II. Architectural Design Specification

Structure Diagrams

A data structure diagram, or structure diagram for short, is a data model that is used to describe other conceptual data models (the Detailed Data Flow Diagrams) by providing a hierarchical view of how all the users, processes, and data flow will occur. This sort of diagram also allows the viewer to see certain processes that are utilized by more than one member/user of the system if such an event occurs.

Alumni Spotlight Web System: Structure Diagram
III. Testing Requirements

Requirements Inventory

Use Case Scenarios

The Alumni Spotlight Web System will include three different user cases, each of which are described below including check lists of specific needs for each.

Administrative User:
- This user will be the first user in the database, and first one created on the CMS.
- The user name will be “Administrator” and a password that we have yet to determine.
- This user will have complete access to all accounts.
  - The administrator will be able to see all registered accounts.
  - The administrator should be able to delete a user from the community.
  - The administrator should be able to edit a user’s account in the community.
- Will be able to modify the website as well as the database behind it.
  - Will have access to the MySQL database table to edit it.
  - Will be able to change the table settings in the database.
  - Will be able to change the style sheets for the website.
  - Will have the ability to change functions for the website.
- Administrative users will be able to select specific community members to be spotlighted on the Siena College Computer Science Home Page.
- The administrative user will be able to delete the account.
- No profile homepage instead has the control panel.
- Will not be able to change the log in name of “Administrator”

Community User:
- User will self register with the community
- The user will use his/her E-mail address as their User name (Log In).
- The password will consist of 6-12 characters, and must contain at least one number.
- If the user forgets their password, the user can retrieve it automatically via a link “Forgotten Password” which will e-mail the user their current password.
- The user will have their own account profile which will be customizable with personal information.
  - The following is a list of what will be included in a User’s profile:
    - First Name – User’s first name.
    - Last Name – User’s last name.
    - City - Current city the user lives in.
- State – Current state the user lives in.
- E-mail – Current E-mail address the user is using.
- Graduation Year – What year the user graduated Siena.
- Major – What the user’s major was.
- Minor(s) – Any minor(s) the user had, if applicable.
- Degree Earned – The user’s current degree.
- Favorite Class – The user’s favorite class at Siena.
- Favorite Professor – The user’s favorite professor at Siena.
- Least Favorite Class – The user’s least favorite class at Siena.
- Graduate School – A Yes or No question if the user has gone to, or is currently attending graduate school.
- What School if applicable – The name of the school if the previous field was yes.
- Current Job Location – The user’s current company they work for.
- Current Job Title – The user’s current job title at work.
- Salary – The user’s current salary at their current job.
- Description on Siena Experience – A small description of what the user felt about their time spent at Siena college.
- Personal Information – Any other personal information the user might want to share such as family status.
- Favorite Quote – A quote the user might have found inspiring in their life or simply something they have heard.

- Will be able to upload a photo depicting them.
  - There will also be a sub part, containing photo albums.
  - The user can create, update, delete and add new photo albums.
  - The user can also update, delete, and add to old albums as well.
- Will have their own photo Album that can be updated.
- Will be able to search other community members that have registered for the Alumni Spotlight Web System.

Anyone:
- This user does not need to register for the community.
- Since the user is not registered, there is no account associated with the user on the community.
- Represents any user that visits the Siena College Computer Science Home page.
- Will only be able to view the current Alumni Spotlight that is active on the page above.
The Alumni Spotlight Web System must be web based, so anyone can access it from anywhere.

The system must work with all major Browsers, including but not limited to:
- Internet Explorer 6.0 as well as 7.0
- Mozilla Firefox 1.5.07
- Netscape 7.1
- Safari 2.0.4

The system should be controlled by some sort of CMS to facilitate the administrator’s job.

Allow an administrator to access, monitor, and maintain the web site.
- Ability to review, accept, and deny initial profiles and changes made to those profiles later on.
- Ability to select and use a profile for the Alumni Spotlight.

Allow the administrator to access the database to maintain the user’s data, and make sure the system runs correctly.

The administrator must be able to select specific community user(s) for the Alumni Spotlight.

Allow the administrator to generate a page automatically for the Siena College Computer Science Home Page displaying the Alumni Spotlight.

In accordance to the point above, this selection must generate the page to be loaded on the Siena College Computer Science Home Page.

Allow secure sign in to the system via a sign on screen.

According to the Use Case scenarios, we will ensure that each user type is correctly established.

Allow self-registration into the system.

Allow users to change/add new personal information to their profile in the following areas:
- First Name
- Last Name
- City
- State
- E-mail
- Graduation Year
- Major
- Minor(s)
- Degree Earned
- Favorite Class
- Favorite Professor
- Least Favorite Class
- Graduate School
- What School if applicable
- Current Job Location
• Current Job Title
• Salary
• Description on Siena Experience
• Personal Information
• Favorite Quote

• Finally, all page links will be tested and ensure that they redirect users to their appropriate link.

Sign On Screen

• Upon pressing the “Log On” button we will ensure that the user name and password is correct, and then redirects the user to their home page.
• We will ensure that the link for registration brings the user to the “Registration Screen.”
• Lastly, we will ensure that the link for a forgotten password works correctly as well, placing the user at the “Forgotten Password Screen.”

Registration Screen

• We will make sure that all indicated fields are filled in, and check the fields to ensure they can handle specific characters, such as spaces or single quotes.
• We will also make sure that upon submission, the account will be activated, and a confirmation email will be sent telling the user that their registration was a success. If the account exists already, we will redirect the user to a page informing them that there is an account with that email address already.

Forgotten Password Screen

• We will make sure the email account entered is contained in our database, and if it is, send the user their password.

Home / My Account Screen

• We will make sure the correct information loads with the specified profile.
• A check of all the links will be done, ensuring that they all lead to their correct, respective pages.

Edit Profile Screen

• This page will check to make sure all required fields have been filled in above all else.
• We will ensure specific characters such as spaces and single quotes are acceptable.
• Upon submission, we will make sure that each field is saved in the
database, actually updating the specified profile.

Search Screen

• Upon pressing “Search” we will make sure the fields entered check the database, and return the user to the results screen, showing correct information according to the search criteria.

Results Screen

• We will ensure that the profiles displayed here are correct in accordance with the search criteria.

Contact Us Screen

• We will ensure this screen will send an email to the systems administrator correctly including the user who sent it, as well as the comments that the user filled out within the comments area.

Photo Gallery Screen

• This screen will show the appropriate albums for the profile signed on.
• We will also make sure that any links – IE Upload, Delete, and Edit – are in working order.

New Photo Album

• Again we will make sure each link works, and that upon submission the new album along with pictures will be uploaded to the server, and be available for viewing purposes.

Edit Album Screen

• We will ensure that all links work correctly and that the database files reflect the changes.

Admin Control Panel

• Due to the complexity of the control panel itself, we will summarize the basic operations that are held within the system. Since our open source CMS will create the basic functionality of the Admin Control Panel the basic things to check will be
  o That each link on the page works.
  o Any change made by the administrative user is reflected on the site, or data base depending upon which has been modified.
  o That the administrative user will be able to select a community user as a
spotlighted member, creating a page for the Siena College Computer Science homepage.

Non-Functional Requirements Inventory

- The system should be fast, using fast servers and databases.
- This system should be easily adaptable, to enable Siena College to experience this community if desired.