External Style Sheet
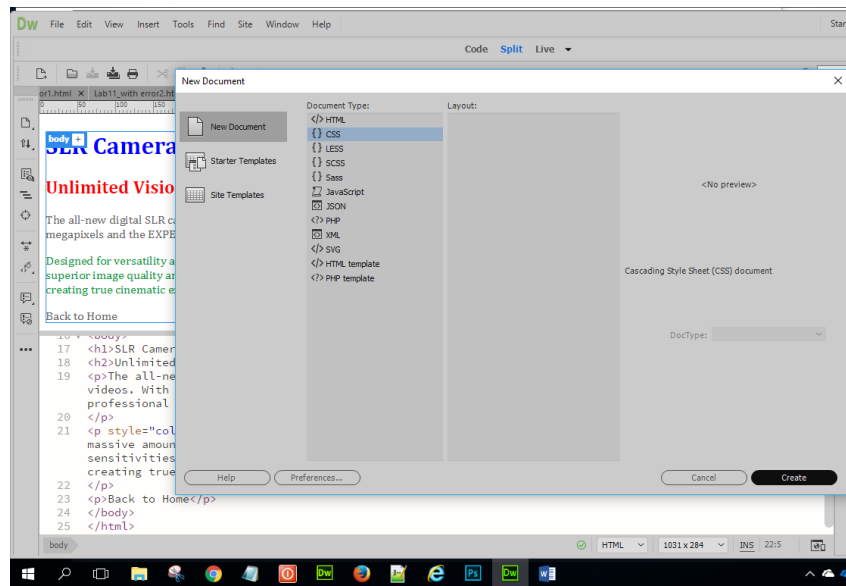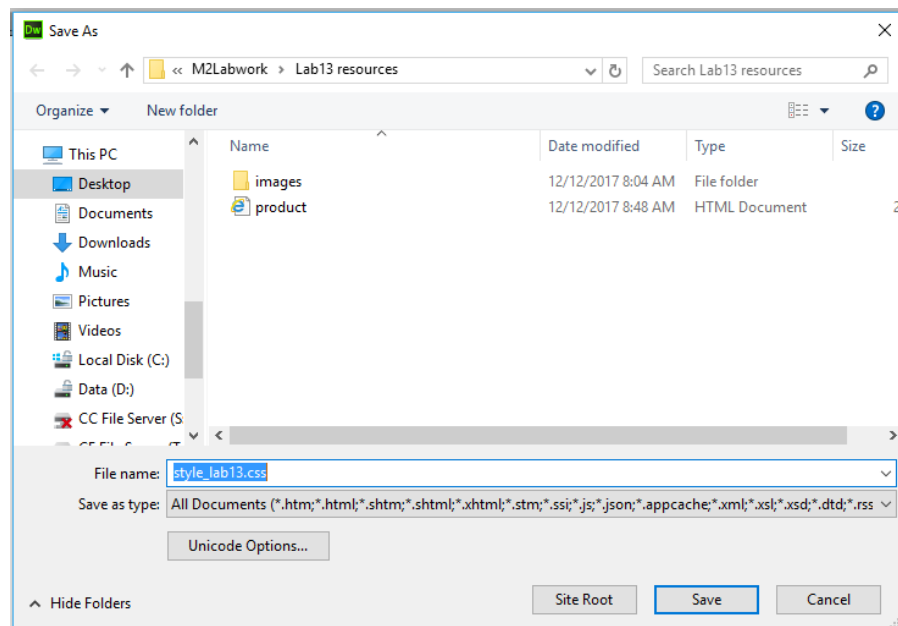
1   Create a new style sheet.
.

