IT 207

Applied IT Programming

Lab Assignment 4 | Arrays, Structured Query Language, MySQL

Social Networking 101

For this assignment you need to design and implement a social networking component that allows users to comment and denote when they have visited your web site. Such functionality is fundamental to many social networking sites such as Facebook. As a component of a social networking site, there is potential to incorporate this into many social sites while adding to it to create an extensive feature set. You will develop two versions of this component, one that uses a text file (for the first submission point), and one that uses a database table (for the final submission point). Both versions will be submitted as part of your final submission.

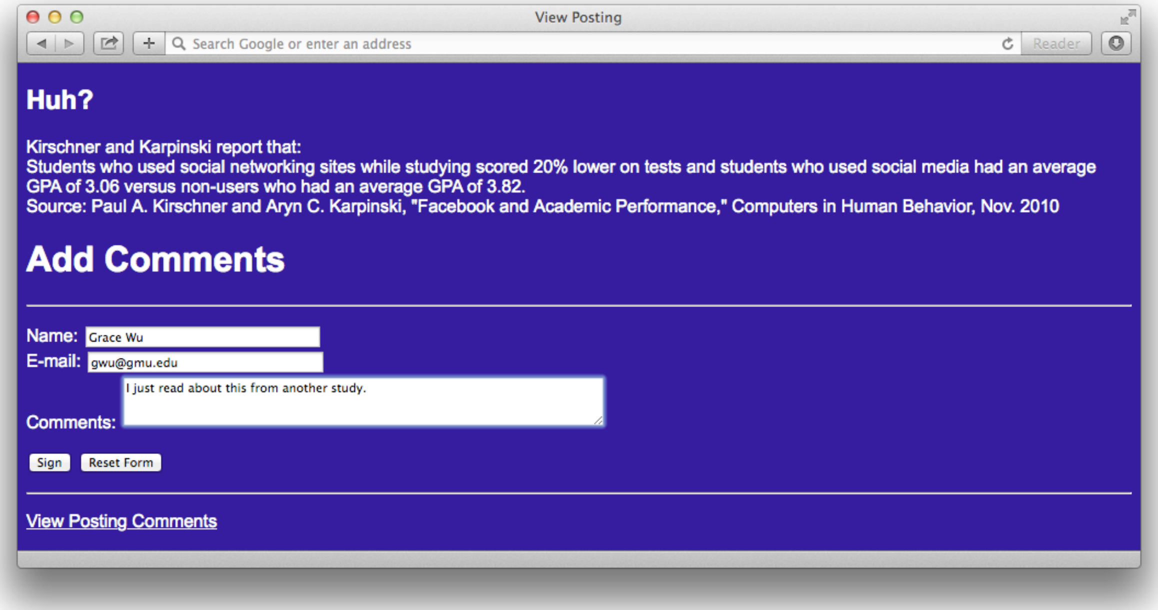
Design Requirements

Create an application that allows users to comment on a static posting that you provide. In one version, the user's name, contact information (e-mail address), and comment will be saved to a single text file. In the other version, the same information will be saved to a database table.

Include functionality that allows anyone to view who has visited the site and left comments. While the comments will automatically be displayed by date (as this is how they are saved to the text file and database table), allow the viewer to sort comments in ascending and descending order (by name) to more easily find a comment. Do not allow users to comment more than once to the posting. In doing so, prevent duplicates from being saved to the text file and/or database table. You will want to plan how to save data to the text file and database table for easy retrieval.

To get started, create an XHTML document that will serve as a main page where you can enter your information and comments. This page should also provide the ability to get to the other existing comments on the posting. Upon providing a comment, you should acknowledge the addition of the entry by showing what values were added. You should also allow a different user to add an entry.

Below is an example of the main page and acknowledgement output you should have before formatting:



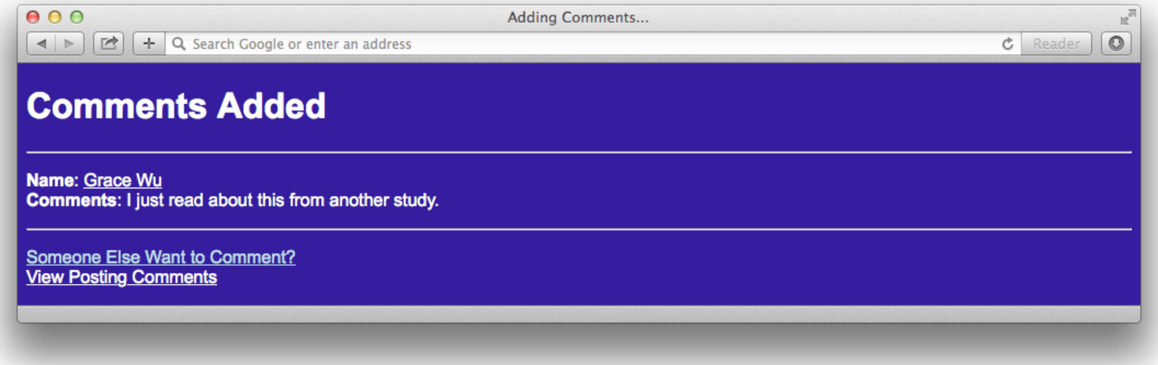
Huh?

