

Responsive Web Design

In this lab, you'll demonstrate your understanding of concepts presented in chapter 8, and enhance your pages with the responsive design techniques discussed in the chapter. Since we're taking chapters a little out of order you'll need to start the lab with the files provided in Moodle.

Getting Started

1. Read chapter 8 in the *Murach* textbook.
 2. Download the **CS125hLab09.zip** file from Moodle and extract its contents onto your drive.
 3. Rename the folder **YourLastName-CS125hLab09**.
 4. Open the folder to explore its contents. The *murach_ch08* folder contains files you'll need to complete practice activities from the end of each chapter. The *hands-on* folder will be where you store your self-generated web page (and any related files).
 5. Add subfolders that you think are appropriate to the *hands-on* folder. You will need one folder to organize your CSS files and potentially another folder to organize your image files.
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Converting an Existing Web Page to a Responsive Design (40 points)

6. Follow the directions to improve the responsiveness of the San Joaquin Town Hall home page that begin on page 290 of the textbook, with the following modifications:
 - a. The `index.html` and `main.css` files are located within the *murach_ch08* folder inside the *CS125hLab09* folder that you downloaded. The HTML file is in the root of the folder and the CSS file is in the *murach_ch08/styles* folder.
 - b. Add a comment to the **head** section of the **c8_index.html** page that includes your name, the date, and CS 125H - Lab 9
 - c. Add a CSS comment to the **c8_main.css** file that includes your name, the date, and CS 125H - Lab 9
 - d. After converting the widths from pixels to percents (and relocating the width for the navigation bar elements), you may notice that no matter how small you make the browser window, the section and aside will not stack. In some browsers, elements with a percentage width and without a minimum width will scale themselves into unusably small sizes. For best results, I recommend adding what you would consider a "reasonable" minimum width to both the section and the aside elements. Something like 200 and 100px, respectively, would be a good place to start. Be aware, however, that you will also need to rethink this min-widths when creating your media queries for smaller devices.

Creating Your Own Responsive Page Design (40 points)

7. Create a structured web page in your text editor (or open the page you worked on last week) and save it inside the **YourLastName-CS125hLab09/hands-on** folder as **index.html** or begin creating a new page with the name of your choice. You may also work with any other HTML file you previously created that you'd like to convert to a responsive design.
8. Create a CSS file in your text editor and save it in an appropriate subfolder of the *hands-on* folder or move an existing CSS file into the folder. The filename should follow good web naming conventions, but is of your own choosing.
9. Add (or modify) a comment to the external stylesheet containing your name, the date, and "CS 125H - Lab 9"
10. Link your index.html file to the external stylesheet.
11. Add HTML to the page and styles to the stylesheet to create a responsive web design. Demonstrate each of the following in some way:
 - a. The use of the viewport meta tag to make mobile devices respond properly to your page
 - b. A page that has a different number of columns depending upon the width of the viewport window
 - For example, perhaps your page has a three-column design in traditionally sized browser windows, but collapses to a single column of content in a cell phone browser window
 - c. A page that uses different font sizes depending upon the width of the viewport window
 - d. A page with images that scale appropriately in very large and very small browser environments
 - Foreground images should decrease proportionally with the width of the browser window
 - Foreground images should not become "blown up" into pixelated versions of themselves in very wide browser windows
 - Background images should similarly scale/adjust as necessary to ensure readability of content and integrity of the design.
 1. Is the background size changing, the tiling, the entire background - you decide what works with your design.
12. Validate your HTML page & CSS file and correct any errors.
13. Compress the YourLastName-CS125hLab09 folder and upload through the appropriate link in Moodle.

To zip a folder, right-click on the folder and select Send To > Compressed (zipped) folder. This will create a new file with the same name as the folder, but with the .zip file extension added and a zippered folder icon.

Weekly Discussion (20 points)

Topic: Progress Report

Your progress on your term project can be in the area of your choice. Use this forum to provide us with a brief update. Your post should include a written summary of the work completed this week PLUS either attached files or links to [published pages](#).

Provide constructive feedback to at least two other students on their progress so far. Constructive feedback may include suggestions for how to improve existing pages, suggestions for additional content or style exploration, questions on work completed so far, etc.