

Criterion B: Analysis

Proposed solution:

The client already has a website that disseminates the information she wishes to disseminate relatively well. Generally under these conditions I would suggest sprucing up the cascading style sheets and maybe reorganizing the index a bit.

However, due to some extenuating circumstances regarding the format of the old website (which are discussed in the “Justification of Chosen Solution” section), we decided that it was reasonable more advantageous overall to build a new website based off the old content.

Requirement specification

IT system requirements

- Hardware
 - A Macbook Air (because I am much more comfortable with unix-like systems than DOS)
 - Internet connection (to look stuff up with. I’m not memorizing html)
- Software
 - A text editor (I used Sublime Text 2)
 - To speed up testing of php code I used a local apache server
 - In order to test the (small) database I also used a local mySQL configuration
 - console (I use iTerm for Mac) because sed and grep were able to speed up some of the more predictable work
 - Source/version control software (I used git and github) to backup my project and keep track of changes.

System interaction

- The website uses PHP, specifically I will need a server that runs PHP 5.1 or higher.
- The website should be able to be navigable and viewable in most major browsers (chrome, mozilla, firefox, safari, IE9+).
- The website uses a mySQL database to handle simple searches and the languages in the testimonial list, so the server needs mySQL capabilities.

Input/output requirements

Input requirements

- All content is to be taken from the old site.
- There are more than a hundred pages of text within the testimonials and allegories sections that need to be transferred.
- The allegories are accompanied by images

- The client has expressed that it would be nice to have a calendar page. She'll provide that in the form of a google calendar.
- Information about the lineage.
- Sonoutas and Annotations (basically random messages) will be provided.

Output requirements

- regular page layout
- easily navigable site
- aesthetically pleasing (although, this basically means 'as long as it's not as bad as the one we have right now' for my client)
- a page based view for the stories (she wants a story book feel to the buddhist stories in particular)

Processing

- Clicking on items in the navigation bar and breadcrumbs allows navigation through the site.
- contact-us form accepts user input and send an email
- testimonials can be filtered by language (she said that it was hard to find the one you were looking for)

Security

- All PHP form information must be sanitized.
- All SQL query operations based on user input must certainly be sanitized.
- Visitors cannot be allowed to write to server files (use of permissions)

Specific performance criteria

- a) The website must be easily navigable (i.e. working breadcrumbs, no 'dead end' pages, etc)
- b) Must display all of the required content (all of the testimonials pages and all of the Buddhist story pages)
- c) Can be displayed on multiple browsers (chrome, firefox, opera, safari, IE9+).
- d) Is not susceptible to Cross Site Scripting (XSS) or SQL injection attacks.
- e) Has a consistent aesthetic.

Justification of chosen solution

A website is the solution to the clients need. As stated in criterion A, the client wishes to display testimonials, allegories, and lineage information to a general group of people. It can be assumed that she wishes to do so with little effort on her part. A website is a passive way of disseminating the types of information that she describes; therefore, it is a fitting solution to her need.

She does already have a site: as I stated before, generally in this situation I would have suggested to merely improve upon the old site by editing its cascading style sheets. It takes a lot more effort to build a new site than to just edit an old one in most cases.

However, upon further examination of the old site, I found that most styling on the site had been applied as either inline styling or in `<style>` tags within the html headers themselves. Furthermore, there were many pages (more than a hundred), and the way the styling was applied was inconsistent (hampering the effectiveness of regex commands like `grep` and `sed` to correct the issues). The man who created the site no longer had the files that he had used to create it either.

Therefore, in order to repair and change the styling of the old site I would have to manually edit at least a hundred pages of content in order to correct the visual appearance alone, much less the organization. Because of this, I deemed it reasonable to do a complete redesign of the site, this time with firmer and more scalable organization.

I do have the IT skills to complete this project. I know HTML, JavaScript, CSS, PHP, SQL, and am adept with text (`grep`, `sed`, `chmod`, etc), and I can write code to perform an action if necessary (in C or C++). I am generally a fast learner with respect to IT systems, so referencing things through Google.com should carry me through the things that I haven't done such as setting up a local host or using FTP software.

Security is a concern because of the use of forms and an outward facing SQL interface; however, with proper argument sanitization the risk of being compromised can be minimized.

Word Count: 373