

Framework Document and Declaration of Independent Work

The framework and declaration must be complete and handed in (either as a .doc or .pdf) for your assignment to be graded!

PERSONAL DECLARATION

"This assignment constitutes original work by ME (name and student number filled in below). Any sources that were used to help in the assignment are properly documented in references below and noted in the comments in the pages. In addition, no part of the document has been submitted for any other course."

Name: Zhiying Wu

Student Number: B00947817

Date: 2 April 2024

(Please note, filling in your name, BannerID and Date, it means that you have read and agree that the above statement is true. Also note, that you must 'sign' this declaration for the Assignment to be graded).

FRAMEWORK DOCUMENT

Assignment Number: 5

Describe purpose of site/assignment:

The purpose of this assignment is to improve the security and functionality of the website. A secure login function is implemented to ensure strong passwords are created and stored in the database using hashed values. Also, prepared statements are utilized to prevent SQL injection vulnerabilities in this assignment.

Updates to Pages/template

Note there may be more rows than pages you updated. You can remove unused rows. Or add additional ones if needed]

- Describe (overview) what you did on each page and if you were asked to make improvements from a previous assignment, make sure you describe how you addressed these.
- ALL PAGES MUST ALSO BE COMMENTED (this document does not negate the requirement for comments).

Page name (e.g., index.php)	Short Description of what you did:
Page 1: login.php	The function "password_verify" function is utilized to compare the password entered by users with the hashed password stored in the database (php.net, 2024).

Page 2: createAccount.php	Regular expressions are used to ensure secure passwords and login functionality in this page, for instances, passwords contain at least 7 characters, 1 number, 1 capital letter, and 1 special character. Passwords are also securely hashed using "password_hash" method with PASSWORD_DEFAULT parameter before storage in the database (php.net, 2024). Error messages are displayed if the password doesn't meet the following requirements. If password is less than 7 characters, error message displays "Error! Password needs at least 7 characters". If password doesn't contain any special characters, error message displays "Error! Password needs 1 special character". If password doesn't contain any uppercase letter, it displays "Error! Password needs at least 1 Capital Letter". If password doesn't contain any numeric numbers, it displays "Error! Password needs at least 1 number".
Page 3: events.php, single-post.php and index.php	The required update (only lists events that are in the future, including the sidebar "Upcoming") is completed in assignment 4. The upcoming events and events are ordered by EventDate from the Events table, with the closest date to today's date first in an ascending order using "events. EventDate > NOW ()" method (zessx, 2013). Therefore, any event that is before today's date will not be displayed.

References:

[include the reference, **where you used** it and **how** you used it [you should include a note about using outside material in your comments in the pages themselves]. If you any AI tools, include a screenshot of the question and answer].

1. All the text are generated from Lorem Ipsum

Lorem Ipsum. (2024, February 24). Lorem Ipsum. Lorem Ipsum - All the facts - Lipsum generator.

<https://www.lipsum.com/>

2. All images used in this assignment are stock images available from Microso_ 365/PowerPoint Image Gallery. (2023, December 20). Image gallery. Stories.

<https://news.microsoft.com/imageGallery>

3. mysqli_insert_id" func0on used in createAcount.php page

W3Schools. (2024). PHP mysqli insert_id() Function. PHP Mysqli insert_id() function.

https://www.w3schools.com/php/func_mysqli_insert_id.asp

4. NOW() function used in event.php and single-post.php

zessx. (2013, March 27). Now() function in PHP. Stack Overflow.

<https://stackoverflow.com/questions/15662205/show-closest-result-to-current-date-timemysql-php>

5. 3. The 0me and data format used in the post.php and single-post.php

w3schools. (2024b). PHP Date/Time Func9ons. PHP date/Time Func9ons.

https://www.w3schools.com/php/php_ref_date.asp

6. header("Loca9on: events.php"); used in post.php

Fitzgerald, A. (2024, January 5). How to redirect in php: What you need to know. HubSpot Blog.

