Fall 2016: CSci-4131 Internet Programming
Assignment 8

Issued: Monday (11/14)

Due Date and Time: Monday (11/28) at 11.55PM

Task:

In this assignment you will create a login capability for your Calendar Website and learn about how to restrict the access to pages of your Calendar website by using a relational database (MySQL).

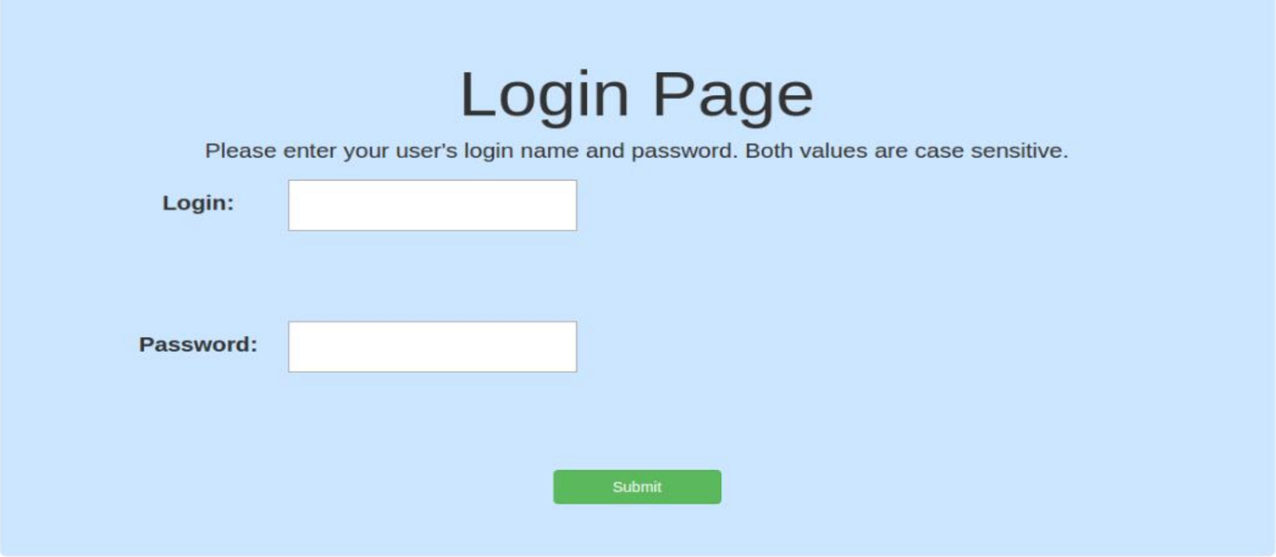
This is a very practical php application that is widely used in web portals and content management systems (CMS) like WordPress, and PHP handles it very well.

You must create two pages that are critical for your task: ***login.php***, and ***logout.php***.
If a user attempts to use your website, but is not logged in, he/she should be redirected to the login page. The login page gets and validates the user login ID and password, checks the user login ID against the database, checks the password against the database, and if everything matches, redirects the user to the first page of your website - the calendar page.

From there, the user may navigate to the second page of your website, where the *Input form* is present. The pages of your website need to be protected from anyone who does not have a login and password in your system. You can use **$_SESSION** variable in PHP to store the current user's information, and if it is not set, redirect the person attempting to use the Calendar or Input page to the login page.

Functionality:

