Class Project

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The Class Project is your chance to show off your new webpage making skills. This project is due Thursday, August 16th at 3:15pm. **No late projects will be accepted**.

The Class Project is designed as a miniature version of CS194 Stanford's Senior Project class. As such, I won't be providing you with a specific objective, instead I will let you decide what it is you want to spend your time on.

In terms of effort or time spent on the project, for single-person projects we are looking for two times as difficult as assignment 3. Two-person teams should show that a comparable amount of effort per person.

Potential Objectives

Here are some potential objectives you might have:

- Create a real website for a real organization. If you want to create a website for a club or organization go right ahead. Do keep in mind Stanford policy prohibits students from receiving class credit for any work for which they are also receiving pay—so no company websites and no consulting fees for CS193C work.

- Create a fun website. Create a hobby website, or create a completely random fun website.

- Create a website which simply shows of your skills. Your website doesn't have to make sense as a whole if your objective is to show off cool JavaScript. For CS193C purposes, if you want to turn in a website consisting of 4-5 independent pages each with different cool JavaScript on it (or even one single webpage with a super-cool JavaScript program on it) that's okay.

We've learned quite a bit of material over the past quarter. Here are some things you might want to emphasize on your website:

- Advanced JavaScript, including dynamic modification of webpage content, events, and use of positioning.

- AJAX using asynchronous requests to a webserver combined with dynamic modification of webpage contents using JavaScript.

- Professional level use of XHTML and CSS. Professional webpages like www.cnn.com or www.nytimes.com clearly look very different from typical hobby websites. In this class, we've learned techniques which can be used to create

professional level webpages. Consider putting the time and effort into creating a polished, professional looking website.

- Navigation and UI Design. While we haven't spent much time discussing HCI (Human Computer Interaction) issues, a well thought out website design will make a considerable difference in a website's success. If you have the HCI training, feel free to include this as one of your website objectives. If you do a good job on HCI, we will count the time you've spent on HCI toward your grade on the project.

Collaborating

You may work with one other CS193C student.[1] In addition, if your website requires server-side programming you may have one or more non-CS193C friends handle the server-side programming for you. If you receive help from anyone other than your CS193C partner it must be explicitly documented in your project writeup. You can also do the server-side programming on your own, but keep in mind this is a client-side programming class, and that's where the bulk of your grade will come from.

We will be taking team size into account when grading the project. Don't feel like you need to join a group to get a good grade.

Outside Support

Text
Depending on your website, you may borrow unformatted text. For example, if you're working on a website for one of the Stanford HAAS Center's public service groups, please feel free to have them write all the text for your website. Do keep in mind that the source of any text taken must be explicitly documented.

If you borrow text from someone other than your project customer (i.e., from anyone other than the person you are building the website for) it must be explicitly noted *on the website* in addition to describing it in your project writeup. In addition, depending on the amount of material copied, you may not be able to present your website to the public—although the CS193C teaching staff will still be able to grade it.

Graphics
You'll have to decide if you want to take the time to create your own graphics by hand. Generally this will give you the most professional look, but it may also take a considerable amount of time. There are several alternatives available. First, as with the text, you can get graphics directly from an outside source. As with text the same rules apply—all copying should be explicitly noted on your website and in your writeup. Again, you may not be able to present your website publicly. As an alternative, there are a variety of websites which will create buttons and banners for you if you supply the text. I've placed links to some of these websites at the bottom of the CS193C Resources webpage.

Tool Support
Please feel free to use Macromedia Dreamweaver or other professional web development tools.

Library Support
There are a variety of JavaScript libraries available which provide support for creating hierarchical menus and use of cookies (among other things). Please feel free to use any

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[1] If you want to form a group with three or more CS193C students, please talk to me first.

JavaScript libraries you want. However, <u>any use must be explicitly documented</u>. Make sure which libraries you've used and which code is from the library vs. which code was written by you.

Copyright Issues

If you do copy text or graphics, keep in mind that copyright rules are in effect on the web just as with print media. You can copy text and graphics for CS193C purposes only under the educational use clause of the copyright law. As long as the CS193C teaching staff is the only one who can see your website, you are probably fine. However, as soon as you publish the website on the web, you may no longer be covered by educational fair use. Too learn more about copyright laws go to http://fairuse.stanford.edu/.