<https://blog.hubspot.com/website/php-redirect>

7. `$_SERVER["REQUEST_METHOD"] == "POST"` used in `post.php`
SpaceshipTrooper, John_Betong, rpkamp Split this topic, WebSteve, & system Closed. (2018, July 11). HOW TO WRITE PROPER PHP. SitePoint Forums | Web Development & Design Community. https://www.sitepoint.com/community/t/how-to-write-proper-php/301523

8. Try & catch method `try {} catch (Exception $e) { echo $e->getMessage(); }` used in `post.php`
W3Schools. (2024, February 22). PHP Exception getMessage() Method. PHP exception getMessage() method. https://www.w3schools.com/php/ref_exception_getmessage.asp

9. `password_verify` function in `login.php`

Password_verify. php.net. (2024a). https://www.php.net/manual/en/function.password-verify.php

10. `password_hash` function in `createAccount.php`

password_hash. php.net. (2024b). https://www.php.net/manual/en/function.password-hash.php

Any other notes:

I cannot access using MySQL PHPMYAdmin on my IOS mac laptop, even when I deleted everything and re-downloaded MAMP. So, one of the TAs JinKun helped me to change the server address to 127.0.0.1:3306. As results, when accessing to my database admin, the address is <http://127.0.0.1:8888/admin/> or <http://localhost:8888/admin/>, and the database's hostname is 127.0.0.1. Also, the collation required in this assignment is `ul8_general_ci`, however, the collation in my database does not have this option and the default collation is `ul8mb4_general_ci`. If I change it to `ul16_general_ci`, the database dump doesn't show the SQL queries and data. Therefore, the collation `ul8mb4_general_ci` is used in this assignment. The username and password have been changed in 'root' as required.

Database server

- Server: 127.0.0.1 via TCP/IP
- Server type: MySQL
- Server connection: SSL is not being used ?
- Server version: 8.1.0 - MySQL Community Server - GPL
- Protocol version: 10
- User: root@localhost
- Server charset: UTF-8 Unicode (utf8mb4)

Database connection in all pages

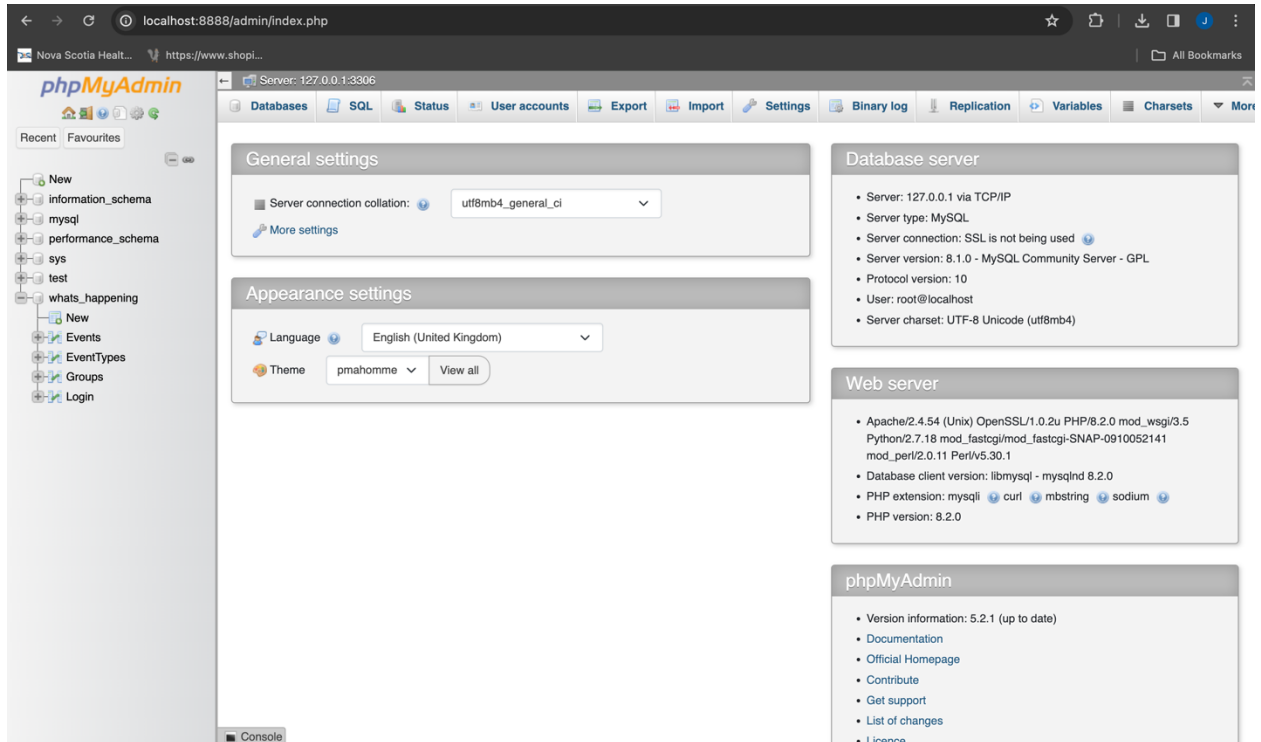
```
<?php
//Database connection parameters as requested
$db_hostname = '127.0.0.1';
$db_username = 'root';
$db_password = 'root';
$db_database = 'whats_happening';
```