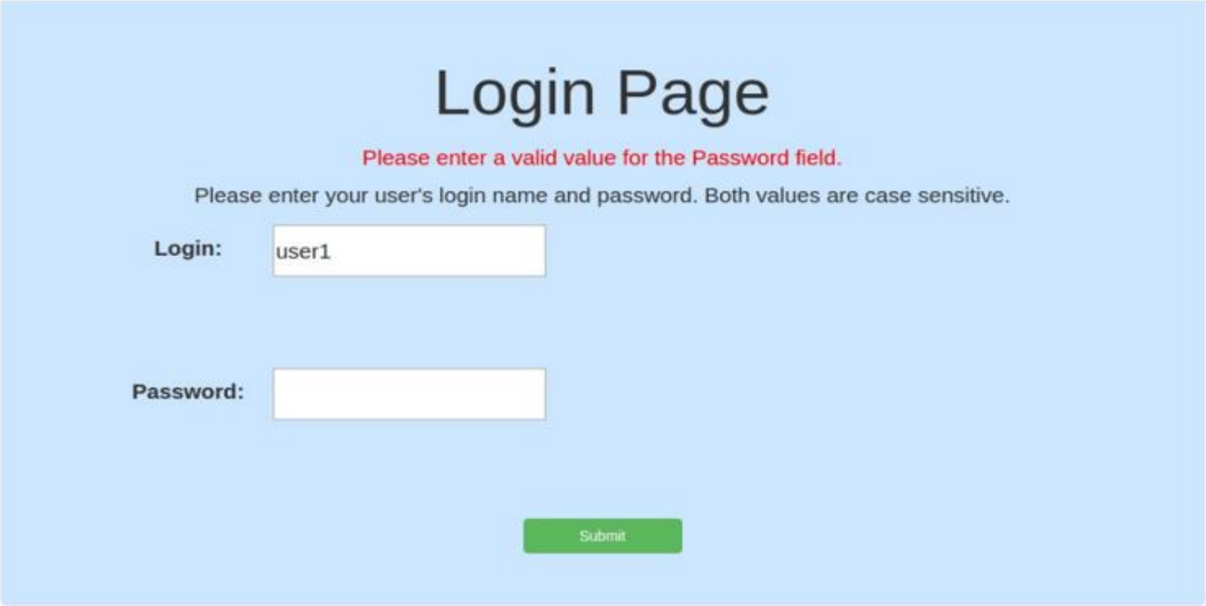
- If user is not authenticated, opening calendar page or Form input page should redirect user to ***login.php***
- ***login.php*** should display a login form with at least the following:
  - ➢ *Login ID Field*
  - ➢ *Password Field*
  - ➢ *Submit Button*
  - ➢ *Div for Errors*



Login Page

Please enter your user's login name and password. Both values are case sensitive.

- When the submit button is clicked, your login page should validate the input and, if necessary, display the following errors:
  - ➢ *Please enter a valid value for Login Name Field.*
  - ➢ *Please enter a valid value for Password Field.*
  - ➢ *or both, if both Fields are empty*

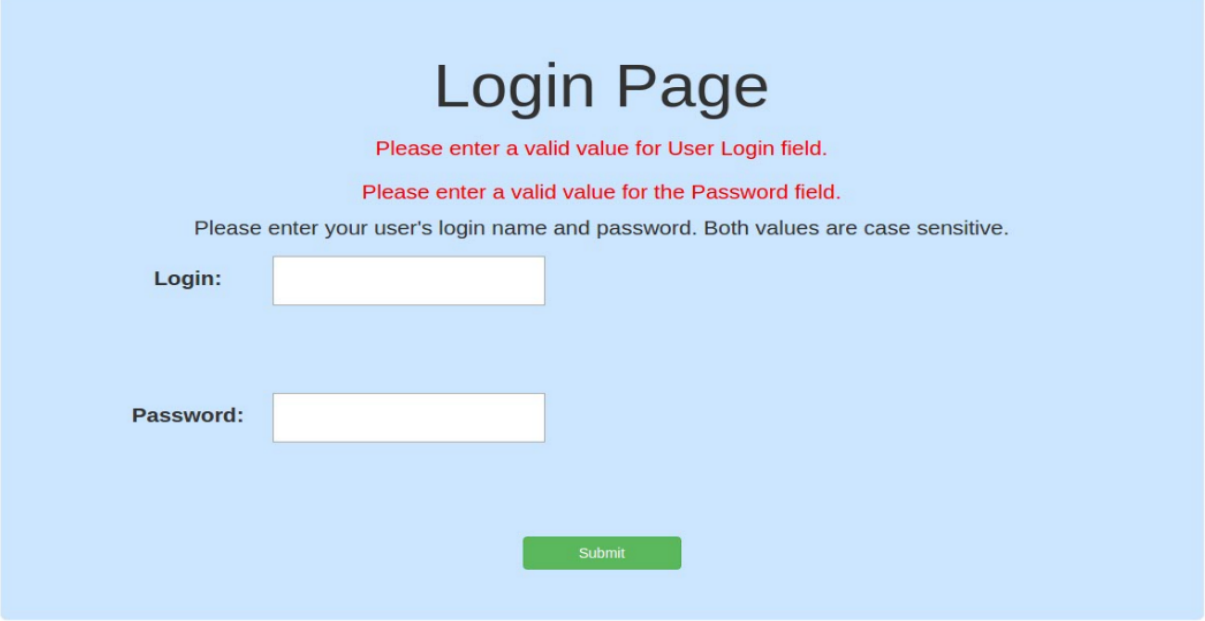


Login Page

Please enter a valid value for the Password field.

