Lab 10: PHP Session, Error Handling & Validation

Task 1: Using PHP Session in JavaJam Coffee House web application

NOTE: Create new folder and files

- ❖ Create a new folder on your "C:\xampp\htdocs" folder called "**javajam8**". Copy **all** the files from your Lab 9's folder (javajam7) into the "**javajam8"** folder.
- ❖ Create a new PHP file named "**processLogin.php**".
- ❖ Create a new PHP file named "**logout.php**".

When the user fills out the form in "**login.php**" and clicks the submit button, the form data is sent for processing to a PHP file named "**processLogin.php**". The form data is sent with the HTTP POST method.

a) **In the "processLogin.php" file, write PHP codes to:**

- Include the database connection file: `include_once("config.php");`
- Start a new session to create a session to ensure that only logged in user can access authorized member pages (e.g. profile.php).

  ```
  session_start();
  ```
- Define new variables to store username and password sent from the login.php page using the POST method.
- Validate whether the login is valid or not. Connect to the database and write mySQLi and SELECT SQL statement to check whether the username and password entered by the user is correct.
  i. **If valid login**: register **$_SESSION variables** that can be used to set values for the logged in user, for example:

     ```
     $_SESSION['logged_in'] = true;
     $_SESSION['user_id'] = $userid;
     $_SESSION['user_email'] = $user_email;
     ```

     and redirect the page to **profile.php** page and pass the 'action' value to profile.php, for example:

     ```
     header("Location: profile.php?action=login_success");
     ```

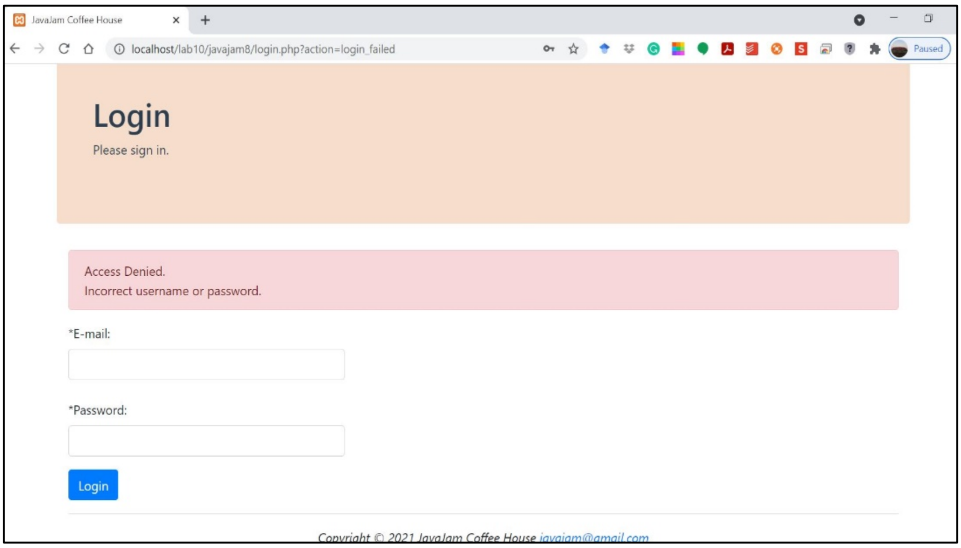
  ii. If invalid login: redirect the page to **login.php** page and pass the 'action' value to login.php, for example:

     ```
     header("Location: login.php?action=login_failed");
     ```

b) **Open the "login.php" file and add PHP codes to :**

- Modify the form action to "`processLogin.php`" and method to "`POST`".
- Add name for the two inputs in the form: email and password
- **Get** '`action`' value in url parameter (action=login_failed) to display **corresponding prompt messages** when the login is failed ($action == "login_failed") (see Figure 1):

  ```
  Access Denied.
  Incorrect username or password.
  ```



Login

Please sign in.

Access Denied.
Incorrect username or password.

