

Assignment #1

HTML & CSS

CS193C Summer 2014, Young

Administrative Details

This assignment is due at 3:15pm Thursday July 10th. We'll provide a separate "Homework Submission Instructions" handout describing how you will submit your assignment. Check the class website for some files associated with this assignment (see the end of the handout for a full listing).

Note: You may not be able to complete most of this assignment until after the July 1st Lecture.

For this assignment no WYSIWYG editors (e.g., no Dreamweaver). Webpages should be laid out using CSS floats (no HTML tables or CSS absolute positioning).

Make sure your files validate at:

<http://validator.w3.org/> (for HTML)

<http://jigsaw.w3.org/css-validator> (for CSS)

Your files should work on both the latest version of Mozilla Firefox and Google Chrome.

Send an E-Mail (2 pts)

Send Dr. Young an e-mail at patrick.young@stanford.edu. Include the following information:

- Your Name
- Your Programming Background (e.g., I have taken CS106A and CS106B)
- Your Web Development Experience (if any) (e.g., I have a blog or I learned basic HTML in high school)
- Your School Name or for SCPD Students¹ Your Company Name and Location
- Your Year in School (if relevant)
- Your Major (if relevant)
- What you hope to get out of taking CS193C

Please attach a digital photo. I'm going to try to get as many student names down as possible, so you can include a standard mugshot or something more memorable – but do try to make sure that you are recognizable in the photo.

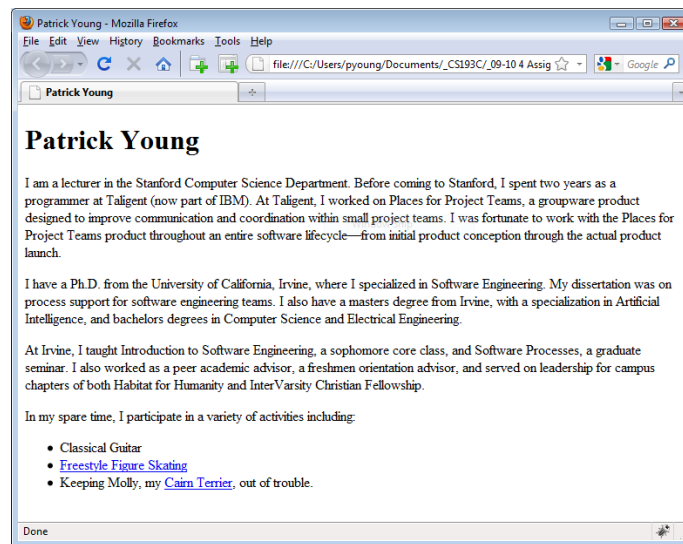
¹ For those of you not in the SCPD program, the Stanford Center for Professional Development allows workers in Silicon Valley and around the world to take classes at Stanford remotely. Supporting SCPD students is why the class is being recorded and broadcast on the web.

Personal Webpage (HTML Only Version) (0 pts, see next section)

Your first task is to create a personal webpage. If you already have one, please start the page for this assignment from scratch. Your personal webpage should contain the following items:

- Your name at the top of the page as an <h1> heading.
- A few paragraphs about yourself. Be sure to include the word Stanford at least twice in your paragraphs—we'll need that for the next problem in this assignment.
- A list of hobbies or interest displayed as an HTML unordered list.
- Link at least two of your hobbies or interests to websites related to those interests.

Here's roughly what the webpage should look like:



Stick to semantic HTML only. We'll spice it up with some CSS in the next part of this assignment. You can find a list of HTML elements commonly considered semantic HTML here:

<http://microformats.org/wiki/semantic-html>

Feel free to add in some additional items to your personal website if you'd like, but there is a more open-ended opportunity to be creative later in the assignment.

Make sure your webpage validates. Save your file under the name `personal.html`.