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Without typing any code, save the file as style_lab08.css:

2.   Create a new HTML 5 file and save it as index.html :

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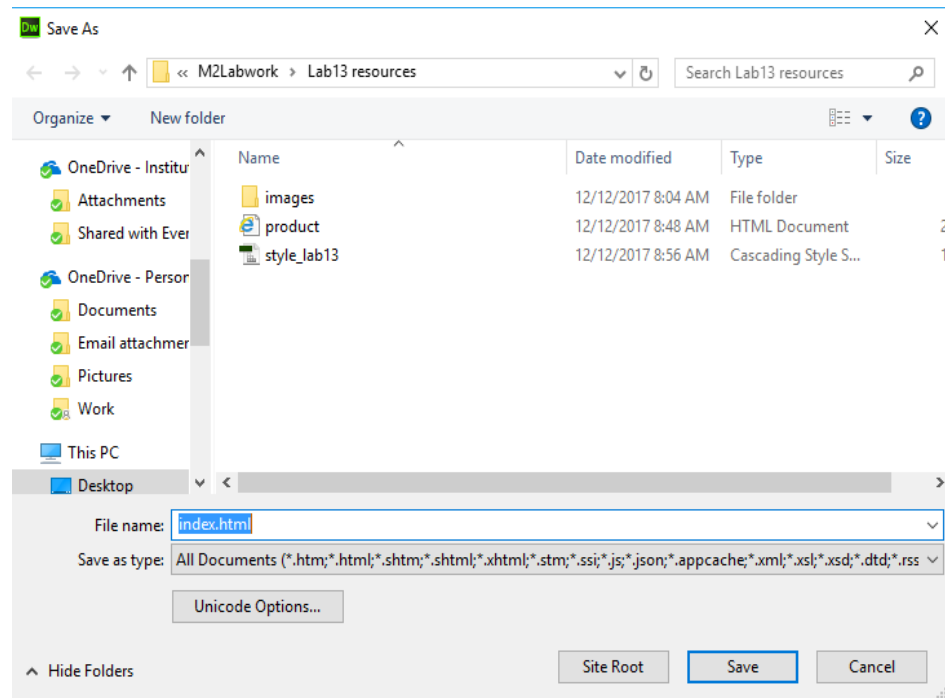3. Add the following code into index.html to link to the external style sheet:

```
<!doctype html>
<html>
<head>
<meta charset="UTF-8">
<title>Untitled Document</title>
<link href="style_lab12.css" rel="stylesheet" type="text/css">
</head>

<body>
</body>
</html>
```

4. Add the content into index.html:

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```
<!doctype html>
<html>
<head>
<meta charset="UTF-8">
<title>Canon</title>
<link href="style_lab12.css" rel="stylesheet" type="text/css">
</head>

<body>
<h1>Canon</h1>
<ul>
<li>Home</li>
<li>Product</li>
<li>Gallery</li>
<li>ContactUs</li>
</ul>
<h2>Working together for a better future</h2>
<p> Guided by its kyosei philosophy that focuses on "living and
working together for the common good", Canon is dedicated to
producing innovative products and technologies to improve
efficiency at home and in the office. We are committed to steering
our research and manufacturing processes towards sustainability,
providing a safe and healthy workplace, and delivering high quality
 products to our customers.</p>
</body>
</html>
```

5.   File save and preview.

Canon

- Home
- Product
- Gallery
- Contact Us

Working together for a better future

Guided by its kyosei philosophy that focuses on "living and working together for the common good", Canon is dedicated to producing innovative products and technologies to improve efficiency at home and in the office. We are committed to steering our research and manufacturing processes towards sustainability, providing a safe and healthy workplace, and delivering high quality products to our customers.

6.   Add the following code into style_lab08.css:

```
@charset "UTF-8";
/* CSS Document */
h1 { color:#00F;}
h2 { color:#F00;}
```

7.   File save and preview index.html:

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Canon
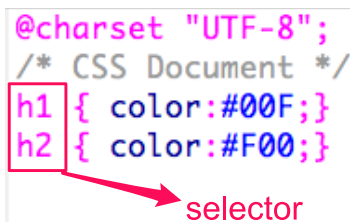
- Home
- Product
- Gallery
- Contact Us

Working together for a better future

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Exercise 1:

Change the product.html file from using internal style sheet to using the same external style sheet (style_lab08.css). Transfer the styles too.

Part (D) – Creating different CSS styles – Tag, class, ID and compound