Websites

If you're looking for website topics, some Stanford websites which you might consider creating an "unofficial" revised version of include Stanford Dining and the Stanford Libraries. These departments aren't actually looking to replace their websites, but I would be interested in seeing CS193C students' ideas on how they might be improved. In addition, while I think the Stanford Athletic department current webpage (www.gostanford.com) works well, you might also consider making a webpage for one or more of the athletic teams. This might give a good opportunity to explore website design and some cool JavaScript programming ideas as well.

Writeup

I've alluded to the project writeup at several points above. You should write a short 1 to 2 page document along with your project. This writeup should include:

- Whether you worked with a partner and if you did who that partner was.

- What your project objectives were.

- A brief description of what makes your website interesting. Be sure to note anything you're particularly proud of or anything you want to make sure we do not miss.

- A description of any collaboration that took place in your project, including explicit documentation of any parts of the project which were created by anyone <u>other than</u> your CS193C project partner.

- Explicit documentation on any code you used which you did not write. This includes, for example, use of a JavaScript Cookie functions package or Hierarchical Menu package which you did not write from scratch. As a university we take intellectual credit very seriously. <u>Make sure you explicitly document any code which you've copied from other sources.</u>

- Explicit documentation on any text or graphics that you did not create yourself. As previously noted, if text or graphics are copied from any source other than your website customer (if any) it should also be credited on the website itself.

If one of your project objectives was to study HCI issues, you may include a separate document providing us with your analysis of the HCI issues involved in your website and the design decisions you made.

Administrative Details

Submit the project using the same procedure as you've used for the homeworks. Send the TAs and I an e-mail including your project writeup. Please use Microsoft Word format or RTF (Rich Text Format) for your writeup (if you don't have Word, the Wordpad accessory on the PC also generates Word documents).

Remember no late projects will be accepted.

Sample Project

In the past, some students have really struggled to come up with project ideas. So here's an idea to get you started. This website is a language learning website. It consists of four webpages (although you may want to add a few more), and is scoped under the assumption that this is a one person project (it would need to be massively expanded for two people):

- Home page. This page doesn't have any JavaScript and is just a description of the website. It's here for aesthetic reasons, since a real website would probably have a home page. Cutting it would have a only a minor impact on the project grade. On the other hand, it could be used as an opportunity to show off CSS and webpage layout skills, which can definitely contribute to your grade.

- Dictionary webpage. This webpage lets the user look up words either in the foreign language or using English. Various search options are provided. For example the user can enter a string and get partial or full matches. The user can search for by word type (e.g., noun vs. verb) so if the website was Spanish and searched for "dog" we might get "perro" (the animal) or "perseguir" (to pursue, chase, or dog after someone) depending on the word type setting.

  When a word has been looked up in the dictionary, give the user a means of adding it to a flashcard stack (see below).

- Flashcards webpage. This page lists stacks of flashcards which the user can select and run. Flashcards can either display English or the foreign language (if you want to get complicated you can give users the option to mix the two), and the user tells the webpage whether or not they know the word.

- Statistics webpage. This page displays bar charts showing how the user has performed on the Flashcards. (Hint 1 you can make bars by creating div elements and setting their width, height, and a background color, Hint 2 you can pass information between webpages using web storage or cookies).

I would be most excited for students to come up with their own website ideas. But feel free to take as much or as little of this project description as you want, or to morph it however you'd like.

If you just do this project would that be an "A"? That depends. Does the website look nice? How complicated and how well done are the various features. Do the Flashcards look nice. Are they setup in a clear and understandable manner? Does the user have the ability to manipulate the card stacks? What about the graphs, how do they look? How much power is the user given to control how the graphs are displayed? There are lots of different ways one could implement this project, and the grade will change considerably depending on the quality of the implementation. Moreover, the project could be gussied up by either doing a terrific job on each of the individual webpages or by expanding the website by adding in additional webpages not described here.