

Silver Surfer Project

Design Document #2

Silver Foxes

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Revision History

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Introduction

Overview

The purpose of this document is to outline the detailed design of the Silver Surfer Project, a project that allows professors to easily create websites that are student-friendly. This document will include the detailed design of four modules of the Silver Surfer Project. For each module, the classification and purpose, constraints and interactions, as well as the processes and data components will be discussed.

Software Modules to be Discussed

The following is a list of software modules to be discussed in this document:

- Administrator Log In
- Authentication
- Creating New Pages
- Course Page Content

Module 1: Administrator Login

Classification and Purpose

This module is classified as a function. The purpose of this module is to allow administrators to log in to manage the Silver Surfer system. They will be asked to enter their email and password, then they press a button to log in.

Constraints and Interactions

A constraint for this function would include the administrator needing their information added to the database in order to access the admin pages. Without having their own login, the user will not be able to access separate pages that would allow them to update their course pages or create new pages.

There are several interactions that are involved for the administrator. The first would include the user entering `/admin` to the end of the Silver Surfer URL to access the administration page. After this is entered, the login portal will appear and the user will be able to enter their username and password and click the `enter` button afterwards. These include the interactions that the user will need to perform for this function.

Processes and Data Components (Pseudo Code)

```
/* this function activates when the user types /admin to the end of
the Silver Surfer URL */
```

```
IF user adds /admin to site URL
    show login portal
        string username = username textbox information
        string password = password textbox information
        WHEN user clicks ENTER BUTTON
            AUTHENTICATION function called with username
            and
                password data
ELSE IF user adds anything else to site URL
    show 404 error page
```

Module 2: Authentication

Classification and Purpose

This module is classified as a function. The purpose of this module is to authenticate the administrator log in so that is safe and secure. In order for this function to work the user will need to be on the login page and enter their information for the system to determine if they are in the database.

Constraints and Interactions

A constraint for this function would include a proper Internet connection in order to have a connection to the database. Without the proper connection, the system will not be able to authenticate the user's username and password when trying to log in.

There are not many interactions that the user will perform for this function. The main interaction would include the user clicking the `enter` button on the login portal which would trigger the authentication function. After pressing the button the system will carry out the rest of the function without any intervention.

Processes and Data Components (Pseudo Code)

```
// this function activates when the user clicks the enter button
// this function needs two parameters - username and password

string username = passed in from administrator login
string password = passed in from administrator login
WHEN user clicks ENTER BUTTON
    IF username matches one in database
        check if password matches the password in the
        database
        for that username
            IF a match
                bring user to admin pages
            ELSE (not a match)
                clear password textbox
                alert user that password is incorrect
    ELSE
        clear password textbox
        alert user that username is incorrect
```

Module 3: Creating New Pages

Classification and Purpose

This module is classified as a function. The purpose of this module is to give administrators the ability to create new pages with ease. Administrators must first log in to access this page.

Constraints and Interactions

The main constraint for creating new pages would center around the authentication process. If the user is not able to log in to the administration page, then they will not be able to create new pages. Any user that is not an administrator with the ability to log in will not be able to interact with this and create new pages, ie. students cannot create new pages.

The interactions include the user needing to log into the administrative pages. Then they will need to type in the information they want on the new page. Following this they will then need to click a “publish” button for the page to be posted for students to view.

Processes and Data Components (Pseudo Code)

```
/* this function is only accessible by admins and activates after
Administrator Login and Authentication functions */

IF user = admin
    show interface page for creating new content
    user types their text/information in that they want on the
    new page
    IF user clicks publish
        text is formatted and a new page is created with the
        user content
ELSE
    redirect to landing page
```

Module 4: Course Page Content

Classification and Purpose

This module is classified as a file. The purpose of this module is to have a landing page for each course currently offered in the Computer Science Department and the proper content/files. Each course will have this type of landing page. The user viewing the page will have a menu that they can open to then click into other content such as viewing a syllabus and additional resources. This is the general view of the website, which does not require logging in and has no access to the administrator side of the website.

Constraints and Interactions

The main constraint for this module is that the administration properly uploads the course files for the students to view. If the professor does not properly upload the information the user will not be able to view or download documents such as a syllabus.

The interactions include the user choosing which course page to view. After choosing a course page, they can choose from the menu items to view content like syllabi, schedules, resources, etc.

Processes and Data Components (Pseudo Code)

```
// this function is accessible by anyone not logged in as admin

IF user != admin
    show a course page
    IF user clicks another course button
        change pages to that course page
    IF user clicks menu
        open menu
        IF user clicks menu option
            show appropriate content in the viewing area
```