```
@charset "UTF-8";
/* CSS Document */
h1 { color:#00F;}
h2 { color:#F00;}
        ──────────► selector
```

There are four ways to define the selector:

1. HTML tag
2. ID
3. Class
4. Compound

In part B and C, we have used HTML tags (such as p, h1 and h2) to define the selectors. Now we shall use the other three ways to define the selectors.

Creating ID styles

1.   We want to add border to any HTML element with an ID called "main".

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ID's are defined in style sheet by starting with a "#"
Hence, an ID called "main" will be defined as "#main" in the style sheet.
In style_lab08.css, let's define an ID called main and give it a border as follows:

```
@charset "UTF-8";
/* CSS Document */
p { color:#666;}
h1 { color:#00F;}
h2 { color:#F00;}
/* Common to both tags */
h1, h2, p { font-family:Georgia, "Times New Roman", Times, serif;}
/* Using class and ID */
#main {border:#666 solid 2px;}
```

.
2   Now, we may add the class to any HTML elements that we want them to have a border around them. In index.html, we add a new <div> </div> section to contain <p> and add the "main" ID to the <div> tag as follows:

```
<!doctype html>
<html>
<head>
<meta charset="UTF-8">
<title>Canon</title>
<link href="style_lab12.css" rel="stylesheet" type="text/css">
</head>

<body>
<h1>Canon</h1>
<ul>
<li>Home</li>
<li>Product</li>
<li>Gallery</li>
<li>ContactUs</li>
</ul>
<h2>Working together for a better future</h2>
<div id="main">
<p>Guided by its kyosei philosophy that focuses on "living and working
together for the common good", Canon is dedicated to producing innovative
products and technologies to improve efficiency at home and in the office.
 We are committed to steering our research and manufacturing processes
towards sustainability, providing a safe and healthy workplace, and
delivering high quality products to our customers.</p>
</div>
</body>
</html>
```

3   File save and preview.

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Working together for a better future

Guided by its kyosei philosophy that focuses on "living and working together for the common good", Canon is dedicated to producing innovative products and technologies to improve efficiency at home and in the office. We are committed to steering our research and manufacturing processes towards sustainability, providing a safe and healthy workplace, and delivering high quality products to our customers.

4   In product.html, we add a new <div> </div> section to contain these two <p>'s and add the "main" ID to the <div> tag as follows:

```
<!doctype html>
<html>
<head>
<meta charset="UTF-8">
<title>Product:SLR Camera</title>
<link href="style_lab12.css" rel="stylesheet" type="text/css">
</head>

