Step-by-Step Learning Activity

a) Create a new HTML Document

- **Step 1:** Download the assets file/folder and move it to a newly create folder called myWeb on the desktop.
- Step 2: Create a new file in Visual Studio Code
- **Step 3:** Add the starting code to the text file

Step 4: Save the file in the root of the myWeb folder as index.html.

b) Add head tags to the HTML document

Key takeaway: The Meta tag is where your web page communicates key information to the browser.

Step 1: Learn the meta tag

Step 2: Add the charset above the title meta tag

<meta charset="UTF-8">

Step 3: Add the description meta tag below the title

<meta name="description" content="My page description">

Step 4: Add the keyword meta tag below the description tag.

<meta name="keywords" content="keywords, describing, content">

Step 5: Save the index.html file.

c) Add div tags to the HTML document

Key takeaway: The div tag is used to build the layout of your web page.

Step 1: Learn the div tag

Step 2: Add a div tag to the body section

<div id="mydiv">

</div>

Step 3: Add some content to the div. Tab the h1 and p tags over to see the structure of the html.

<div id="mydiv">

<h1>My first div</h1>

Vestibulum ut tempor lorem. Nam ut mi mauris. Aliquam quis viverra velit. Sed egestas, velit sit amet luctus pretium, enim dolor interdum felis, at pretium tellus nibh id velit.

</div>

Step 4: Save the index.html file.

Step 5: Preview in Live Server to confirm the code was added correctly.

Step 6: Understand that the value of the div tag is its ability to section content together

Step 7: Switch back to the HTML document to continue.

d) HTML5 Semantic Elements

Key takeaway: Most of the new semantic elements can be used in place of a div to logically name and layout your page.

Step 1: Learn the semantic elements

e) Add HTML5 Semantic Elements - header

Key takeaway: The header tag is a container for banners, navigation and introductory content. It can replace a div.

Step 1: Learn the header tag

Step 2: Add a header tag above the div.

<header> </header>

Step 3: Save the index.html file.

f) Add HTML5 Semantic Elements - nav

Key takeaway: Use the nav tag to define navigation menus. It can replace a div.

Step 1: Learn the nav tag

Step 2: Add a nav tag to the header

<header>

<nav>

</nav>

</header>

Step 3: Add some links inside the nav tag - use a hash tag as a placeholder for the links.

<header>

<nav>

```
<a href="#">My link 1</a> | <a href="#">My link 2</a> | <a href="#">My link
       3</a>
           </nav>
       </header>
Step 4: Save the index.html file.
Step 5: Preview in Live Server to confirm code was added correctly.
Step 6: Switch back to the HTML document to continue.
g) Add HTML5 Semantic Elements - section
Key takeaway: Use the section tag to group similar chunks of content together. It can replace a div.
Step 1: Learn the section tag.
Step 2: Add a section tag below the div.
       <section>
       </section>
Step 3: Define the id attribute for the section tag
       <section id="myArticle">
       </section>
Step 4: Save the index.html file.
h) Add HTML5 Semantic Elements - article
Key takeaway: Use the article tag to define self-contained content such as a news story or blog post.
Step 1: Learn the article tag
Step 2: Add an article tag inside the section tag
       <section>
           <article>
           </article>
       </section>
Step 3: Add some content inside the article tag
       <article>
           <h2>My First Article</h2>
           Lorem ipsum dolor sit amet...
           Nunc sed augue lacus viverra...
           Ultrices eros in cursus...
           Nisl tincidunt eget nullam...
          Vestibulum rhoncus est...
       </article>
```

Step 4: Save the index.html file.

Step 5: Preview in Live Server to confirm code was added correctly.

Step 6: Switch back to the HTML document to continue.

i) Add HTML5 Semantic Elements - aside

Key takeaway: Use the aside tag to define content that is associated with other content.

Step 1: Learn the aside tag

Step 2: Add an aside tag above the article tag

<aside>

</aside>

Step 3: Add some content inside the aside tag

<aside>

<h3>Author Bio</h3>

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nulla congue, lorem at posuere vestibulum, magna dolor fringilla sapien, ac efficitur est risus non est. Maecenas ac eros id nibh egestas tristique. Aenean eros est, sollicitudin in velit non, tempor eleifend ipsum. Suspendisse nec mattis libero. Ut id interdum nisi, ac efficitur nibh.

</aside>

Step 4: Save the index.html file.

