Exercise08: Ajax/Comet/Web Sockets

Objectives:

To learn about ajax, comet, and web sockets.

AJAX: Goal is to make web pages responsive. Client can make request to server and update part of a page without having to load an entire page.

COMET: Goal is to make client respond to server events (rather than only having server respond to requests from clients).

Web Sockets: Goal is to allow bi-directional communication.

In LAB07, there was no extra work with the lab. This lab is a continuation of last lab and basically you get to do the "extra work".

Work with your group (or by yourself). Each group to upload only one submission.

1 Run UwAmp server (Same as for Lab07)

UwAmp is a WAMP server (Windows Apache MySQL, PHP). You can download it by using the following steps. You can run it off a USB stick.

1.1 Download UwAmp

1) go to http://www.uwamp.com/en/?page=download
2) download .zip file .and extract the contents into a folder.
3) change the port number to 8080
4) startUwAmp

1.2 Check to make sure it is working ok

1) Run UwAmp
2) Select the first two check boxes you get.
3) Make sure that ALL the PHP code you want to run is in a folder INSIDE www folder of UwAmp.

2 Warm Up: Try Some Examples (same as for Lab07)

1. First, open blackboard, go to Course Contents, and then **download exercise08.zip file** into your workspace (U:\workspace or something like that!). Then, unzip.
2. Play with each of the given examples (in examples directory). Open them using a text editor of your choice and modify parts of PhP files to learn how the different instructions work. There are TODO instructions in the files. Try them out!

Note that the assignment assumes you have understood these examples.

3 Follower - application

Here you will create a simple twitter-like application where a user will be able to view posts from other users whom they are following.

3.1 Basic Requirements

1) There are two screens: the login screen and the home screen.

2) The login page asks for a "username". If the username does not exist, then a new entry is created in the database table named **usernames.** Also, a user always follows himself/herself and so an entry must be created in the database table named **followers** as well. If the username already exists, then the home page is shown.

3) The home page has five sections: a Head section where the user name is displayed, a Messages section where posts from users being followed are displayed, a Follow section where user names of users being followed are displayed, a Followers section where user names of users who are following the current user are displayed, and a Post section where the user can type in and post a message. How you organize the sections in your homepage is up to you. Sections must be updated using only Ajax/Comet/web-sockets.

4) Posts in messages section are sorted by time. Users should be able to see posts sent by themselves and by others whom they are following.

5) When a user posts a message, it should automatically update all followers (use comet or web-socket techniques).

6) In the follow section, a user can click on a "follow" button – which will show a list of all the users AND the number of followers for each user – and the user can choose a user to follow. Use Ajax and comet to update follower and followed pages.

3.2 Database Access

You will use the same database as for Lab06. However, you will use different tables than that lab.

Server: mysql.cs.iastate.edu
Schema: db319all
User: u319all
Pass: 024IjLaMj4dI

3.3 Database Tables

There are three tables of interest:

usernames

username

followers

username	**Follower name**

message

username	msg	Time

**Here time will be stored as (TIMESTAMP)

** All the remaining fields are char()

4 Submission

Zip your html, js, and php files and submit on black board. Remember there is only one submission per group. Make sure to include all the files that are needed in order to run your program