Please enter your user's login name and password. Both values are case sensitive.

Login: user1



Login Page

Please enter a valid value for User Login field.

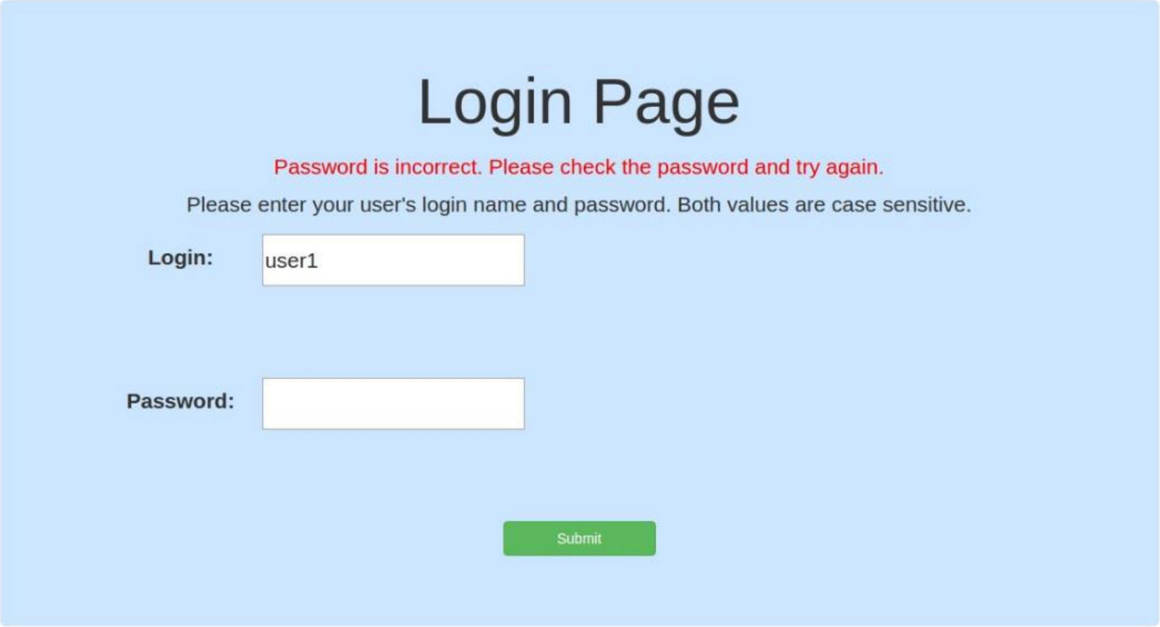
Please enter a valid value for the Password field.

Please enter your user's login name and password. Both values are case sensitive.

Login:

Password:

- After form input data validation, your page should query the database and following errors need to be reported should they occur:
- ***Login is incorrect: User Does not exist. Please check the login details and try again.*** (This will be displayed if the Login ID entered is not present in the database users list)
- ***Password is incorrect: Please check the password and try again.*** (This will be displayed if the correct login is entered, but the encrypted password associated with the Login ID in the database is not the same as the encrypted password entered by the user.)



Login Page

Password is incorrect. Please check the password and try again.

Please enter your user's login name and password. Both values are case sensitive.