Kirschner and Karpinski report that:
Students who used social networking sites while studying scored 20% lower on tests and students who used social media had an average GPA of 3.06 versus non-users who had an average GPA of 3.82.
Source: Paul A. Kirschner and Aryn C. Karpinski, "Facebook and Academic Performance," Computers in Human Behavior, Nov. 2010

Add Comments

Name: Grace Wu
E-mail: gwu@gmu.edu
Comments: I just read about this from another study.

View Posting Comments

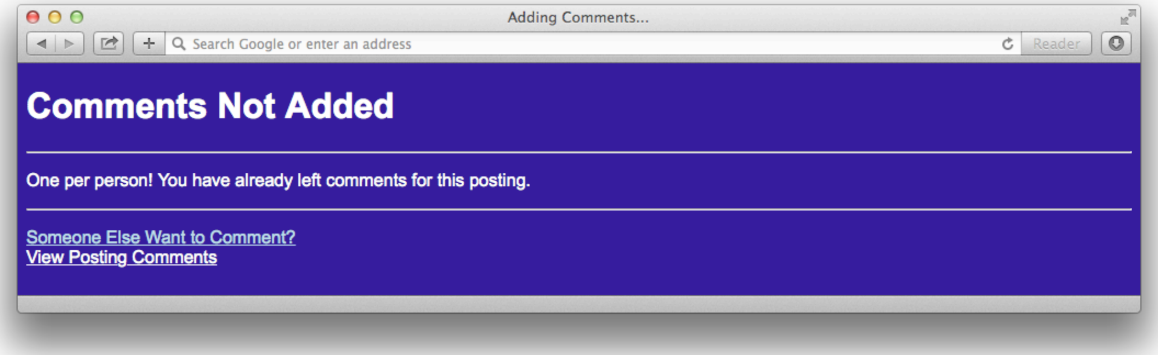


Comments Added

Name: Grace Wu
Comments: I just read about this from another study.

Someone Else Want to Comment?
View Posting Comments

If the user has already commented on the posting, you should let them know that you don't allow more than one comment by the same user. Below is an example of the notification page output you should have before formatting for duplicate entries:

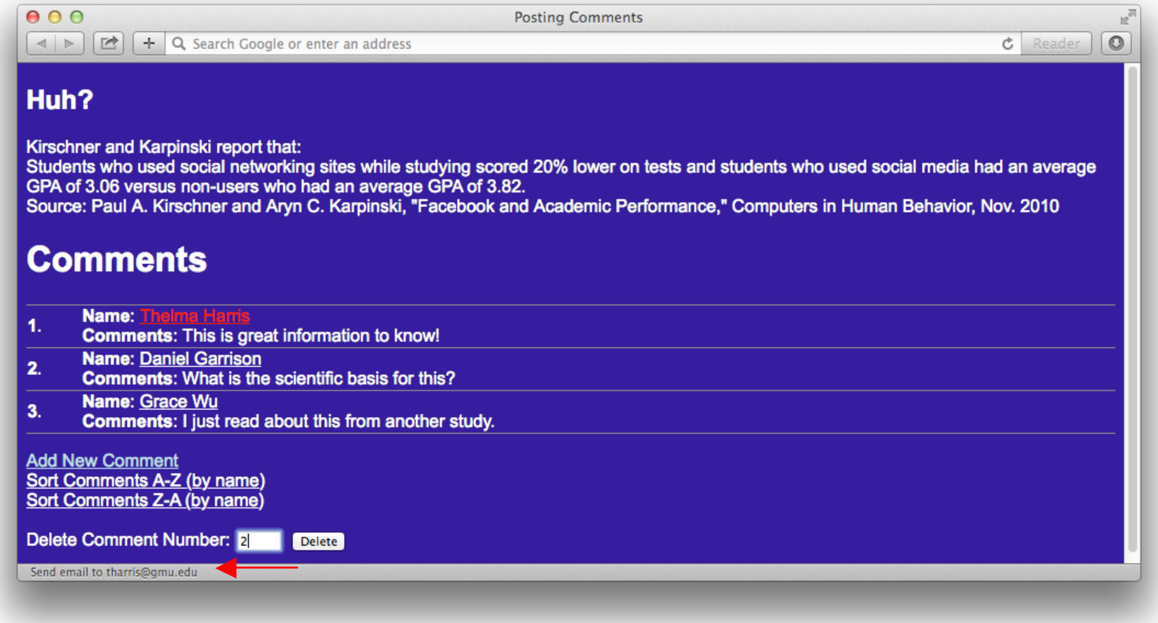


Comments Not Added

One per person! You have already left comments for this posting.