Personal Webpage (HTML & CSS Version) (12 pts)

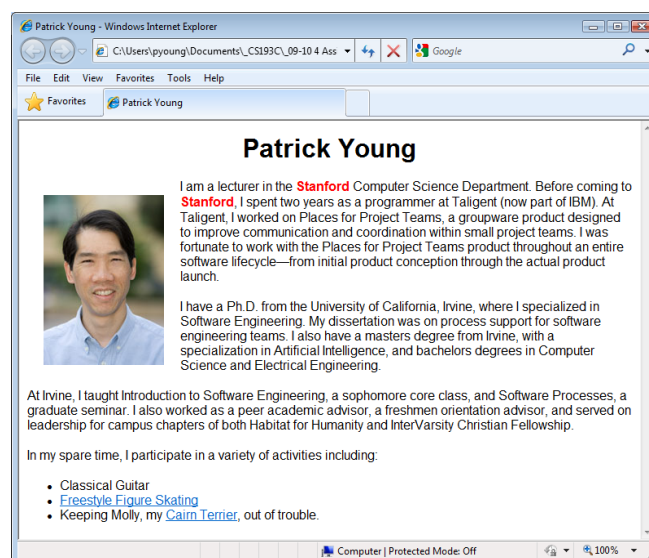
Now add a CSS file called `personal.css` to the previous problem. It's okay to save the HTML file for this version of your personal webpage over the `personal.html` file from the previous problem, you only need to turn in this more advance version. Make the following changes and additions:

- Add a photograph of yourself and float it to the left side of the webpage using CSS. Add box information (margin, padding, and/or border) to make it look nice on the webpage.
- Change the font used throughout the document to sans-serif. To do this you can set the font for the `body` element, which will be inherited by all elements contained within the `body` (which is everything displayed on the webpage). Alternatively, you can create a style rule with the special *universal selector* which is represented by the asterisk. The universal selector matches any element, however it's not very efficient and will slow rendering of your page down a bit. For example the following rule will turn everything on the webpage to red:

```
* {  
    color: red;  
}
```

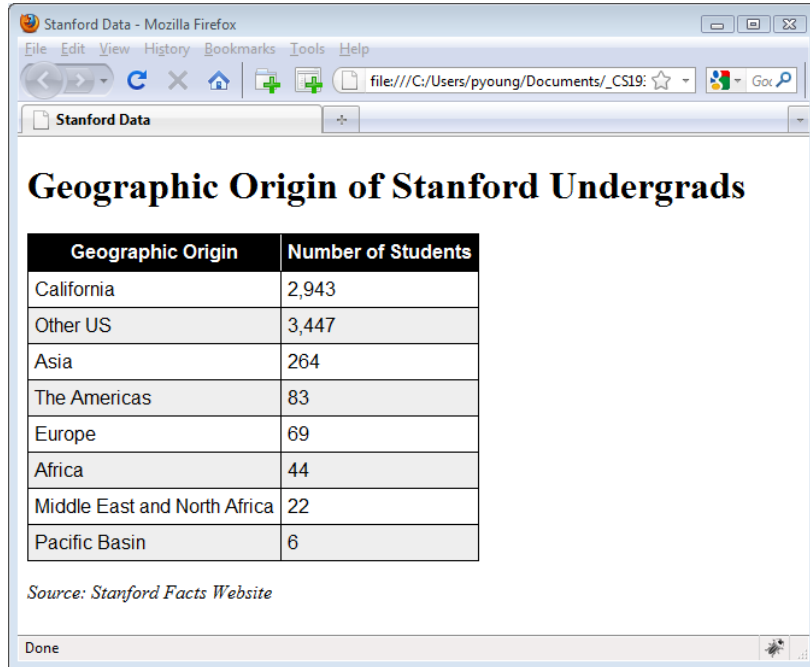
- Center the heading with your name in it.
- Setup your links to use the “:hover” pseudo-class (use a `:hover` so that only the links are effected). How the link changes when the mouse moves on top of it is up to you, but if you're short on ideas, just have the link change colors.
- Add `` tags and setup your style sheet so that every time the word “Stanford” appears, it is in red and is in bold.