Login: user1

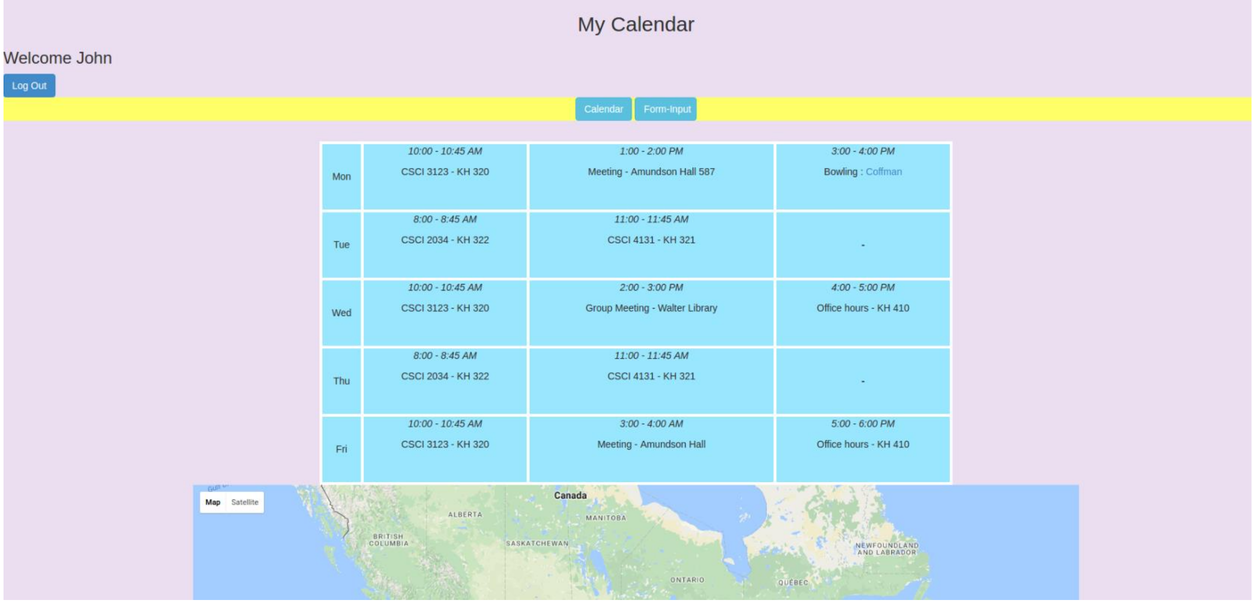
Password:

- Passwords are stored in the database in a SHA1 hashed format. You need to convert the password string entered by the user into a SHA1 hash format using sha1() function of PHP, and compare it to the SHA1 hashed password stored in the database

- The *logout.php* page clears the session variable, destroys the session, and redirects the user to *login.php* page.

- The *calendar page* and *Form Input page* should display a welcome message with the current user name, and display a logout button or link. Pressing the logout button will send the user to *logout.php* page and log the user out. Once logged out, the user can no longer open the calendar or ad rotator page without re-entering his/her credentials on the *login.php* page.

