

CIS 435-525 Fall 2015 Project 3:

Demonstration Registration with PHP and MySQL

Assigned: 10/29/2015
Due: **Monday, 11/16/2015**
Total Points: **125**

Assignment

There are 36 students in the web technology class. In order 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 a given time slot. The professor decides to have 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, and 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:

1. 12/9/15, 6:00 PM – 7:00 PM, 6 seats remaining
2. 12/9/15, 7:00 PM – 8:00 PM, 5 seats remaining
3. 12/9/15, 8:00 PM – 9:00 PM, 3 seats remaining
4. 12/10/15, 6:00 PM – 7:00 PM, 2 seats remaining
5. 12/10/15, 7:00 PM – 8:00 PM, 4 seats remaining
6. 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

1. For your assignment, you should use HTML, CSS, JavaScript, PHP, and MySQL.
2. The database must fully implement the registration process, maintaining the submitted information. The server and page behavior must meet the requirements listed above.
3. 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.
4. 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. 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. *Note, the email format is much more restrictive.*

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.

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). For your convenience, I posted the sample programs (*dynamicForm.zip* and *MailingList.sql*) on Canvas. It is connecting to a MySQL DB instance at the AWS. You can deploy it to the AWS Elastic Beanstalk in the same way as you did in project 1.

You may develop, debug, and test your project using the AWS Elastic Beanstalk. However, it is not very convenient. I suggest that you install the XAMPP on your personal computer, see the instruction on the textbook Section 17.6, page 611. Then, you can develop and test your program locally. When all done, you can then deploy it to the AWS.

What to turn in:

1. Upload all your files as a **single ZIP file** to the Canvas under the “P3” 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.
2. **Write down the URL of your web site in the comment section**, when submitting.