Here's a sample screenshot. Make sure your webpage validates without errors through both the HTML and CSS validators.



Zebra Striping (8 pts)

In a zebra-striped table, every other row is a different color. In this problem you'll create a simple zebra-striped table using data on the Stanford undergraduate population. For this problem save your HTML file under the name `zebra.html`, and put your CSS directly into the HTML file using the `<style>` tag. Here is what your webpage should look like:



The screenshot shows a Mozilla Firefox browser window with the title 'Stanford Data'. The address bar shows a local file path. The page content includes a heading 'Geographic Origin of Stanford Undergrads' in a serif font. Below the heading is a table with two columns: 'Geographic Origin' and 'Number of Students'. The table has a zebra-striped appearance with alternating light gray and white rows. Below the table is a source citation in italics: 'Source: Stanford Facts Website'. The browser status bar at the bottom shows 'Done'.

Geographic Origin	Number of Students
California	2,943
Other US	3,447
Asia	264
The Americas	83
Europe	69
Africa	44
Middle East and North Africa	22
Pacific Basin	6

Source: Stanford Facts Website

Your solution needs to display the following characteristics:

- The “Geographic Origin of Stanford Undergrads” heading and the Stanford Facts Website citation at the bottom are in the default serif font, whereas the table itself is in sans-serif.
- The table header row is white text on a black background.
- There is a thin white border separating the “Geographic Origin” cell from the “Number of Students” cell in the table header row.
- Odd-numbered rows (other than the black table header row) have a light gray background whereas even-numbered rows have a white background.
- All table cells (except those in the header) have a 1 pixel solid black border around them.
- The Stanford Facts citation at the bottom should be in italics (but don’t use the `<i>` italics tag for this, that’s not semantic HTML).

Here are a few implementation pointers.

- You'll need to use the `border-collapse` property on the table, otherwise all your table cells will end up with double borders.
- I used the color `#EEE` for my light gray background.
- For my implementation I created classes for the odd rows and for the last row, but you're welcome to implement it differently with the following limitation: *there is a fancy `:nth CSS3 style selector` that makes zebra-stripping easy – however, I do not want you to use this.* You should get some practice using the class attribute which will be generally useful for a wide range of tasks. If you ever need to zebra stripe a table on a real website, the `:nth` selector is a fine choice.

Blog Styling (20 pts)

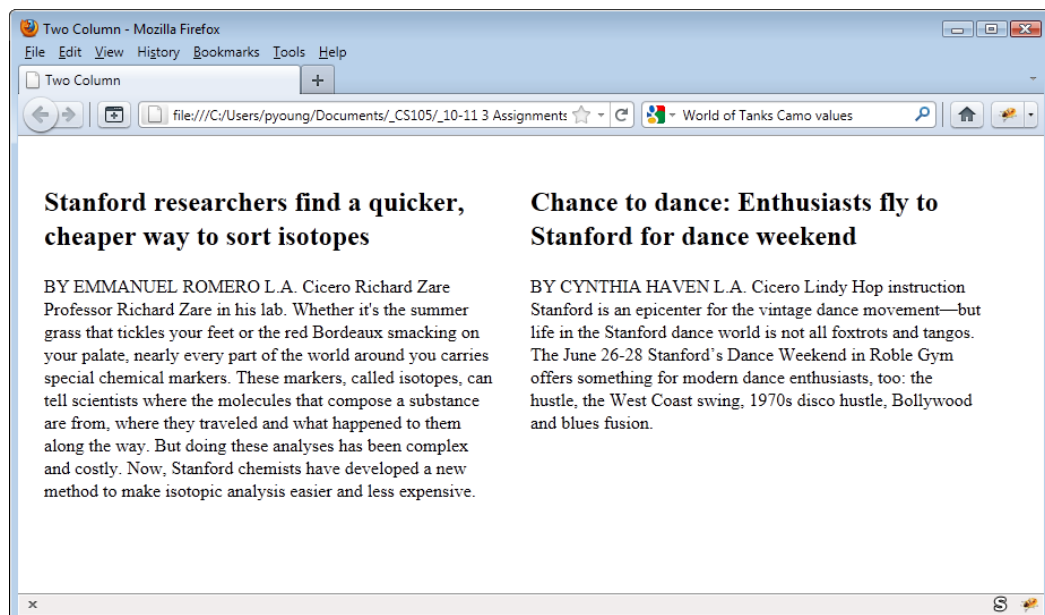
In class, I showed an example of a blog in which various parts of the blog were marked using the class attribute. For this problem you'll use an enhanced version of that blog and provide styling for it. Make sure to use the `blog.html` file provided with this assignment's downloads, not the one used as a class example—the assignment version has extra `entryfooter` tags in it. This is your opportunity to get creative on this assignment. Here are the minimum requirements for full credit on this part of the assignment:

- Provide styling on the header and add in the Stanford Seal (provided with the assignment downloads) using an `` tag with appropriate accompanying CSS.
- Make sure that each blog entry is appropriately distinguished, so that a viewer can easily tell where each blog entry starts and stops.
- Add styling to each entry heading and each entry footer.
- Make your blog look better than my class example!

We'll be giving up to 3 bonus points for nicely styled blogs. In addition, the TAs will pick the top 1-2 blogs and we'll give them up to 10 bonus points, and will show them in class. I've provided a jpeg of the Memorial Church before the earthquake (from Stanford University Archives) in case you want to add it in.

Two-Column Layout (0 pts, see next 2 sections)

Create following two-column webpage (article excerpts from the Stanford Report) using CSS float layout:



Save the file as two-column.html. Each column should be 400 pixels with 15 pixel margins. Use a font with serifs. Actual text is provided with this assignment's downloads so you don't have to type it in. This section will not be graded, and you do not need to submit this file.

Four-Column Layout (0 pts, see next section)

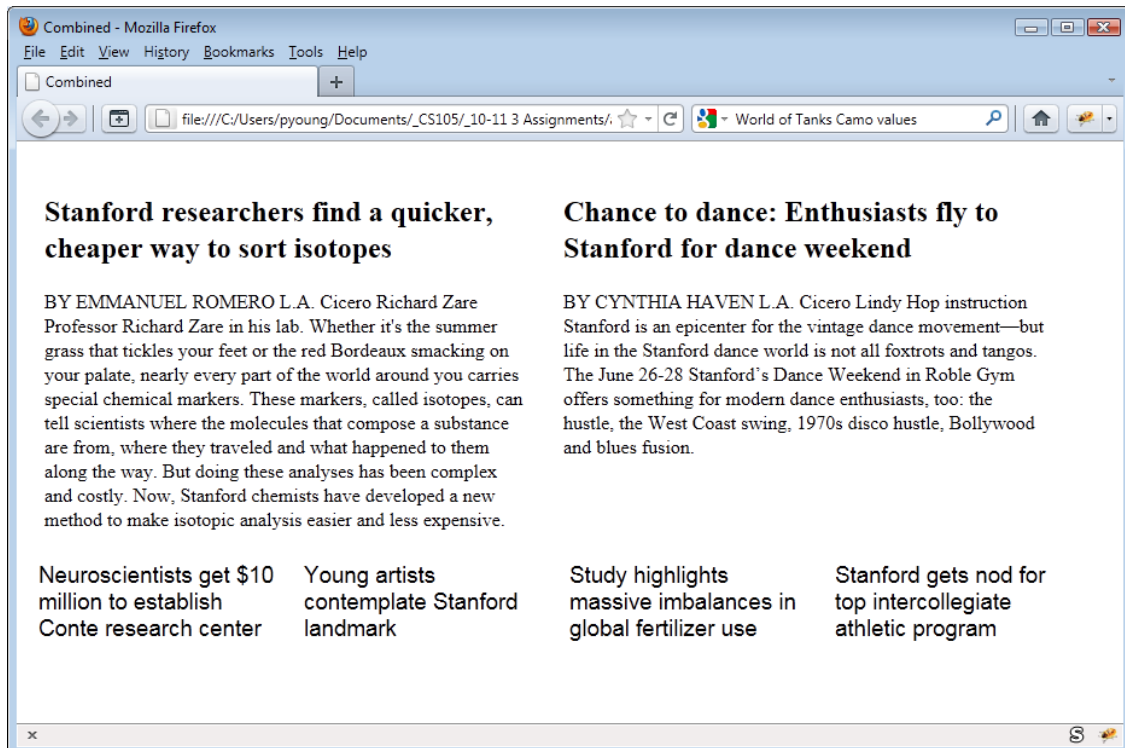
Reproduce the following four-column webpage (consisting of headlines from the Stanford Report) using CSS float layout:



