Lab 1 - Web Page - HTML and CSS   60 Possible Points

12/7/2021

Attempt 1 ⌄	◠ **IN PROGRESS** Next Up: Submit Assignment	💬 Add Comment

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Unlimited Attempts Allowed
11/30/2021

⌄ **Details**

Introduction

The start of any good web application begins with a good web page. In this lab, you will be creating a web page for your schedule this term using Hypertext Markup Language (HTML). You will then stylize the web page using two cascading style sheets (CSS) in a separate files.

References

For this lab you will be using HTML and CSS. In addition to what was discussed in class the following resources may be helpful:

- HTML Reference from w3 schools: **https://www.w3schools.com/html/default.asp (https://www.w3schools.com/html/default.asp)**
- CSS Reference from w3 schools: **https://www.w3schools.com/css/default.asp (https://www.w3schools.com/css/default.asp)**
- HTML Validator: **http://validator.w3.org/** **(http://validator.w3.org/)**
- CSS Validator: **http://jigsaw.w3.org/css-validator/** **(http://jigsaw.w3.org/css-validator/)**

Outcomes

By the end of this lab, you will be able to:

- Write a web page using HTML to provide structure/content
- Use CSS to specify presentation and appearance to the page
- Use the HTML and CSS validator to verify markup validity

<		>
(https://msoe.instructure.com/courses/9417/modules/items/363732)	Assignment	**(https://msoe.instructure.com/cou**

Before beginning the development make sure you install your development environment and create a W3Schools account: **Software Installation and User Setup (https://msoe.instructure.com/courses/9417/pages/software-installation-and-user-setup)**

Lab Exercises

You are welcome and encouraged to work in groups on lab exercises.

This lab covers several aspects of HTML and CSS it is not all-inclusive. To help practice with other facets of HTML and CSS explore the exercises in W3Schools.

HTML

1. Navigate to the W3Schools exercises on HTML: **https://www.w3schools.com/html/exercise.asp (https://www.w3schools.com/html/exercise.asp)**
2. Complete the exercises for the following sections:
   - HTML Attributes
   - HTML Headings
   - HTML Paragraphs
   - HTML Styles
   - HTML Formatting
   - HTML Quotations
   - HTML Comments
   - HTML Links
   - HTML Images
   - HTML Tables
   - HTML Lists

CSS

1. Navigate to the W3Schools exercises on CSS: **https://www.w3schools.com/css/exercise.asp (https://www.w3schools.com/css/exercise.asp)**
2. Choose and complete 10 different exercise sections of your choosing. Find ones that interest you.

Once you have completed all your exercises notify your instructor to check off your completion before continuing.

Work on the lab project is to be done individually. You are welcome to collaborate with class members, but the project must be your own work.

For this project you will create and validate a web page consisting of several files:

- an HTML file
- an image file (jpg or similar)
- a CSS file for browser formatting
- a CSS file for print formatting

The page will replicate your own personal course schedule for the current quarter.

NOTE: This should be your own schedule for this quarter, do not copy a schedule from another student or another location on the web. You will need to validate the HTML and CSS files to ensure markup validity.

Part 1: HTML Content

First, create an html file and add the html markup for your individual schedule. You'll have to make use of header, paragraph, link, image, and table elements. See the **HTML Reference (https://www.w3schools.com/html/default.asp)** for syntax details. When you display this page in a browser, it will not have any style information so will follow the browsers default styling. It should look similar to Figure 1 below.
Use the HTML Validator to make sure your markup does not contain any errors or warnings.

John Doe

Schedule for Winter

MSOE

	Monday	Tuesday	Wednesday	Thursday	Friday
8:00 AM	SE2811	SE2811		SE2811	SE2811
9:00 AM				<LAB>	
10:00 AM	PH2031		PH2031	PH2031	PH2031
11:00 AM					<LAB>
12:00 PM	Free Hour				Free Hour
1:00 PM				SE2840	
2:00 PM	SE2840	SE2840		<LAB>	SE2840
3:00 PM	CS2711	CS2711		CS2711	CS2711
4:00 PM					

Figure 1: Web page with no CSS style rules applied (uses browser default styling)