Step 5: Preview in Live Server to confirm code was added correctly.

Step 6: Switch back to the HTML document to continue.

j) Add HTML5 Semantic Elements - footer

Key takeaway: Use the footer tag to define the content at the bottom of the page. It can replace a div.

Step 1: Learn the footer tag

Step 2: Add a footer tag below the article tag

<footer>

</footer>

Step 3: Add a paragraph tag and link to the footer

<footer>

My footer

My Footer link

</footer>

Step 4: Save the index.html file.

Step 5: Preview in Live Server to confirm code was added correctly.

Step 6: Switch back to the HTML document to continue.

k) Add Image elements - planning your page

Key takeaway: You should consider your image dimension and file size to ensure it is appropriate for how you want to use the image. If necessary, resize the image in an image editor to match its purpose.

I) Add Image elements – absolute links

Key takeaway: Absolute links should only be used for images that you own and control. Relative links are preferable.

- **Step 1:** Learn the absolute links
- Step 2: Add an image banner to the header above the nav tag, include the alt attribute

<img src="https://cdn.pixabay.com/photo/2016/10/22/18/52/beach-1761410_1280.jpg"
alt="The Beach">

Step 3: Set the width of the image by using the width attribute – using pixels.

<img src="https://cdn.pixabay.com/photo/2016/10/22/18/52/beach-1761410_1280.jpg"
alt="The Beach" width="1200">

- **Step 4:** Save the index.html file.
- **Step 5:** Preview in Live Server.
- **Step 6:** Switch back to the HTML document to proceed to next segment.

m) Add Image elements - relative links

Key takeaway: Relative paths identify where the image is in relation to the web page. In code the path is represented with the / for example, "myfolder/myimage.jpg"

- Step 1: Learn relative links
- **Step 2:** Add an image banner to the header below the absolute link image

Step 3: Set the width of the image by using the width attribute

- **Step 4:** Save the index.html file.
- **Step 5:** Preview in Live Server.
- **Step 6:** Note that the relative path image has been cropped to make it more suitable for its purpose as a banner.
- **Step 7:** Comment out the absolute image

<!--<img src="https://cdn.pixabay.com/photo/2016/10/22/18/52/beach-1761410_1280.jpg"
alt="The Beach" width="1200">-->

- Step 8: Save the index.html file.
- **Step 9:** Preview in Live Server.

Step 10: Switch back to the HTML document to proceed to next segment.

n) Add Image elements - figure

Key takeaway: Use the figure tag to group an image with a caption. It can replace a div.

- Step 1: Learn the figure tag
- **Step 2:** Add a figure tag inside the div container, underneath the paragraph

<figure>

</figure>

Step 3: Add an image inside the figure.

<figure>

```
<img src="img/beach-53118_small.jpg" alt="The Cabana">
```

</figure>

Step 4: Add a caption inside the figure, below the img.

```
<figure>
```

```
<img src="img/beach-53118 small.jpg" alt="The Cabana">
```

<figcaption>My first Caption</figcaption>

</figure>

- **Step 5:** Save the index.html file.
- **Step 6:** Preview in Live Server.
- **Step 7:** Note that the image has been resized to suit its purpose as an image that supports the content around it.
- **Step 8:** Set the width of the image by using the width attribute

```
<figure>
<img src="img/beach-53118_small.jpg" alt="The Cabana" width="350" height="280">
<figcaption>My first Caption</figcaption>
```

</figure>

Step 9: Save the index.html file.

Step 10: Preview in Live Server.

Step 11: Switch back to the HTML document to proceed to next segment.

o) Add Video elements - video tag

Key takeaway: Use the video tag to show videos in your web page. To ensure that your video will play on all browsers only link to mp4 videos.

