CS 1520 / CoE 1520: Programming Languages for Web Applications (Spring 2012)
Department of Computer Science, University of Pittsburgh

Assignment #2: PHP

Released: October 20th, 2012   **Due:** 11:59pm, Saturday, November 3rd, 2012

Goal

Gain familiarity with PHP.

Description

In this assignment, you will need to maintain a list of parcel-IDs for real estate properties in Allegheny County and compare these properties' assessed market value increases. The user could add or delete entries in the list. State should be maintained either through the use of session variables or by embedding this information in the HTML form itself. No javascript or database manipulation is allowed, since we have not yet covered these in class. You should not use file access at the server side either (this would be a challenge if you had multiple users).

Page Elements

Your PHP program (`property-compare.php`) should show a page that has three different elements:

1. A textbox where the user could enter one ore more parcel IDs (e.g., 0028-C-00296-0000-00). You should accept parcel IDs with or without hyphens, that are separated by either commas, spaces or newline characters (i.e, one at a line). The text box should have an "Add Parcel IDs" form button.

2. A list of properties (one property per line), showing:

   - the Parcel ID, the Owner Name, the Address, the Municipality, and whether it is Vacant or not. This is the same information displayed when you are making a search on the property assessment web site (`http://www2.county.allegheny.pa.us/RealEstate/Search.aspx`).

   - the 2012 Full Market Value (Land, Building, and Total Value), which corresponds to the Full Market Value (left column) and can be obtained from
     `http://www2.county.allegheny.pa.us/RealEstate/GeneralInfo.aspx?ParcelID=XYZ`,
     where XYZ is the parcel ID without hyphens, e.g., 0028C00296000000.

   - the 2013 Full Market Value (Land, Building, and Total Value), which corresponds to the Court Ordered Reassessed Full Market Value (right column) and can be obtained from:
     `http://www2.county.allegheny.pa.us/reval/GeneralInfo.aspx?ParcelID=XYZ`.
     where XYZ is the parcel ID without hyphens, e.g., 0028C00296000000.

   - Computed percentage increases from the 2012 to the 2013 values for all categories (i.e., Land, Building, and Total). For example, for parcel ID 0028C00296000000, you should compute:
     - Land Increase: $\frac{\$101,700 - \$32,900}{\$32,900} * 100 = 209.12\%$
     - Building Increase: 22.61%
     - Total Increase: 26.94%

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Note that these numbers would be negative, if the value decreased in 2013.

Next to each property there should be a form button to "Delete" that property from the listing.

3. The properties should be sorted by Parcel ID by default. There should be two additional form buttons at the bottom of the page, one that says "Sort by Ascending Rate Increase" (i.e., property with smallest increase first) and "Sort by Descending Rate Increase" (i.e., property with highest increase first). Once you press any of these buttons you just get the property listing to be displayed in the appropriate sort order.

It should be noted that after any form button is pressed, the user is sent back to the same page and all the functionality is still there.

What to submit

One PHP program that performs the tasks listed above, along with any additional libraries that you have developed (and are shared by the programs). Name your program `property-compare.php`. There is no standard naming scheme for the libraries.

Academic Honesty

The work in this assignment is to be done *independently*, by you and only you. Discussions with other students on the assignment should be limited to understanding the statement of the problem. **Cheating in any way, including giving your work to someone else, will result in an F for the course and a report to the appropriate University authority for further disciplinary action.**

How to submit your assignment

We will use a Web-based assignment submission interface. To submit your assignment:

- If you have more than one file to submit, prepare your assignment for uploading, by generating a single zip file with all the files.
- Go to the class web page `http://db.cs.pitt.edu/courses/cs1520/spring2012` and click the Submit button.
- Use your pittID as the username and the password you specified at the contact information form for authentication. There is a reminder service via email if you forgot your password. You must have already submitted your contact information, if you have not yet you need to do so now.
- Upload your assignment file to the appropriate assignment (from the drop-down list).
- Check (through the web interface) to verify what is the file size that has been uploaded and make sure it has been submitted in full. **It is your responsibility to make sure the assignment was properly submitted.**

You must submit your assignment before the due date (11:59pm, Saturday, November 3rd, 2012) to avoid getting any late penalty. The timestamp of the electronic submission will determine if you have met the deadline. There will be no late submissions allowed after 11:59pm, Monday, November 5th, 2012.

[Last updated on October 20, 2012 at 7:19pm EST]