MyCalendar.php

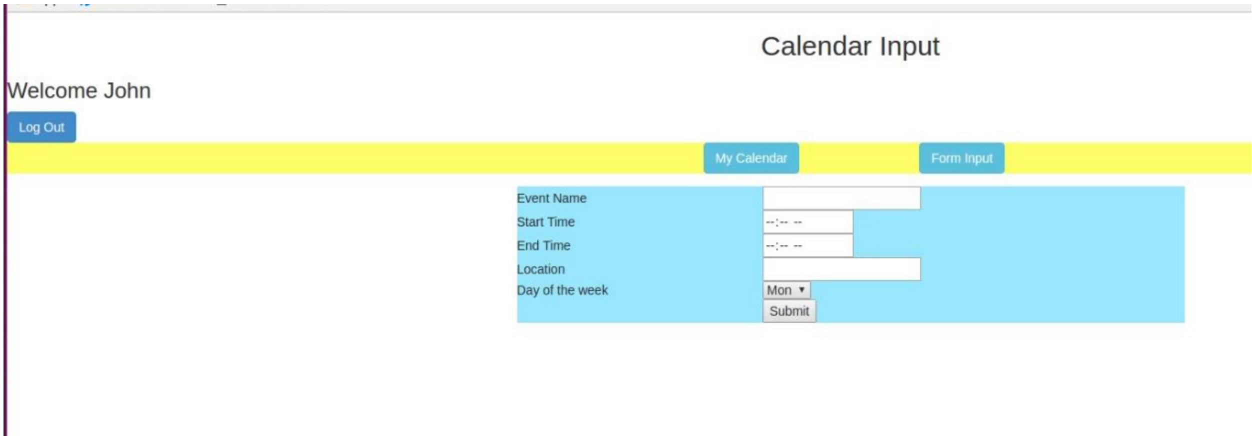


My Calendar

Welcome John

Mon	*10:00 - 10:45 AM* CSCI 3123 - KH 320	*1:00 - 2:00 PM* Meeting - Amundson Hall 587	*3:00 - 4:00 PM* Bowling : Coffman
Tue	*8:00 - 8:45 AM* CSCI 2034 - KH 322	*11:00 - 11:45 AM* CSCI 4131 - KH 321	-
Wed	*10:00 - 10:45 AM* CSCI 3123 - KH 320	*2:00 - 3:00 PM* Group Meeting - Walter Library	*4:00 - 5:00 PM* Office hours - KH 410
Thu	*8:00 - 8:45 AM* CSCI 2034 - KH 322	*11:00 - 11:45 AM* CSCI 4131 - KH 321	-
Fri	*10:00 - 10:45 AM* CSCI 3123 - KH 320	*3:00 - 4:00 AM* Meeting - Amundson Hall	*5:00 - 6:00 PM* Office hours - KH 410

MyForm.php



Calendar Input

Welcome John

Event Name

Start Time --:-- --

End Time --:-- --

Location

Day of the week Mon ▾

- In the Assignment files for this assignment, you will find 3 skeleton files:
    - **createTables_HW8F16.php**;
    - **insertValues_HW8F16.php**, and
    - **database_HW8F16.php**.

- The **database_HW8F16.php** file that code that sets php variables that contain the values you can use to create a connection to your MYSQL database.

- Edit the file and add your database name, database username, and password credentials as provided to you in the column named **MYSQL Database Info** in your grades on Moodle. Note, your database name and database user name are the same (C4131F16Uxxx, where xxx is a number between 1 and 131)

- Edit the other two files and add your MySQL account credentials as you did with the **database_HW8F16.php** file, and then execute the files to create the tables and add users with their sha-1 hashed passwords. You should use the php **include** or **include_once** statements in your login.php code to get the database server credentials from **database_HW8F16.php,** and to be able to use PHP **mysqli** functions and methods to create your connection to the MYSQL database in your php code.

Database:

- The Database in this assignment contains one table*: tbl_accounts*

- The table (*tbl_accounts*) has following fields: *acc_id*, *acc_name*, *acc_login*, and *acc_password*.

- You can use following PHP code to initiate a database connection:

```
<?php
//…

include once 'database_HW8F16.php';

// Create connection
$conn=new mysqli($db_servername,$db_username,$db_password,$db_name,$db_port);
if ( $conn->connect_error ) {

      // report error

} else {

      // setup your query
}
//…
?>
```

To connect to the database directly from cselabs unix machines (so you can issue SQL commands directly to the database) you can do the following:

```
module load soft/mysql
mysql -u(mysqluser) -hegon.cs.umn.edu -P3307 -p (databasename)
```

And then enter your password when prompted.

Once you have started MySQL, you can, and should, change your database password with the following command

```
set password=password('whateveryouwant');
```

Submission Instructions

Include the following files in one zipped file for your submission:

- login.php : Main Login page
- logout.php : Logout page
- The ***Calendar*** and ***Form input*** pages in your website with logout links, and modified to prevent access if a user has not successfully logged in (i.e., established a session).
- The modified **insertValues_HW8F16 php** file (which contains your passwords)
- style.css: (optional)
- A readme file with any additional details
- Any other files that you think we will need

Grading Criteria (100 points):

1. Submission instructions are met - **10 points**

2. Both the pages of your website redirect the user to login.php page automatically before authentication - **10 Points**

3. The Login page shows the form elements and submit button - **10 points**

4. The Login page handles input validation, checks and retrieves the user from the database, and displays the appropriate errors - **15 points**

5. The Login page logs the user in and redirects to calendar page - **15 points**

6. Both pages of your website display the appropriate user name at the top - **15 points**

7. It is possible to Navigate between pages and the pages are functional – **10 points**

8. The Logout functionality works correctly - **15 points**