Step 1: Learn the video tag

Step 2: Add a new section and declare the section id as myvideosection

<section id="myvideosection">

```
</section>
Step 3: Add a video tag to the new section. Specify its width and height
       <section id="myvideosection">
           <video width="560" height="315">
        </video>
       </section>
Step 4: Add a source tag to the video.
       <section id="myvideosection">
           <video>
                 <source src="media/Beach-10890.mp4">
           </video>
       </section>
Step 5: Add alternate text to tell users that their browser can't play the video.
       <section id="myvideosection">
           <video width="560" height="315">
                 <source src="media/Beach-10890.mp4">
                 You cannot view this video with your current browser.
           </video>
       </section>
Step 6: Save the index.html file.
Step 7: Preview in Live Server.
Step 8: Add the controls attribute to the video tag.
       <section id="myvideosection">
           <video controls width="560" height="315">
                 <source src="media/Beach-10890.mp4">
                You cannot view this video with your current browser.
           </video>
       </section>
Step 9: Save the index.html file.
Step 10: Preview in Live Server.
Step 11: Add the autoplay and muted attributes to the video tag.
       <section id="myvideosection">
           <video autoplay muted controls width="560" height="315">
                 <source src="media/Beach-10890.mp4">
                You cannot view this video with your current browser.
           </video>
       </section>
```

- **Step 12:** Save the index.html file.
- Step 13: Preview in Live Server.
- **Step 14:** Switch back to the HTML document to proceed to next segment.

p) Add Video elements - embedding YouTube videos

- **Step 1:** Learn embedding YouTube videos
- Step 2: Go to https://www.youtube.com/watch?v=qREKP90ijWI&t=14s
- Step 3: Click on the share button and select embed.
- **Step 4:** Note that you can select an alternate beginning point if you like. Click the copy button.
- **Step 5:** Paste the embed code in the video section **under** the video tag.
- Step 6: Save the index.html file.
- Step 7: Preview in Live Server.
- Step 8: Switch back to the HTML document to proceed to next segment.

q) Adding Audio

Key takeaway: Use the audio tag to play audio in your web page. To ensure that your audio will play on all browsers only link to mp3 audio. Audio can be very disruptive to users, only use audio in a web page if it has a specific purpose.

r) Adding links – absolute links:

Key takeaway: Use absolute links for linking to external sites. To help users return to your site use the target="_blank" to open the link in a new window.

- Step 1: Learn absolute links
- **Step 2:** Replace the first link in the nav tag with an absolute link

```
<nav>
```

```
<a href="https://www.expedia.ca/">My absolute link: Expedia.ca</a> | <a href="#">My link 2</a> | <a href="#">My link 3</a> </nav>
```

Step 3: Add the target attribute to the link.

```
<nav>
    <a href="https://www.expedia.ca/" target="_blank">My absolute link: Expedia.ca</a> |
<a href="#">My link 2</a> | <a href="#">My link 3</a>
</nav>
```

- **Step 4:** Save the index.html file.
- **Step 5:** Preview in Live Server. Test the link.
- **Step 6:** Switch back to the HTML document to proceed to next segment.

s) Adding links - relative links:

Key takeaway: Use relative links for linking to pages on your site. You do not have to specify the target attribute for pages that are within your site.

Step 1: Learn relative links

Step 2: Replace the second link in the nav tag with a relative link

```
<nav>
```

My absolute link: Expedia.ca | My relative link: a page on my site | My link 3 </na>

Step 3: Save the index.html file.

Step 4: Preview in Live Server. Test the link.

Step 5: Switch back to the HTML document to proceed to next segment.

t) Adding links - anchors:

Key takeaway: Use anchors to link specific areas on your web page or specific areas of other pages.

Step 1: Learn anchors

Step 2: Replace the third link in the nav tag with an anchor

```
<nav>
```

My absolute link: Expedia.ca | My relative link: a page on my site | My anchor link: to a specific spot on a page </nav>

Step 3: Save the index.html file.

Step 4: Preview in Live Server. Test the link.

Step 5: Switch back to the HTML document to proceed to next segment.

u) Adding email links

Key takeaway: Use mailto: in front of email addresses to link to an email.

Step 1: Learn email links

Step 2: Add an email link in a new paragraph in the footer.

```
<footer>
My footer
```

Contact me via

email

</footer>

Step 3: Add a subject to the to the email link.

```
<footer>
    My footer
    <a href="mailto:myemail@mywebsite.com?subject=My%20Subject"
    target="_self">Contact me via email</a>
</footer>
```

Step 4: Save the index.html file.

Step 5: Preview in Live Server. Test the link.

Step 6: Switch back to the HTML document to proceed to next segment.

v) Adding forms - form and form action:

Key takeaway: Use the form tag to create a form.

