WDD 131

Home W1 W2 W3 W4 W5 W6 W7

# **W01 Assignment: Home Page**

### **Overview**

This assignment allows you to demonstrate your prerequisite knowledge by applying HTML and CSS in the design and development of a home page. In addition, you will be asked to apply learning activity concepts including JavaScript to provide some dynamic information.

#### Task

Design and develop the following home page using your own content and basic styling.



Figure 1: Example Home Page

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### **Instructions**

### **Step 1: File and Folder Setup**

- 1. In VS Code, open the **wdd131** local repository folder.
- 2. Create a new page in this root folder named "index.html".

Why is this file named "index.html"?

► Check Your Understanding

3. Create new folders (directories) named "**styles**", "**scripts**", and "**images**'.

These sub-folders, on the repository root directory, will contain the relevant, asset files.

Note that the words *directory* and *folder* have essentially the same meaning. Directory is the more accurate term for file systems while "folder" refers to the graphical metaphor that is generally accepted because it is highly related to the term file in the organized world.

- 4. Add a CSS file named "base.css" to the "styles" directory. This is your main CSS file.
- 5. Add a JS file named "getdates.js" to the "scripts" directory.

## Step 2: HTML

- 1. In the **index.html** document, include:
  - the required document type definition,
  - ✓ html tag with language attribute,
  - the **head** tag, and
  - the **body** tag.
- 2. In the **<head>**, include the following elements with appropriate attributes and content:

Refer to the <u>course development standards</u> if you need to review any of these **<head>** elements.

- the meta charset attribute,
- the **meta viewport**,
- the title.

- the meta description, and
- the meta author.
- 3. Set the title content to "WDD 131 Dynamic Web Fundamentals Your Name".
- 4. Phrase the **meta description** content at least contain this content:
  - "WDD 131 Dynamic Web Fundamentals"
  - ✓ Your full name
  - Keyword summary of page content
- 5. In the **<body>**, create a layout using a **header**, a **main**, and a **footer** element.
- 6. The <header> element contains:
  - ✓ the page heading as shown in an <h1> tag, and
  - a <nav> tag with these four menu links:
    - Your **LinkedIn** profile page.

If you do not have a free LinkedIn account profile, consider making one or just provide a general link to LinkedIn.

- I-Learn using https://byui.instructure.com/.
- Link to a favorite Scripture using https://www.churchofjesuschrist.org/study/scriptures

#### **Example**

https://www.churchofjesuschrist.org/study/scriptures/bofm/1ne/3?lang=eng&id=p7#p7

- Final Project folder link. This will just be a placeholder for now.
- 7. The <main> element contains the following:
  - Two **section** tags each with the class attribute named "**card**" where the headings are provided and the content example is shown in the figure above including an **image**. Use your own content and at least three (3) resource links.

All images used on web pages must be optimized in this class and must be local (no external, absolute references to images).

- 8. The **<footer>** has two paragraphs **p**:
  - ✓ The first paragraph contains the following:
    - The copyright symbol and current year where the year will be dynamically populated using JavaScript code. Provide a blank <span>

tag to do this.

```
Example <span id="currentyear"></span>
```

- Your name.
- Your state or country.
- The second paragraph has an id of "lastModified" and will be populated with JavaScript code.

### Step 3: CSS

Use the external **base.css** file to layout and style the page as shown in the example screenshot above.

1. Use your color schema and typography choices.

You are responsible to practice good design principles of alignment, color contrast, proximity, repetition, and usability in all of your work.

2. Use the Google Fonts API to select one or two fonts to use on the page.

If you need help using Google Fonts, watch: Google Fonts API

3. Use CSS Flex on the navigation nav.

Demonstration: CSS Flex Navigation Menu

Source: CSS Flex Menu - CodePen

- 4. The navigation must employ a well designed **hover** affect. See the Codepen above for an example.
- 5. The main element has a limited width and is centered on the screen horizontally.
- 6. Layout the main column cards using **CSS Grid**.

# Step 4: JavaScript

1. Reference the "**getdates.js**" JavaScript file by using a **<script>** reference in the **head** of the HTML file and using the attribute **defer**.

Why is the <u>defer</u> boolean attribute important? How else can we successful reference and employ JavaScript?

2. In **getdates.js**, write JavaScript statements that dynamically output the following:

the copyright year (the current year) in the footer's first paragraph, and

Note this **CodePen** summary of using the **Date** object in different ways.

the date the document was last modified in the second paragraph.

Use the <u>lastModified</u> property of the document object to get this date/time dynamically.

You do **not** need to alter the **document.lastModified** native format.

## **Step 5: Testing**

Testing Demonstration: ► <u>Testing and Auditing your own work</u>

- 1. Continuously check your work by rendering the page locally using Live Server in VS Code.
- 2. Use the browser's **DevTools** to check for JavaScript runtime errors in the console or click the red, error icon in the upper right corner of DevTools.



"DevTools" is an abbreviation for "Developer Tools." It refers to a set of tools or utilities provided by web browsers to help developers debug, profile, and analyze web pages during the development process. The tools are typically accessed by pressing the F12 function key or selecting the menu option for the browser's developer tools.

- 3. Use DevTools **CSS Overview** to check your color contrast.
- 4. Generate the DevTools **Lighthouse** report and run diagnostics for **Accessibility**, **Best Practices**, and **SEO** in the Desktop view.

The **DevTools Lighthouse tool** serves as a comprehensive auditing tool integrated into the browser. In this class, we focus on accessibility, best practices, and SEO (Search Engine Optimization) and page weight measured by the total transfer bytes when the page is hard reloaded from an empty cache.

For more information, see the <u>Lighthouse documentation</u>.

It is best to test your page in a **Private** or **Incognito** browser window.

- 5. Hard reload the page using **Empty Cache and Hard Reload** in **DevTools** with the **Network** tab open to view the total transferred bytes at the bottom of the tab. Check that the page is 500 kB or less. The usually fixes at this point are:
  - Make sure that all images are optimized.
  - You are not allowed to use third party libraries that bloat your page.

### **Submission and Audit**

- 1. Commit your local repository and push or upload your work to your GitHub Pages enabled wdd 131 repository on GitHub.
- 2. Use this <u>audit tool</u> to self-check your work for some of the required HTML elements and CSS content. This audit tool is also used by the assessment team.
- 3. **Share** your work by posting your URL in the course's **Microsoft Teams weekly forum** and comment on your peers' work by providing constructive feedback.
- 4. Return to I-Learn and submit your GitHub Pages enabled URL for wdd131, e.g.,

https://your-github-username.github.io/wdd131

Note that we do not need to include **index.html** in our reference because index.html is the default file retrieved with a folder request.

#### Back I-Learn

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