Senior Project Proposal

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Objective:

To create a comprehensive website for the topic of Urban Speleology through which users can interact with other users. Functionality will be incorporated to allow users to communicate with other users to an interface such as a forum. Users may also be given rights to post new content (outside of forum) to the website too, be it articles, personal compositions and/or photos related to the topic of Urban Speleology.

Project Details:

This website will be featured at http://www.UrbanSpeleology.com. The site will be primarily encoded in php and MySQL, but other languages such as cgi, java and javascript may be utilized to accomplish the desired tasks.

The majority of the site will be dynamically generated on the fly based upon the contents of POST and GET variables. Portions of the code will be written following OO design practices featuring classes and inheritance. An administrative interface may also be included which, at minimum, will allow modification of the site's data from a web browser. Ideally, this interface will also allow new data to be added to the site.

Project Goals:

General Coding (4pts total):

*(1pt) Usage of classes in php code.
*(1pt) Usage of class inheritance in php code.
*(1pt) Subclasses override functions in Super classes.
*(1pt) Application of OO design principles in php code.

Website (14pts total):

*(3pt) Create a website with dynamically generated page content stored in a MySQL database.
*(1pt) Ability to store binary data in addition to ascii data in MySQL database.
*(2pt) Create an interface to browse binary content (photos/images) of the website (i.e. Photo Gallery).
*(1pt) Incorporate functionality to remove and/or move binary content of the website.
*(1pt) Incorporate functionality to upload files to the website from a web browser.
*(1pt) Ability to automatically reformat images to conform to a set of predefined specifications before storage on the server.
*(1pt) Generate thumbnails, either on image upload or on-demand.
*(3pt) Dynamically generated site map
*(1pt) Feature site statistics (incorporation of 3rd party apps allowed, i.e. webalizer).

Data Creation/Editing (13pts total):

*(2pt) Ability to add new content to the website through a web interface.
*(1pt) Ability to edit preexisting content through a web interface.
*(1pt) Ability to remove data on the website.

*(1pt) Ability to reclassify data on the website.
*(2pt) Ability to click buttons/links to auto generate html code (i.e. tags)
*(4pt) WYSIWYG text editor interface for modifying data content. (three points)
*(2pt) Incorporate a spell checker into the website (3rd party app).

Users (14pts total):
*(2pt) Allow user logins
*(1pt) Account differentiations (regular users, moderators, administrators, etc)
*(2pt) Allow the creation of user profiles
*(2pt) Allow searching of user profiles
*(2pt) Login security (log out when browser closed, timeout for inactivity, auto-login)
*(4pt) Custom built php sessions (IOW does not use built in php session functions)
*(1pt) Ability to notify a user without revealing the user's identity or contact information
    --Could send an email to the user
    --Could create a web interface for the user to view messages

Forum (11pts total):
*(3pt) Create a user forum integrated with the user logins
*(1pt) Allow user postings
*(1pt) Allow replies to postings
*(2pt) Ability to display postings in threaded format.
*(1pt) Ability to allow comments on a comment.
*(1pt) Ability to email or notify user when a reply is posted to their posting.
*(2pt) Forum/Post statistics (i.e. number of comments, last post, etc).

Moderation (6pts total):
*(3pt) Allow moderation data postings and/or new content posted.
*(1pt) Moderation is dependent on account differentiations.
*(2pt) Screen user submitted data until it has been approved as acceptable.

Search (4pts total):
*(1pt) Add a search feature to the site (potentially outsourcing to a third-party site such as google)
*(3pt) Write a search feature for the website

Total Points possible: 66

Grading:
The grading will be determined by the following scale. Additional points may be awarded to topics not listed under the project goals. Points above and beyond those mentioned herein will require approval of the project advisor and/or the senior project committee.

A --> 40+ points achieved
B --> 33+ points achieved
C --> 27+ points achieved