Someone Else Want to Comment?
View Posting Comments

Below is an example of the posting comments page output you should have before formatting:



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Comments

1.	**Name:** Thelma Harris **Comments:** This is great information to know!
2.	**Name:** Daniel Garrison **Comments:** What is the scientific basis for this?
3.	**Name:** Grace Wu **Comments:** I just read about this from another study.

Add New Comment
Sort Comments A-Z (by name)
Sort Comments Z-A (by name)

Delete Comment Number: 2 Delete

Send email to tharris@gmu.edu

When the user views the comments on the posting, they should have the ability to sort the results in either ascending or descending order. For the text file version, this should be done using an indexed array that re-indexes depending on the sort order chosen. For the database version, you should use SQL to do the sorting. No matter where someone is in your web site, you should always provide a way to return to the main page where a new user could add a comment to the posting.

In addition, you should allow a user to specify the index number of any user's comment information they wish to delete. This functionality should be implemented in both text file and database versions. While this feature would traditionally require administrator authentication, you can keep it simple and allow any user to delete any existing entry. Upon deleting an entry, you should re-output the posting comment page showing the remaining entries renumbered.

Notice that on all applicable pages while the email address does not show, the name is hypertext linked to their email address using a XHTML `mailto:` link. As shown in the comments page example, selecting the user name hyperlink should provide an email link to the email address of commenter. Constants should be used for values that do not change, and variables for values that change during the course of execution. You should include Last Modified Date information on your pages. This should be provided dynamically by using the built-in `date()`function within the `getlastmod()`function.

Your application should be laid out in the *Lab Content* area of your web site. When laying out your web page, you should retain the common navigation and structural components (header and footer) of your website even though not shown in the image. This will require you to incorporate the SSI file references in this lab assignment as you did on previous the lab assignment. SSI files should not be moved but rather you should provide the path to their original file location. The common navigation and structural components should present visual continuity across all the web pages of your website and should not shift at all when going from web page to web page. In addition, while the image does not demonstrate this, you need to include a working link on the main page of both versions to get back to your home page. Also, while the image does not demonstrate this, you will need a working link from the text file version's main page to get to the database version's main page.

For the text file main page, you should use a file name that will automatically load when a user specifies only the folder name in the URL. The file should be uploaded to your Lab Assignment 4 directory. Your XHTML file should be well-formed and created using a strict XHTML DTD. You can create the web page using any text editor (Microsoft Notepad, RogSoft Notepad+, Adobe Homesite, etc) that is not WYSIWYG capable (Adobe Dreamweaver, Microsoft Word, etc).

You should use XHTML for the content of all pages and CSS for the stylizing and positioning of each of the pages. Using an external .css file, add formatting of your choice to make the output more aesthetically pleasing. These styles should be implemented as part of the final submission points. While you should continue to use the external CSS you created for your home page, you should not modify or update the file. Your new CSS file should not conflict or modify the layout and positioning of earlier lab assignments.

Approach

For the first submission point, start off by creating a main page with XHTML form that submits to a .php file. After creating the non-PHP XHTML page, determine, code, and validate the .php file. As part of this process, create the script that does the addition of a posting comment, and a .php file that outputs the posting comments as stored in the text file (by date). Of course, you will want a text file to store the user's names, email addresses, and comments. Finally, you can create individual .php files for the ascending and descending views.

After the first submission, you can start to create the second version of the site that stores the same information, but now in a database table. To layout and create the database table, determine the data types and primary key of the information to be stored. This version should provide all the same functionality as the text file version. Once you have both versions working, you can add the CSS formatting. Finally, validate all the pages and correct any ill-formed tags where necessary.

Submission
You will need to upload these web/script pages and CSS file to your Lab Assignment 4 directory within your Zeus/Helios server space, while keeping the original SSI and CSS files in their original file location. Verify that the uploaded pages work in the browser, as this is what will be used for grading. Make sure all links in the pages work. Also for each submission point, you must submit all the files you create to the appropriate Assignment drop box on Blackboard. As part of your final Blackboard submission you should include a text file that contains a copy your database table creation script that you used in the console window. This will allow us to understand how your table is laid out.

Notables

- Remember that the lab assignment must clearly display your name in the interface (if any) and be commented with your name in all files.
- Try to be consistent in the naming of your files as this will help you later on.
- Feel free to use your book and notes for general information on these technologies.
- If need be, for reference material on HTML, you may want to visit http://w3schools.com/html/ which we discussed in class.
- For reference material on CSS, you may want to visit http://w3schools.com/css/ which we discussed in class.
- For reference material on PHP, you may want to visit http://php.net which we discussed in class.
- Websites other than those provided in this lab should not be utilized.
- Just a reminder… this is individual work so while you can provide general assistance to other students while in the lab class, you should not work together or give solutions. Assistance provided to others while outside the lab class should only be through the use of the discussion forums.