Step 1: Learn the form tag

Step 2: Create a new section called myForm

```
<section id="myform">
<h2>My First Form</h2>
</section>
```

Step 3: Add a form to the section

```
<section id="myform">
  <h2>My First Form</h2>
  <form>
  </form>
```

</section>

w) Adding forms - input types

Key takeaway: Use input types to define the data you want to collect and how it appears to the user. Input types require the **name** attribute to pass data on when the user clicks the submit button.

x) Adding forms - input types - text

Key takeaway: Use the text input type to ask the user to supply a single line of text.

Step 1: Learn the text input type

Step 2: Add a text input area inside a p tag to ask for a user's first name

```
<form>

First Name <input type="text">
```

```
</form>
Step 3: Add the name attribute to pass data on when submitted.
       <form>
          >
                First Name <input type="text" name="firstname">
           </form>
Step 4: Add the placeholder attribute to give the user a hint
       <form>
          >
                First Name <input type="text" name="firstname" placeholder="Your name...">
           </form>
Step 5: Save the index.html file.
Step 6: Preview in Live Server.
Step 7: Add an additional text input area for the last name.
       <form>
          >
                First Name <input type="text" name="firstname" placeholder="Your name...">
                Last Name <input type="text" name="lastname" placeholder="Your last name...">
          </form>
Step 8: Save the index.html file.
Step 9: Preview in Live Server.
Step 10: Switch back to the HTML document to proceed to next segment.
y) Adding forms - input types - email
Key takeaway: Use the email input type to ask the user to supply an email address.
Step 1: Learn the email input type
Step 2: Add an email input area below the last name text input type
       <form>
           >
                First Name <input type="text" name="firstname" placeholder="Your name...">
                Last Name <input type="text" name="lastname" placeholder="Your last name...">
                Email <input type="email">
          </form>
```

```
Step 3: Add the name attribute to pass data on when submitted.
       <form>
           >
                First Name <input type="text" name="firstname" placeholder="Your name...">
                Last Name <input type="text" name="lastname" placeholder="Your last name...">
                Email <input type="email" name="mail">
          </form>
Step 4: Add the placeholder attribute to give the user a hint
       <form>
          >
                First Name <input type="text" name="firstname" placeholder="Your name...">
                Last Name <input type="text" name="lastname" placeholder="Your last name...">
                Email <input type="email" name="mail" placeholder="Email address">
          </form>
Step 5: Add the required attribute to require the user to submit their email
       <form>
           >
                First Name <input type="text" name="firstname" placeholder="Your name...">
                Last Name <input type="text" name="lastname" placeholder="Your last name...">
                Email <input type="email" name="mail" placeholder="Email address" required>
          </form>
Step 6: Save the index.html file.
Step 7: Preview in Live Server.
Step 8: Switch back to the HTML document to proceed to next segment.
z) Adding forms - input types - radio
Key takeaway: Use the radio input type to ask the user to choose between a number of options.
Step 1: Learn the radio input type
Step 2: Add 3 radio input types in a new paragraph below the email input type.
           >
                <input type="radio"> My radio 1
                <input type="radio"> My radio 2
                <input type="radio"> My radio 3
```

```
</form>
Step 3: Add the name attribute to each radio type.
                                           >
                                                                 <input type="radio" name="myradio" > My radio 1
                                                                 <input type="radio" name="myradio" > My radio 2
                                                                 <input type="radio" name="myradio" > My radio 3
                                           </form>
Step 4: Add the value attribute to each radio type.
                                           >
                                                                 <input type="radio" name="myradio" value="radio1"> My radio 1
                                                                 <input type="radio" name="myradio" value="radio2"> My radio 2
                                                                 <input type="radio" name="myradio" value="radio3" > My radio 3
                                           </form>
Step 5: Add the label tag around each radio button to expand the clickable area to include the text
describing the value of the radio button.
                                           >
                                                                 <a href="clabel"><input type="radio" name="myradio" id="radio1" value="radio1"></a>
                                                                 My radio 1 </label>
                                                                 <a href="radio" name="myradio" id="radio2" value="radio2"> <a href="radio2" value="radio2" value
                                                                 My radio 2 </label>
                                                                 <a href="radio" name="myradio" id="radio3" value="radio3"> <a href="radio3" value="radio3" value
                                                                My radio 3 </label>
                                           </form>
Step 6: Add the checked attribute.
                                           >
                                                                 <label><input type="radio" name="myradio" id="radio1" value="radio1" checked>
                                                                 My radio 1</label>
                                                                 <label><input type="radio" name="myradio" id="radio2" value="radio2" >
                                                                 My radio 2 </label>
                                                                 <label><input type="radio" name="myradio" id="radio3" value="radio3" >
                                                                My radio 3 </label>
                                           </form>
Step 7: Save the index.html file.
Step 8: Preview in Live Server.
Step 9: Switch back to the HTML document to proceed to next segment.
```

aa) Adding forms - input types - checkbox

Key takeaway: Use the checkbox input type to ask the user a yes or no question or to choose one or more of options from a list of options.