*E-mail:

*Password:

Login

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Figure 1: JavaJam Coffee House's login.php – Screenshot of corresponding prompt messages to deny access when incorrect username or password was entered.

c) In the "profile.php" file, remove the codes that read the last line of the "javamember.txt" file and write PHP codes to:

- **Start a new session** to create a session to ensure that only logged in user can access authorized JavaJam Coffee House's Profile page: `session_start();`
- Include the database connection file: `include_once("config.php");`
- Check whether the session is set:

  i. If session is set, $_SESSION variable exists and the `$_SESSION['logged_in']` is equal to 'true':

```
if  (isset($_SESSION['logged_in'])  &&  $_SESSION['user_id']  &&
$_SESSION['user_email'] && $_SESSION['logged_in']==true )
```

  ❖ Get logged in member's unique user id by using $_SESSION variables, e.g.
  `$id = $_SESSION['user_id'];`

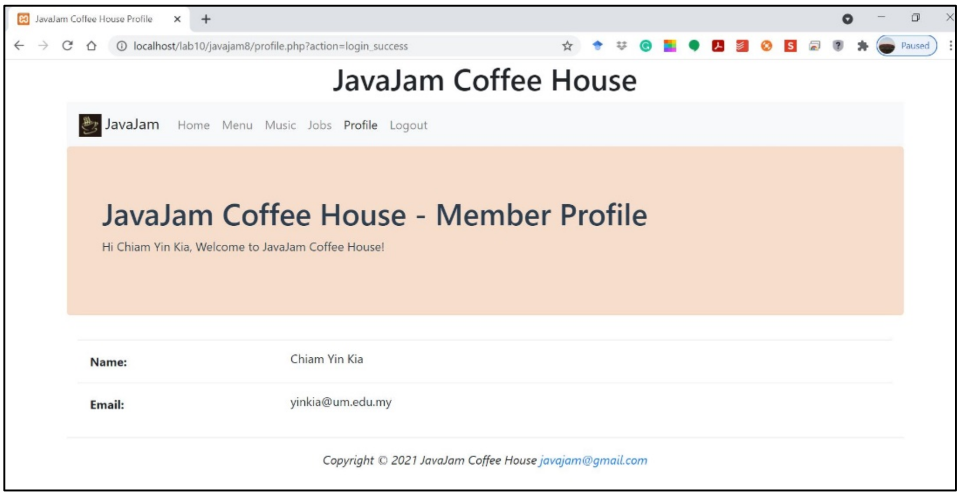
  ❖ Print a message to welcome the logged in user to JavaJam Coffee House's Profile page.

  ❖ Write MySQLi and SELECT SQL statements to retrieve the user profile information from database (member's table) and display all the user data (except password) in an HTML table (see Figure 2).

  ii. Else if session is not set, prevent unauthorized access and display a message (e.g. "Only logged in and authorized member can access this page.") (see Figure 3).

d) In the "logout.php" file, write PHP codes to:

- Start a session.
- Unsetting the registered session variables.
- Destroy the session.
- Display a message: "You have been logged out." (see Figure 4).


JavaJam Coffee House Profile
localhost/lab10/javajam8/profile.php?action=login_success
Paused
JavaJam
Home
Menu
Music
Jobs
Profile
Logout

JavaJam Coffee House

JavaJam Coffee House - Member Profile

Hi Chiam Yin Kia, Welcome to JavaJam Coffee House!

Name: Chiam Yin Kia

Email: yinkia@um.edu.my

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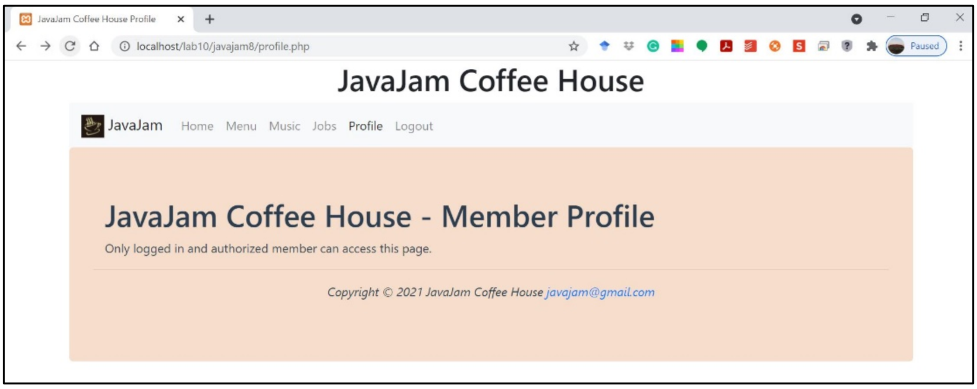
Figure 2: Redirect to JavaJam Coffee House's Profile page after successful login


JavaJam Coffee House Profile
localhost/lab10/javajam8/profile.php
Paused
JavaJam
Home
Menu
Music
Jobs
Profile
Logout

JavaJam Coffee House

JavaJam Coffee House - Member Profile

Only logged in and authorized member can access this page.