Save it under the name four-column.html. Your webpage does not have to look exactly like mine, but it should contain four-columns, each column should be 200 pixels wide with 10 pixel margins. Use a font without serifs. This section will not be graded, and you do not need to submit this file.

Combined Webpage (8 pts)

Combine the last two parts of this assignment into a new file called combined.html. Here's what your combined webpage should look like:



Stanford Performing Arts Webpage (25 pts)

Create the following webpage:



The Bing Concert Hall text is an excerpt from the actual Bing Concert Hall website (binghall.stanford.edu) and, along with the Bing Concert Hall image file, is provided as part of the homework downloads, so you don't need to type it in.

You don't need a pixel-perfect representation. If your measurements are different or your margins are a bit off or your fonts are a different size, you'll still receive full credit. But the overall placement of items should be the same. Make sure you have the following features:

- A masthead across the top with "Stanford Performing Arts" on the left and "Autumn 2012 Edition" on the right, right-justified with "Edition" below "Autumn 2012."
- The main article section on the left with the text floating around the image as shown.
- Calendar section on the right, with performing arts events listed below, with lines between the events plus an additional line between the Calendar heading and the first event and a line below the last event as shown. Use style sheets to create these lines, not the `<hr />` tag.

Here are some of the specific measurements I used:

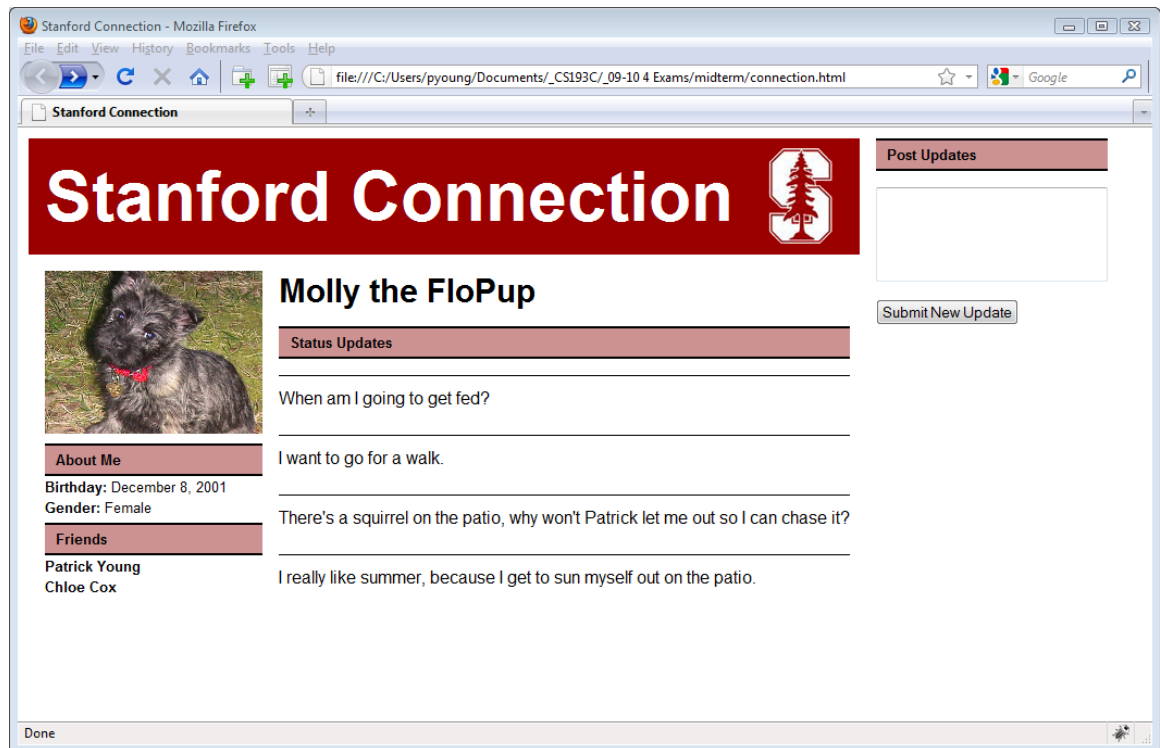
- "Stanford Performing Arts" color #cc0000, 36 point bold, sans-serif
- "Autumn 2012 Edition" color # cc0000, 12pt bold
- "Bing Concert Hall" 18pt, bold, sans-serif
- "Calendar" 14pt, bold, sans-serif
- Calendar items 12pt, italic, sans-serif