When exporting whats_happening database dump using collation utf8mb4_general_ci

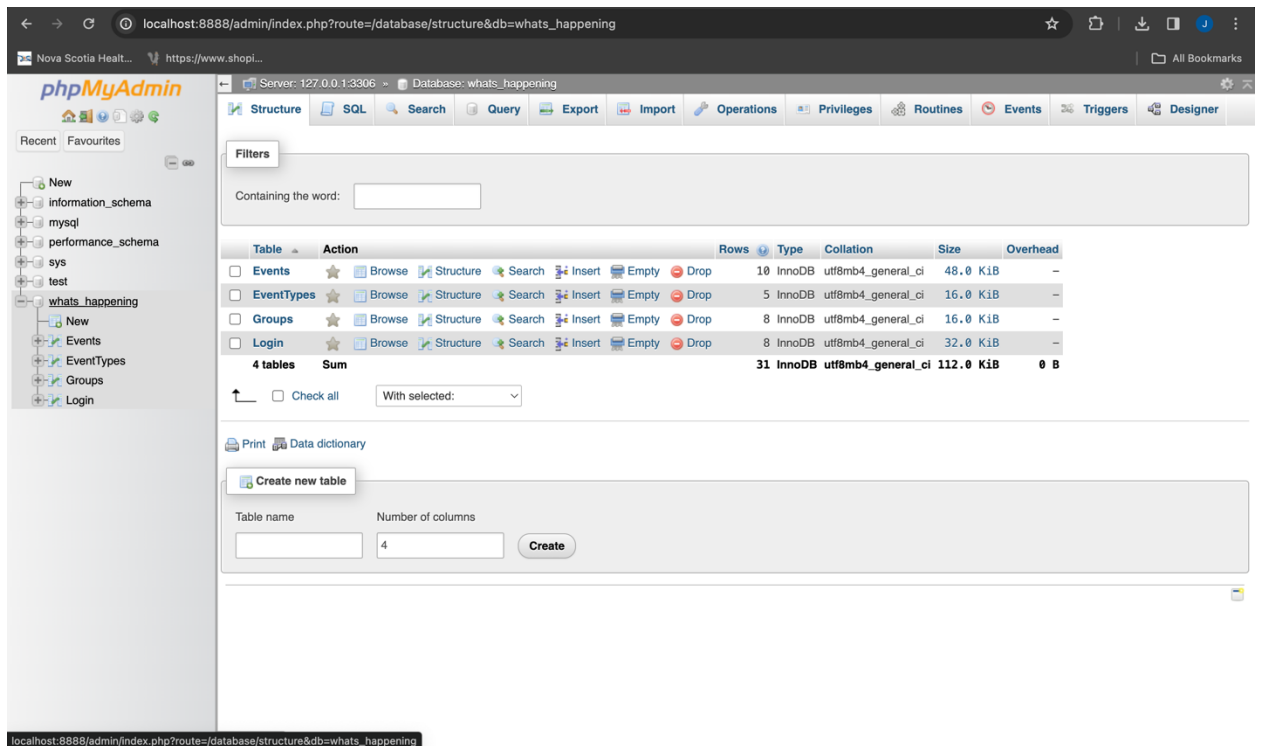
The screenshot shows the phpMyAdmin interface with the 'Export' dialog open for the 'whats_happening' database. The 'Export method' is set to 'Quick dump' and the 'Format' is 'SQL'. A dark overlay window displays the generated SQL dump content, which includes an error message: 'Line 11, column 82, location 854'.

```
1 <div class="alert alert-danger" role="alert"><h1>Error</h1><p><strong>SQL query:</strong> <a href="#">
2 class="copyQuerybtn" data-text="SET time_zone = &quot;+00:00&quot;">Copy</a>
3 <a href="index.php?route=/database/sql&sql_query=SET time_zone+%3D+
4 %22%2B00%3A00%22&show_query=1&db=whats_happening"><span class="text-nowrap">&nbsp;Edit</span></a> </p>
6 <p>
7 <code class="sql"><pre>
8 SET time_zone = &quot;+00:00&quot;;
9 </pre></code>
10 </p>
11 <strong>MySQL said: </strong><a href="http://url.php?
12 url=https%3A%2F%2Fdev.mysql.com%2Fdoc%2Frefman%2F8.0%2Fen%2Fserver-error-reference.html"
13 target="mysql_doc"></a>
15 </p>
16 <code>#1298 - Unknown or incorrect time zone: &#039;+00:00&#039;;</code><br></div>
```