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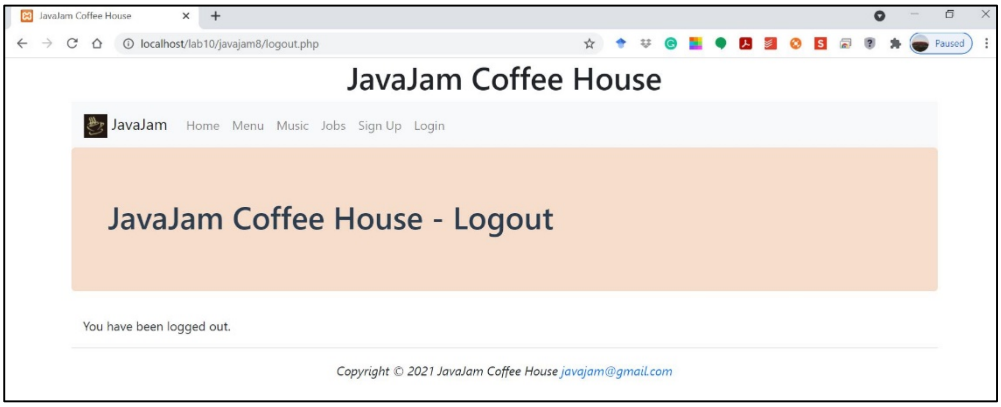
Figure 3: Unauthorized access to JavaJam Coffee House's Profile page.



JavaJam Coffee House

JavaJam Coffee House - Logout

You have been logged out.

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Figure 4: JavaJam Coffee House's Logout page.

References:

- https://www.w3schools.com/php/php_sessions.asp
- https://codeofaninja.com/2013/03/php-login-script.html

Task 2: Using error handling and validation in JavaJam Coffee House web application

NOTE: Create new folder and files

- Create a new folder on “C:\xampp\htdocs” folder called “**javajam9**”. Copy **all** the files from your Task 2’s folder (javajam8) into the “**javajam9”** folder.

a) Open the “processSignup.php” file, write PHP codes to:

i. Write a PHP function named “`checkPassword`” with two arguments “`$pwd1`” and “`$pwd2`” to validate whether the two password entered by the user are same (see Figure 1).

ii. Add validation codes to validate all the variables sent from the Registration form (`signup.php`) exists and values are not empty. You may use `isset()` and `empty()` functions.

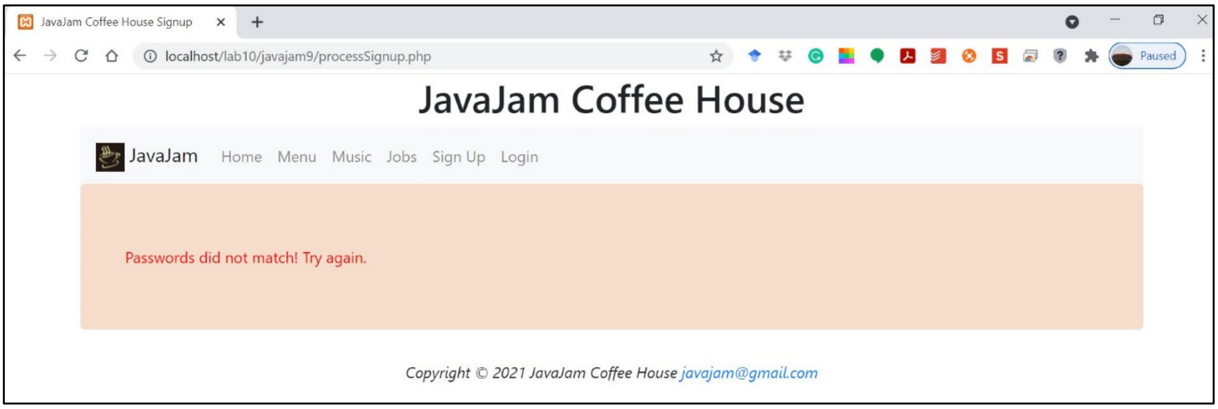
iii. Apply one of the **PHP hash functions** to store *hashed password* in the database. Run your web application to test whether a new record is added into the database with hashed password (see Figure 2).