<body>
<h1>SLR Camera</h1>
<h2>Unlimited vision</h2>
<div id="main">
<p>The all-new digital SLR camera will turn your imagination into
stunning still images and spectacular videos. With its revolutionary
36.3 megapixels and the EXPEED3 image-processing engine, the is your
ideal professional camera.
</p>
<p style="color:#093;">
Designed for versatility and high performance, this D-SLR is equipped to
 handle massive amounts of data with ultra-fast speed. also offers
superior image quality and supports ISO sensitivities from 50 to 25600.
In addition, videos can be filmed in FX- and DX-based movie formats,
creating true cinematic experiences.
</p>
</div>
<p>back to home</p>
</body>
</html>
```

.
5   File save and preview.

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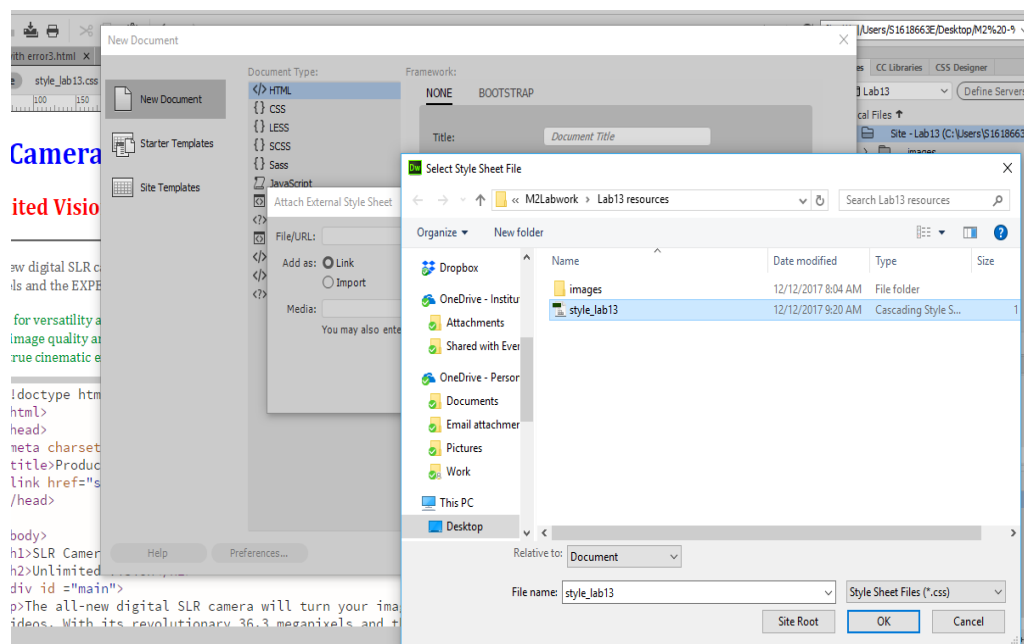## SLR Camera

Unlimited Vision

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Designed for versatility and high performance, this D-SLR is equipped to handle massive amounts of data with ultra-fast speed, also offers superior image quality and supports ISO sensitivities from 50 to 25600. In addition, videos can be filmed in FX- and DX-based movie formats, creating true cinematic experiences.

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Creating class styles

6   Create a new HTML5 file and link to the style sheet as follows:

Save the file as gallery.html:

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7   Key in the content as follows:

```html
<!doctype html>
<html>
<head>
<meta charset="UTF-8">
<title>Gallery</title>
<link href="style_lab12.css" rel="stylesheet" type="text/css">
</head>

<body>
<h1>Gallery</h1>
<table>
    <tr>
        <td>1</td>
        <td>2</td>
        <td>3</td>
    </tr>
    <tr>
        <td>4</td>
        <td>5</td>
        <td>6</td>
    </tr>
</table>
<p>back to home</p>
</body>
</html>
```
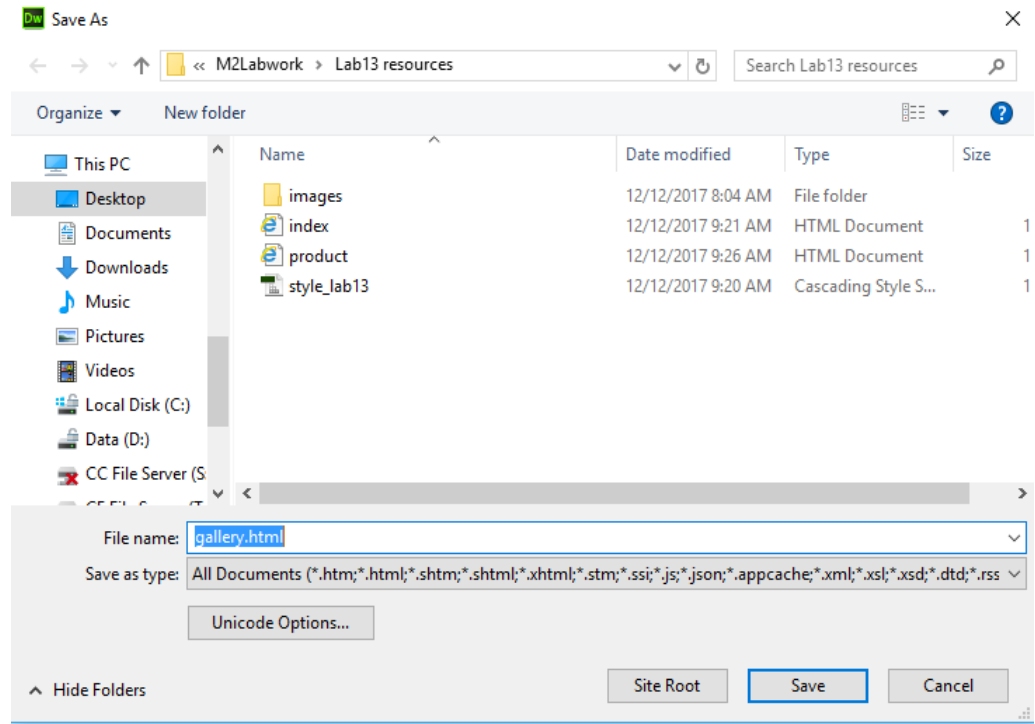
9   File save and preview.

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10   Replaced the numbers (1 – 6) with suitable images and add in suitable ALT:

```html
<!doctype html>
<html>
<head>
<meta charset="UTF-8">
<title>Gallery</title>
<link href="style_lab12.css" rel="stylesheet" type="text/css">
</head>

<body>
<h1>Gallery</h1>
<table>
    <tr>
        <td><img src="images/Image_06.jpg" alt="image 06"></td>
        <td><img src="images/Image_10.png" alt="image 10"></td>
        <td><img src="images/Image_11.jpg" alt="image 11"></td>
    </tr>
    <tr>
        <td><img src="images/Image_20.png" alt="image 20"></td>
        <td><img src="images/Image_34.jpg" alt="image 34"></td>
        <td><img src="images/Image_36.jpg" alt="image 36"></td>
    </tr>
</table>
<p>back to home</p>
</body>
</html>
```

11   File save and preview.

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Gallery

12   To standardize the image width, one way is to use the <img> tag as selector, but this will affect all other images that we may add later.

But we cannot use ID selector as ID can only be used for one element in a page. In this case, we will use class selector. Class selector allows more than one element to use it in a page.

Classes are defined in style sheet by starting with a ".".
Hence, a class called "image" will be defined as ".image" in the style sheet.
In style_lab08.css, let's define a class called image and give it a width of 200px as follows:

```
@charset "UTF-8";
/* CSS Document */
p { color:#666;}
h1 { color:#00F;}
h2 { color:#F00;}
/* Common to both tags */
h1, h2, p { font-family:Georgia, "Times New Roman", Times, serif;}
/* Using ID and class */
#main { border: #666 solid 2px;}
.image {width:200px;}
```

13   Add the class property into each of the <img> tag in gallery.html:

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```html
<!doctype html>
<html>
<head>
<meta charset="UTF-8">
<title>Gallery</title>
<link href="style_lab12.css" rel="stylesheet" type="text/css">
</head>

<body>
<h1>Gallery</h1>
<table>
    <tr>
        <td><img class="image" src="images/Image_06.jpg" alt="image 06"></td>
        <td><img class="image" src="images/Image_10.png" alt="image 10"></td>
        <td><img class="image" src="images/Image_11.jpg" alt="image 11"></td>
    </tr>
    <tr>
        <td><img class="image" src="images/Image_20.png" alt="image 20"></td>
        <td><img class="image" src="images/Image_34.jpg" alt="image 34"></td>
        <td><img class="image" src="images/Image_36.jpg" alt="image 36"></td>
    </tr>
</table>
<p>back to home</p>
</body>
</html>
```

14   File save and preview.

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Creating CSS styles using Compound Selectors

On top of using the other three types of selectors, many times we need to combine them to be more specific. The combinations are known as compound selectors.
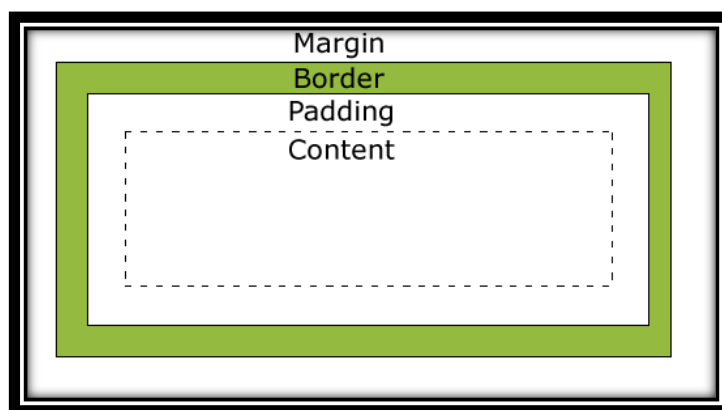
If we want to target all the <p>'s inside any <div id="main"> ..</div>, the compound selector will be div#main p