My database



The screenshot shows the phpMyAdmin main interface in a web browser. The address bar indicates the URL is localhost:8888/admin/index.php. The interface includes a sidebar with a tree view of databases (information_schema, mysql, performance_schema, sys, test, whats_happening) and a main content area with several panels: General settings (Server connection collation: utf8mb4_general_ci), Appearance settings (Language: English (United Kingdom), Theme: pmahomme), Database server (Server: 127.0.0.1 via TCP/IP, Server type: MySQL, Server version: 8.1.0 - MySQL Community Server - GPL), Web server (Apache/2.4.54 (Unix) OpenSSL/1.0.2u PHP/8.2.0 mod_wsgi/3.5), and phpMyAdmin (Version information: 5.2.1 (up to date)).



The screenshot shows the phpMyAdmin database structure view for the 'whats_happening' database. The address bar indicates the URL is localhost:8888/admin/index.php?route=/database/structure&db=whats_happening. The interface includes a sidebar with a tree view of databases (information_schema, mysql, performance_schema, sys, test, whats_happening) and a main content area with a table structure view. The table structure view shows a list of tables (Events, EventTypes, Groups, Login) with columns for Table, Action, Rows, Type, Collation, Size, and Overhead. Below the table list, there is a 'Create new table' button and a form to create a new table with fields for Table name and Number of columns (set to 4).

Table	Action	Rows	Type	Collation	Size	Overhead
Events	Browse Structure Search Insert Empty Drop	10	InnoDB	utf8mb4_general_ci	48.0 KiB	-
EventTypes	Browse Structure Search Insert Empty Drop	5	InnoDB	utf8mb4_general_ci	16.0 KiB	-
Groups	Browse Structure Search Insert Empty Drop	8	InnoDB	utf8mb4_general_ci	16.0 KiB	-
Login	Browse Structure Search Insert Empty Drop	8	InnoDB	utf8mb4_general_ci	32.0 KiB	-
4 tables	Sum	31	InnoDB	utf8mb4_general_ci	112.0 KiB	0 B