

**CSci 5131: Advanced Internet Programming, Spring 2009****Assignment 3: Programming with CGI****Due Date: March 23, 2009****This assignment is to be done either individually OR in groups of up to three students.****Goals:**

In this assignment you will learn about CGI protocol, Perl, and Cookie management using CGI. You will learn how to use JavaScript to change DOM, and form checking before submission. You will also learn about CGI.pm module.

**Problem Statement:**

You will create a website for uploading and viewing photos using CGI and Perl. It will support single photo folder, multiple users, functionality for adding/deleting/viewing photos and functionality for adding/deleting users.

**Functionality:**

You are required to support the following functionality.

- **Photo Folder**

- The site will support a single folder where all the photos will be uploaded.
  - Your CGI will create this directory.
    - ✓ Please name this directory as “MyPhotos”.

- **Users**

- The site will support users in three different roles: Owner, Editors, and Visitors.
  - Every user will have a unique User-Name and Password.
  - The owner should be able to add/delete/view photos.
  - A user in the Editor role should be able to add/delete photos, and edit photo information.
  - A user in the Visitor role should be able to only view the photos.

- **Photo Upload, Photo View, Photo Delete**

- The site will support the following photo specific functionality:
  - View Photos:
    - You should display all the photos in the folder.
  - Upload one or more Photos:
    - You should provide the following:
      - ✓ Elements for specifying Photo Name, Photo Description, and Photo upload (file browsing menu).
    - You should check whether the file being uploaded is indeed an image.
      - ✓ You should use JavaScript to this checking.
      - ✓ You should at least support the following file types: BMP/bmp, jpeg/JPEG, jpg/JPG, gif
    - You should provide a button (“Add more photos”) that would dynamically create the photo upload elements (Photo Name, Photo Description, and Photo upload browsing functionality).
      - ✓ You will dynamically add these elements using JavaScript to the current DOM.
  - Delete a Photo:
    - You should provide mechanism to select a photo for deletion.

- **Administrative Functions for the Owner**

- Owner should be able to add and delete users to the editor and visitor roles.

- **Slideshow Functionality**

- You should support the slideshow functionality that you implemented in Assignment 2.

**Design Guidelines:**

1. Please name the directory where you will upload the photos as “MyPhotos”.
  - a. You should create this directory in the current working directory.
  - b. In Perl, you can obtain the current working directory through the “getcwd” command.
2. Use JavaScript to ensure that only image files are selected for upload.
  - a. You should at least support the following file types: BMP/bmp, jpeg/JPEG, jpg/JPG, gif
3. For multiple photo upload:
  - a. Create this by adding required elements to the current DOM.
4. We are not going to use database related functionality in this assignment. Therefore,
  - a. You will have to maintain the <User Name, Password, Role> information in a file.
5. Use dummy users to simulate multiple users.
  - a. We suggest that you **\*\* DO NOT \*\*** use your ITLabs/CS/X.500 User Name and Password.
6. COOKIES: You will need to use HTTP Cookies to track the currently logged in user.
  - a. Cookies will enable you to provide user specific information without requiring the user to enter User Name and Password for each interaction.
  - b. You can use random numbers as cookies.
7. For the enabling Slideshow functionality you will need to embed JavaScript in form that will be generated by CGI.

**Menu:**

Below we present the various menu options that you need to define as part of various forms.

**Login Menu:**

- Input User Name and Password
  - If the user is passes authentication test, then you will display one of the following: Owner menu, Editor menu, Visitor menu.
- You can use any User Name and Password for the Owner.

**Visitor Menu:**

- View Photo: Display Photo Thumbnails.

**Editor Menu:**

- Should support all the functionality of the Visitor. Additional it should support the following menu option:
- Add one or more Photos: Input -> Photo name, Photo description, Photo to upload (selected through File browsing menu).
- Delete Photo: Select a Photo.
- Edit Photo: Input -> Photo name

**Owner Menu:**

- Should support all the functionality of the Editor role. Additional it should support the following menu option:
- Add User: Take the following items as input: User Name, Password, Role (Select from Editor/Visitor)
- Delete User: Input -> User Name

**Grading Criteria:**

- Group submissions need to implement all the above functionality
- Individual submissions can:
  - Skip JavaScript checking.
  - Use only two roles: Owner, and Visitor

**Resources:**

- [CGI Tutorial on CS Web Page](#)
- [CGI PM](#)
- [DOM Reference](#)
- [DOM Interfaces](#)

**Submission Instructions:**

Include the following files in your submission: CGI files and HTML files, and a README file.

In the README indicate the following things:

- Your Student Name and ID
- How to run your code.

Submit the tarred directory containing all these files.