Selector	Effect
p	Affect all <p>'s
div p	Affect all <p>'s inside any <div>
div#main p	Affect all <p>'s inside any <div> with id="main"
#main p	Affect all <p>'s inside any HTML element with id="main"

Box Model

We want to change the spacing inside or outside a border, we need to know about the Box Model.

For every HTML elements, the spacing outside the border are controlled by MARGIN while the spacing inside the border around the content are controlled by PADDING.

To define the values for the Margin or Padding, there are a few ways to do it:

Definition	Meaning
margin: 5px;	margin-top is 5px margin-right is 5px margin-bottom is 5px margin-left is 5px

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margin: **5px 10px**;	margin-top is 5px margin-right is 10px margin-bottom is 5px margin-left is 10px
margin: **5px 10px 15px**;	margin-top is 5px margin-right is 10px margin-bottom is 15px margin-left is 10px
margin: **5px 10px 15px 20px**;	margin-top is 5px margin-right is 10px margin-bottom is 15px margin-left is 20px

The above applies to padding as well.

15   In style_lab08.css, define the margin for div#main p:

```
@charset "UTF-8";
/* CSS Document */
p { color:#666; }
h1 { color:#00F;}
h2 { color:#F00;}
/* Common to both tags */
h1, h2, p { font-family:Georgia, "Times New Roman", Times, serif;}
/* Using ID and class */
#main { border:#666 solid 2px; }
.image { width:200px;}
/* Using compound selectors */
div#main p { margin:10px; }
```

16   File save and preview index.html and product.html file. Take note of the margin around the <p>'s being added:

Canon

- Home
- Product
- Gallery
- Contact Us

Working together for a better future

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Part (E) – Styling Hyperlinks

Now we will work on the nagivation menu on the index.html page.

17   Add a <div> block to contain the navigation unordered list (ul) and add the anchor links:

```
<!doctype html>
<html>
<head>
<meta charset="UTF-8">
<title>Canon</title>
<link href="style_lab12.css" rel="stylesheet" type="text/css">
</head>

<body>
<h1>Canon</h1>
<div id="navigation">
<ul>
<li><a href="#">Home</a></li>
<li><a href="product.html">Product</a></li>
<li><a href="gallery.html">Gallery</a></li>
<li><a href="contactus.html">ContactUs</a></li>
</ul>
</div>
<h2>Working together for a better future</h2>
<div id="main">
<p>Guided by its kyosei philosophy that focuses on "living and
working together for the common good", Canon is dedicated to
producing innovative products and technologies to improve efficiency
at home and in the office. We are committed to steering our research
and manufacturing processes towards sustainability, providing a safe
and healthy workplace, and delivering high quality products to our
customers.</p>
</div>
</body>
</html>
```

18   In style_lab08.css, define a new navigation id style to have a border:

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```css
@charset "UTF-8";
/* CSS Document */
p { color:#666; }
h1 { color:#00F;}
h2 { color:#F00;}
/* Common to both tags */
h1, h2, p { font-family:Georgia, "Times New Roman", Times, serif;}
/* Using ID and class */
#main { border:#666 solid 2px; }
.image { width:200px;}
/* Using compound selectors */
div#main p { margin:10px; }
/* For navigation menu */
#navigation { border:#666 solid 2px; }
```

19   In style_lab08.css, change the default setting of <ul>, <li> and <a> tag to form the menu:

