

Project 3

CIS 435 – Fall 2016
Prof. John P. Baugh

Demonstration of Registration with PHP and MySQL

Due: **November 27, 2016 at 11:59 p.m.**
Total Points: **125**

Instructions

There are 36 students in a Web Technology class. To organize the project demonstrations, the students will demonstrate their projects at six different one-hour long time slots. **Up to 6 students can give their demonstrations in each time slot.** The professor decides to create a registration webpage to allow students to sign up for one of the time slots. A student visiting the page should be able to submit:

- his/her UMID
- first name
- last name
- project title
- email address
- phone number

The student should also be able to book a seat in one of the available time slots. **A student is uniquely identified by his/her UMID.**

The submitted data should be stored in a **MySQL database** which is maintained on a server. The webpage and the server should interact with each other at every step of the registration process.

The page should show **how many free seats** are available in each time slot, announcing and blocking all fully booked time slots. After a student makes a data submission, it should check whether the student has been already registered:

- If not, the data is stored on the server and the student is notified about her registration.
- Otherwise, if already registered, **the student should be prompted to ensure that she wants to change her registration** to the new section (and removed from the current one she is registered for).

For example, the time slots may look like the following list:

12/9/15, 6:00 PM – 7:00 PM, 6 seats remaining
12/9/15, 7:00 PM – 8:00 PM, 5 seats remaining
12/9/15, 8:00 PM – 9:00 PM, 3 seats remaining
12/10/15, 6:00 PM – 7:00 PM, 2 seats remaining
12/10/15, 7:00 PM – 8:00 PM, 4 seats remaining
12/10/15, 8:00 PM – 9:00 PM, 0 seats remaining

In addition, you need to write a **separate** webpage that will display the list of students (including their UMIDs, names, project titles, email addresses, phone numbers, and time slots) who are registered, after querying the database.

Requirements

For your assignment, you should use HTML, CSS, JavaScript, PHP, and MySQL.

- The database must fully implement the registration process, maintaining the submitted information. The server and page behavior must meet the requirements listed above.
- The specific look and feel of the pages as well as the database implementation is left intentionally vague, allowing considerable design freedom on your part.
 - However, the page should have a nice look and the code should satisfy common standards.
- User inputs must be validated at the server side in PHP **and/or** at the client side in JavaScript.
- The first and last name fields cannot be empty and consist of alpha letters only. UMID must be 8 digits
- Email begins with series of alphanumeric characters, followed by the “@” character, and domain name
 - *Note, the actual email format is much more restrictive.*
- Domain name consists of dot separated labels of 1 to 20 alphanumeric characters each, up to a maximum total length of 80 characters (including dot delimiters).
- Phone number must be in the form 999-999-9999

If there are any errors, your program must **highlight the error input** and keep the correct inputs. **You should not ask a user to “go back”** to the previous page or input everything again.

Options for PHP and MySQL

There are a multitude of options for using PHP and MySQL. Three common options are to:

- Install XAMPP on your own machine
 - See my documents under Supplemental on Canvas to learn how to do this
- Pay for a hosting service that also provides MySQL and PHP support
- Use a free trial of Amazon AWS with ARD
 - Partial instructions are below

NOTES ON LAUNCHING A MYSQL DATABASE INSTANCES AT AWS

The following link gives the detailed instruction:

<http://docs.amazonwebservices.com/AmazonRDS/latest/GettingStartedGuide/LaunchDBInstance.html>

Notes:

- DB instance class should be **"db.t2.micro"** to avoid any additional cost.
- Allocated storage should be 5GB
- Database port should be 3306
- DB security group should be "default". Note, make sure that it authorizes the connection: CIDR/IP: 0.0.0.0/0
- Take a note of your master user name (e.g. root) and password
- Take a note of the "endpoint of the DB instance," which is the host name of your MySQL server.
- Database and table names are case sensitive.
- To connect to your DB instance, you will need to install a MySQL client in your computer. MySQL workbench is one of the best tools. You may download it from the following link:
<http://www.mysql.com/downloads/workbench/>

Hints:

Your program 3 may follow the similar structure of the sample programs we discussed on the textbook (Section 19.11, page 694).

I suggest that you install the XAMPP on your personal computer. Then, you can develop and test your program locally.

Deliverables

Upload all your files as **a single ZIP file** to the Canvas under the appropriate folder. Be sure to include all relevant HTML, CSS, JavaScript, and PHP files, and include an SQL dump of the relevant table(s) that you are using for this assignment. Use the "mysqldump" command or data export in MySQL workbench, or the appropriate commands from within phpMyAdmin to export the SQL.