- Article text is default font.
- Overall Width 800px;
- Article Column Width: 500px;
- Calendar Column Width: 300px;

If you use the <h1>, <h2>, and <h3> tags to create your headings (which is recommended), you'll need to override the standard margins otherwise your headings will take up too much space. This is commonly done on professional webpages. In fact, many professionals use a "CSS Reset" with their webpages, which resets all the margin and padding on all HTML elements to 0px.

Stanford Connection CSS-Based Layout (25 pts)

Create the following "Facebook-like" webpage. Here's what the webpage should look like:



As you can see, the webpage consists of a photo, some information about the person, and a set of status updates. On the right, using form elements, the user is able to enter in new updates, which will be added to the status updates shown in the center.

You don't have to make a page for my dog Molly, you can substitute your own information, but don't use any time thinking about this, we are only interested in the webpage layout. Also if you enter your own material, make sure it stays at the PG-level or below – we will not grade any R- or X-rated websites.

While you do not need a pixel-perfect implementation you should include the following:

- The Stanford Connection banner which runs across the top of the left two columns (but not across the “Post Updates” column).
- As seen in the screenshot the banner should have the Stanford Logo, which is included with the midterm’s downloads. Note that the actual “Stanford Connection” is text (not part of a graphic image) and it should remain text. You should not create any new graphics files. The color in the logo is #9A0000.
- A column on the left consisting of a picture, followed by information about the user.
- Two sections below the picture, one for “About Me” and one for “Friends”.
- Titles in the “About Me” section like “Birthday” should be bolded, while actual values such as December 8, 2001 are not bolded. Friends’ names are bolded.
- Each of the sections “About Me”, “Friends”, “Status Updates”, and “Post Updates” should have a colored background – I used the color #CC9191. They should also have a 2-pixel black border on the top and bottom but no border on the sides.
- Status updates should be separated by thin lines as shown.
- The right column should include a “Post Updates” heading, a text area, and a submission button.
- Leave a reasonable amount of space between columns.

As we don’t yet know how to execute programs with our webpages, the button “Submit New Update” won’t actually do anything.

Provided Files

The following files are provided with the assignment download:

- blog.html is an enhanced version of the HTML file from class. You’ll need to add your own <style> tag (or a <link> tag and an external file) for the assignment. As previously noted, I’ve also provided you with a Stanford Logo and a photo of Memorial Church from the Stanford University Archives in case you want to add a picture to your blog.
- report-text.txt (unformatted text) for the 2-column/4-column Stanford Report problem.
- bing.jpg and bing-text.txt (unformatted text) for the Stanford Performing Arts webpage.
- tree-logo.gif and molly.jpg for the Stanford Connection webpage.