```css
@charset "UTF-8";
/* CSS Document */
p { color:#666; }
h1 { color:#00F;}
h2 { color:#F00;}
/* Common to both tags */
h1, h2, p { font-family:Georgia, "Times New Roman", Times, serif;}
/* Using ID and class */
#main { border:#666 solid 2px; }
.image { width:200px;}
/* Using compound selectors */
div#main p { margin:10px; }
/* For navigation menu */
#navigation { border:#666 solid 2px; }
#navigation ul {list-style:none; overflow:hidden;}
#navigation li {float: left; text-align:center;}
#navigation a { text-decoration: none; display: block; width: 150px; }
```

20   File save and preview.

Canon

| Home | Product | Gallery | Contact Us |

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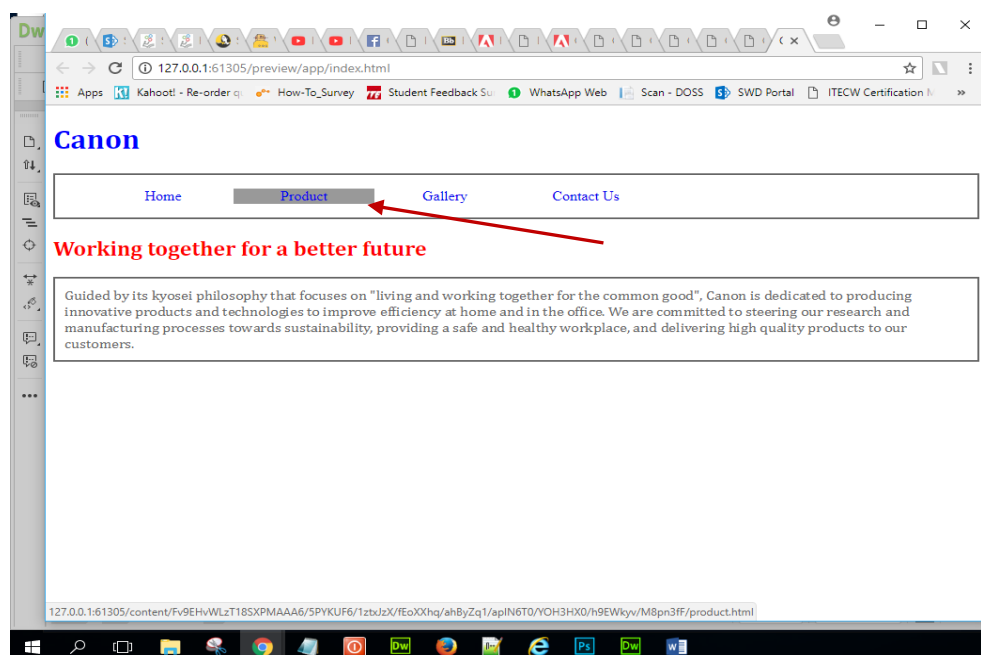
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21   When you hover your mouse above the links, since now they are no longer underlined, there is no indication to the user that these links are clickable.
For <a> tag, there are four pseudo classes that we can use as part of the selector -
:link, :active, :visited and :hover.

Research using the WWW about their meanings.
For now, we will use the :hover to change the background colour when the mouse is hovering above any of the <a> tags.

```css
@charset "UTF-8";
/* CSS Document */
p { color:#666; }
h1 { color:#00F;}
h2 { color:#F00;}
/* Common to both tags */
h1, h2, p { font-family:Georgia, "Times New Roman", Times, serif;}
/* Using ID and class */
#main { border:#666 solid 2px; }
.image { width:200px;}
/* Using compound selectors */
div#main p { margin:10px; }
/* For navigation menu */
#navigation { border:#666 solid 2px; }
#navigation ul {list-style:none; overflow:hidden;}
#navigation li {float: left; text-align:center;}
#navigation a { text-decoration: none; display: block; width: 150px; }
#navigation a:hover {background-color:#999;}
```

22   File save and preview.

LABSHEET 09

- END -

Submitted by:

Joshua Chan

Name: _____

Class: CC2201F _____

Module

Front-end
Web
Development

Module Code

IT43004FP

Duration

3 hours