References:
https://php.net/manual/en/function.password-hash.php
https://blog.ircmaxell.com/2015/03/security-issue-combining-bcrypt-with.html
https://security.blogoverflow.com/2011/11/why-passwords-should-be-hashed/

b) Open the “processLogin.php” file to

i. Modify the codes to apply the same PHP hash function that you have used in (a)(i) so that the hashed password is same as the one stored in the database.

ii. Run your web application to test whether you can login successfully using the hashed password (see Figure 3).


JavaJam Coffee House Signup
localhost/lab10/javajam9/processSignup.php
Paused
JavaJam
Home
Menu
Music
Jobs
Sign Up
Login

JavaJam Coffee House

Passwords did not match! Try again.

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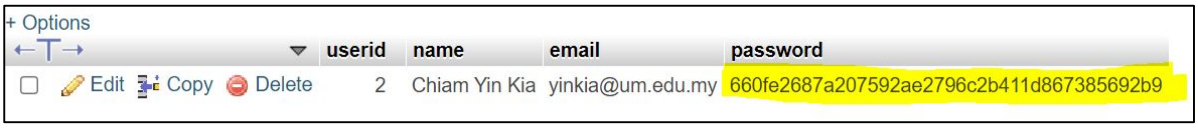
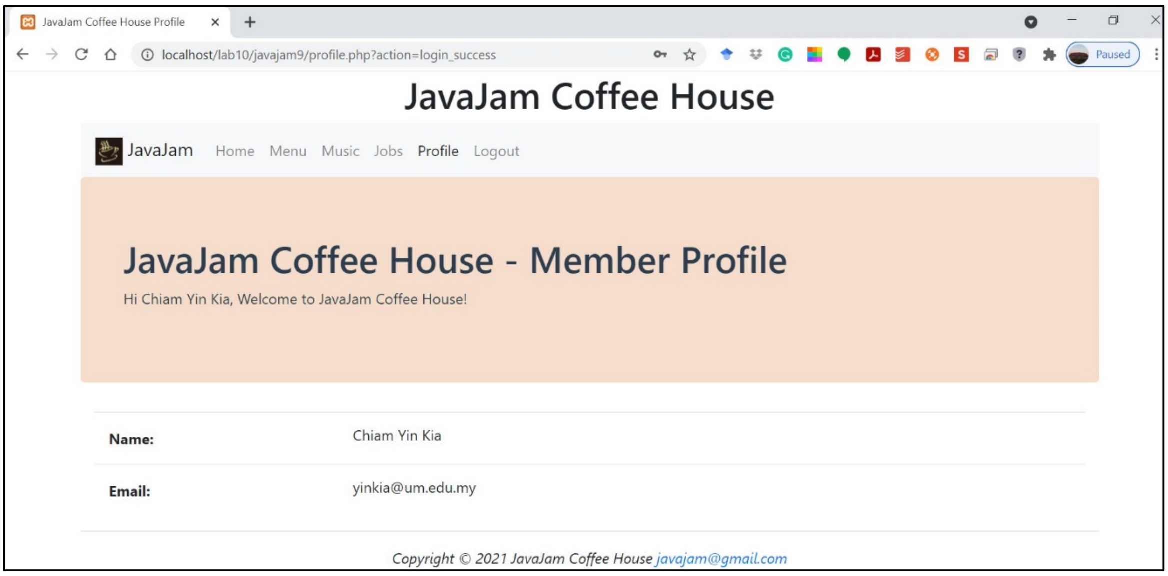
Figure 1: JavaJam Coffee House’s processSignup.php – Passwords did not match



	userid	name	email	password
□ Edit Copy Delete	2	Chiam Yin Kia	yinkia@um.edu.my	660fe2687a207592ae2796c2b411d867385692b9

Figure 2: JavaJam Coffee House's processSignup.php – Screenshot of "member" table which store the hashed password



JavaJam Coffee House Profile
localhost/lab10/javajam9/profile.php?action=login_success
Paused

JavaJam Coffee House

JavaJam
Home
Menu
Music
Jobs
Profile
Logout

JavaJam Coffee House - Member Profile

Hi Chiam Yin Kia, Welcome to JavaJam Coffee House!

Name:	Chiam Yin Kia
Email:	yinkia@um.edu.my

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Figure 3: JavaJam Coffee House's profile.php – Login successfully using the hashed password