Part 2: CSS styling

Once you have an HTML file with the necessary content, create a CSS file containing style rules. Your stylized web page will need to look similar to the one in Figure 2 (see development requirements for specifics). Furthermore, your web page must be styled differently when displayed in a browser than
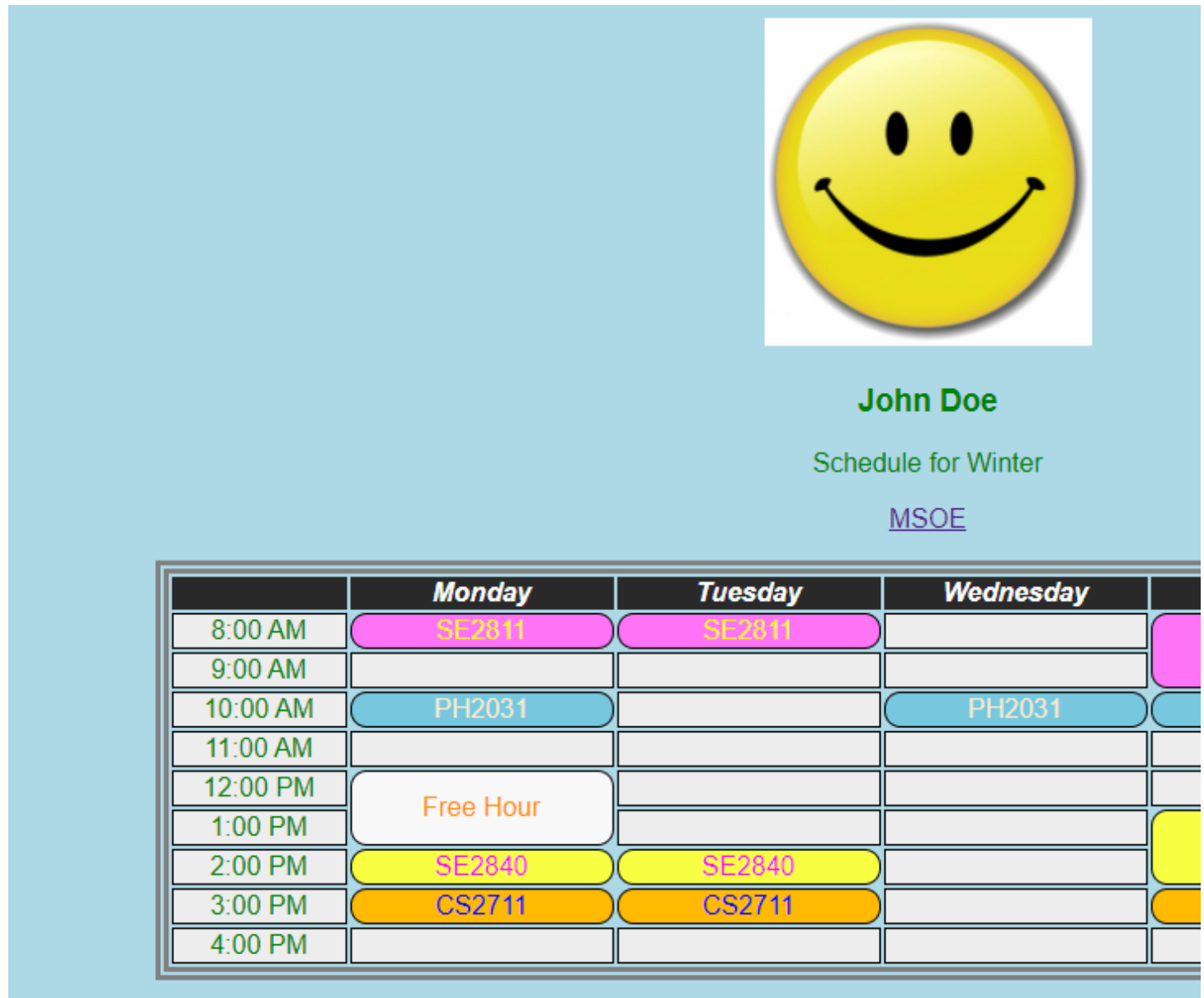
styling and one for print styling. Using media queries will tell the browser which CSS to use. Consult the **CSS Reference** **(https://www.w3schools.com/css/default.asp)** for additional help.

NOTE: Do not add CSS styling rules to your HTML file. The styling should be done completely in the CSS file.

NOTE: You will need to add a links in the HTML file indicating the CSS files to be used for styling. You will also have to indicate id and or class attributes on your HTML elements in order to set specific styles for different elements.