Step 1: Learn the checkbox input type

Step 2: Add a checkbox input type in a new paragraph below the radio buttons.

<input type="checkbox"> I would like to be added to your newsletter

</form>

Step 3: Add the name attribute.

```
<input type="checkbox" name="newsletter"</p>
I would like to be added to your newsletter

</form>
```

Step 4: Add the label tag around the checkbox and text.

```
<label><input type="checkbox" name="newsletter"> I would like to be added to your newsletter</form>
```

Step 5: Save the index.html file.

Step 6: Preview in Live Server.

Step 7: Switch back to the HTML document to proceed to next segment.

ab) Adding forms - text areas

Key takeaway: Use the text area tag to ask the user to supply multiple lines of text, commonly used to ask for comments or questions.

Step 1: Learn the text area tag

Step 2: Add a text area tag in a new paragraph tag below the email input type. Declare the text area to have 5 rows.

Email <input type="email" name="mail" placeholder="Email address" required>

```
>
```

Comments or Questions

<textarea rows="5"></textarea>

```
Step 3: Add the name attribute.
          >
                Comments or Questions <br/>
                <textarea name="comment" rows="5"></textarea>
          <q\>
Step 4: Add the placeholder attribute.
          >
               Comments or Questions <br/>
               <textarea name="comment" placeholder="Comments..."
          rows="5"></textarea>
          Step 5: Save the index.html file.
Step 6: Preview in Live Server.
Step 7: Switch back to the HTML document to proceed to next segment.
ac) Adding forms - select dropdown
Key takeaway: Use the select tag and option tags to create a dropdown list.
Step 1: Learn the select tag.
Step 2: Add a select tag in a new paragraph below the text area.
          >
                <select>
                </select>
          Step 3: Add the name attribute to pass data on when submitted.
          >
                <select name="favouritebeach">
                </select>
          Step 4: Add 3 options to choose from.
          >
                <select name="favouritebeach">
                     <option>Mexico</option>
                     <option>Caribbean</option>
                     <option>Hawaii
                </select>
```

```
Step 5: Add a value to each option to pass on the users' choice when the form is submitted.
          >
                <select name="favouritebeach">
                     <option value="mexico">Mexico</option>
                     <option value="caribbean">Caribbean
                     <option value="hawaii">Hawaii
                </select>
          Step 6: Add a default value using the selected attribute.
          >
                <select name="favouritebeach">
                     <option value="mexico" selected > Mexico < / option >
                     <option value="caribbean">Caribbean
                     <option value="hawaii">Hawaii
                </select>
          Step 7: Save the index.html file.
Step 8: Preview in Live Server.
Step 9: Switch back to the HTML document to proceed to next segment.
ad) Adding forms - reset button
Key takeaway: Use the button tag to create a clickable button. You must define the type of button.
Step 1: Learn the button tag
Step 2: Add a button tag after the checkbox
          >
                <label><input type="checkbox" name="newsletter"> I would like to be added to
               your newsletter</label>
          <button>Reset the form</button>
      </form>
Step 3: Define the type of button.
                <button type="reset">Reset the form</button>
      </form>
Step 4: Add the value attribute.
                <button type="reset" value="Reset">Reset the form</button>
      </form>
Step 5: Save the index.html file.
```

</form>

</form>

Step 6: Preview in Live Server.

Step 7: Switch back to the HTML document to proceed to next segment.

ae) Adding forms - submit button

Key takeaway: Use the submit input type to create a button that submits user data to a server page that processes the data.

Step 1: Add a submit input type after the checkbox and before the reset button.

Step 2: Add the value attribute to define the value of the input type.

```
<input type="submit" value="Submit">
<button type="reset" value="Reset">Reset the form</button>
```

Step 3: Add a formaction attribute to define the server page that will process the form data.

```
<input type="submit" value="Submit" formaction="#">
<button type="reset" value="Reset">Reset the form</button>
```

Step 4: Save the index.html file and preview it in Live Server.

Done!