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

Assignment #5: MyPlaces
(Due: 11:59pm, Friday, December 14th)

Goal

Gain familiarity with Google Maps, AJAX, and their interaction with PHP/MySQL.

Description

In this assignment, you are asked to create four php pages:

- `myplaces.php` – this is the main page for your program that should display a map using google maps, with pushpins corresponding to the different places stored in the database, along with summary information for each place. This information should be displayed in a popup window when the user clicks on a pushpin (per the default google maps behavior) and should contain:
  - the name of the place, as stored in the database,
  - a link to the appropriate oneplace.php for this place (can make it a hyperlink off of the name), that should show up in a different window if the user clicks it,
  - the total number of check-ins for the current user (since the beginning of time),
  - the total number of check-ins for all users (since the beginning of time).

  The easiest way to display these two numbers would be to show them as a fraction, i.e., 2 / 43 (where 2 corresponds to the check-ins for the current user and 43 corresponds to that of all users).

- `oneplace.php?id=XYZ` – this is a detailed page for the place with id = XYZ, which is stored in the database. It should include:
  - the last check-in timestamp for the current user,
  - the total number of check-ins for the current user (since the beginning of time),
  - the total number of check-ins for all users (since the beginning of time),
  - any comments that the users have left, sorted in chronological order (more recent comments first) and with the comments of the current user be in bold font to stand out.

- `mycheckin.php` – this allows the user to check-in to a specific place and optionally submit a comment. This should be implemented as a form with two text input boxes, *place* and *comment* and a single submit button.
  - *place* should be an AJAX-enabled text box that will lookup for matching entries of names of places in the database, and display these as options to be selected from the user, instead of typing in the full name. The definition of "matching" in this context should be as a prefix on the beginning of a word that is part of the name. In other words, someone typing "Sq" should get "Sennott Square Building" as part of the suggestions.

  - *comment* is a simple textarea input box that can be used to collect a user's optional comment.

- `register.php` – this is a page for new users to register. You should make sure that users can login to your system and utilize cookies (that expire within 2 hours) to access any of the php pages mentioned earlier, without having to provide a username and password every time. If a user attempts to access any of these three pages without having first logged in, he/she should get a prompt asking them to login (using a username and password) plus provide a link to the `register.php` page.

  The `register.php` does not require prior login and should allow a user to provide a username, password, first name, last name, and email (as part of a simple form) in order to get an account. The registration form should have two buttons:
  - *check username* – should be next to the username and should check whether the user-submitted username is already in the database, using AJAX. If it is, an error message ("already in the database", in red) should be displayed next to the button. If it is not, then a positive message ("ok", in green) should be displayed next to the button.
  - *register* – should be a simple form submit button.

Database Schema

The database has three tables:

- **Places**
  - latitude
  - longitude
  - name
  - placeID (primary key, auto-increment)
  - web_page

- **Users**
  - username
  - password
  - first name
  - last name
  - userID (primary key, auto-increment)
  - email

- **Checkins**
  - userID
  - placeID
  - comment

A detailed schema in SQL will be provided on the class web site.

Initial Data

We will provide sample data in the `Shared` database and make it so that you can also contribute data for everybody else as well. You should however use your individual databases for the project.

What to submit

All your PHP files that are needed to execute the program. You should leave your database populated with sample data, if you have some, so that we can test your assignment.

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 five files 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/fall2012` 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, Friday, December 14th) 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, Friday, December 14th.