Figure 2: Completed web page with CSS styling applied when viewed from the browser

John Doe

Schedule for Winter

MSOE

	Monday	Tuesday	Wednesday	Thursday	Frid
8:00 AM	SE2811	SE2811		SE2811 <LAB>	SE28
9:00 AM					
10:00 AM	PH2031		PH2031	PH2031	PH2(<LAE
11:00 AM					
12:00 PM	Free Hour				Free F
1:00 PM				SE2840 <LAB>	
2:00 PM	SE2840	SE2840			SE28
3:00 PM	CS2711	CS2711		CS2711	CS27
4:00 PM					

Figure 3: Completed web page with CSS styling applied when printed

Development Requirements

Your completed web page files must conform to the following requirements:

- Your HTML and CSS files must all contain comment blocks at the time with:
  - Lab name
  - You name
  - Section number
- Your HTML file must contain only structural markup; do **NOT** embed any CSS rules in the HTML file
- Your HTML file must refer to external CSS files containing all the style rules (include a link in the header with appropriate media queries for browser and print)

Your web page must be formatted as follows:

- The title of the page (that appears on the browser tab) must contain your name
- All text must be centered
- When displayed in your browser screen, the page body must use a font that is not your browser's default font
- You must specify a custom color for your page body background and text (the text outside the table). Any color is OK - just don't use the default browser background color and text color.
- The generated page must contain at least one image (e.g. a photo of yourself). Stylize the image so that it is displayed no larger than 200x200 pixels
- Your name must appear below the picture and must be a level-3 header
- A link titled "MSOE" should be below your name and link to **https://www.msoe.edu (https://www.msoe.edu/)**
- The page must make use of a table
  - Use **different** borders for the cells vs the entire table
  - The first column of cells of the table should occupy 10% of the table width
  - The remaining 5 columns should each occupy 18% of the table width
  - The table itself should be centered within the page body and occupy 85% of the page body width
  - As the browser is resized, the table and cells should dynamically resize, and everything should remain centered
  - The headers in the table should have a black background with a white text color, bolded and italicized
  - Your courses should each use a different background color with a different contrasting text color, similar to above (choose you own colors)
  - Unused table cells can assume the background color of the page body or your own chosen color
  - Courses that span multiple hours (like labs) must span multiple cells and must be merged
  - Lab sections must contain the text "<lab>" with "<" and ">" marks under the course name
  - The Monday and Friday "Free hour" must be included as if it were a course in your schedule.

- All text must be black
- The page background must be white
- The table heading (days of the week) must be black text on a white background (but still bold and italics)
- The table cell backgrounds must be either white or shades of grey
- The table borders must be either black or shades of grey
- Text should be in a font different than your browser's default AND different than the browser stylized page

NOTE: it's ok if the link and the image still appear colored in print mode (challenge: figure out how to make the image gray-scale).

Testing and Validating

When testing, it can be helpful to change your browser's default color and font settings to something that will make it easy for you to verify that your styling fits the development requirements. For example, set the font to 36pt "Comic Sans" and the background color to yellow.

Default styling can be changed as follows:

- Firefox: Using this tutorial - **https://support.mozilla.org/en-US/kb/change-fonts-and-colors-websites-use**   **(https://support.mozilla.org/en-US/kb/change-fonts-and-colors-websites-use)**
- Chrome: By modifying your appearance settings - Navigate your browser to: chrome://settings/appearance

NOTE: Make sure your stylizing is correct when viewed in multiple browsers.

When testing Print...preview, make sure you select a printer that supports colors. This is because some printer drivers "know" that a particular printer can only print black and white (even if the document contains colors), and will thus automatically display the preview in B/W.

NOTE: Some printer drivers have a "Print Background Graphics" option that you can select or deselect. Make sure this option is SELECTED, so that the driver does not automatically disable the display of background colors.

Deliverables

Include all HTML, CSS, and image files in your submission. Make sure your name, lab name, and section number are in comments on ALL HTML and CSS files.

2. Summary - a reflection of what you learned in this lab
3. Suggestions - a list of suggestions for improvement and/or what you enjoyed about this lab

NOTE: If you were not able to complete the exercises before the end of lab, include evidence of having completed the exercises in your lab submission.

Create a zip file of all files and submit to Canvas before the due date

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∨ **View Rubric**

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Lab 1 Rubric

Criteria	Ratings	Pts
Introduction view longer description		/ 2 pts
Summary view longer description		/ 2 pts
Suggestions view longer description		/ 6 pts
HTML and CSS Validation view longer description		/ 10 pts
Checkoff view longer description		/ 5 pts
Browser Stylizing view longer description		/ 25 pts
Print Styling view longer description		/ 10 pts
		Total Points: 0

Choose a submission type

< **(https://msoe.instructure.com/courses/9417/modules/items/363732)**

Assignment **(https://msoe.instructure.com/cou** >

Webcam

Canvas Files

Choose a file to upload

(https://msoe.instructure.com/courses/9417/modules/items/363732)

Assignment

(https://msoe.instructure.com/cou