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**PHP Code Functionality for index.php:**

Let's break down the key components:

1. Login Form (index.php):

The user sees a simple login form with fields for entering a username and password.

The form's action attribute is set to login.php, indicating that the form data will be submitted to login.php for processing.

It uses the POST method to send the form data securely.

2. Header Section (index.php):

The page includes a header with the title "Login Form."

3. Virtual Study Room Content (index.php):

After the login form, there is a link to the "Virtual Study Room," leading to other sections of the application.

The content includes sections such as "About Us," "My Courses," and "Find Friends," each with a brief description and images.

Each section has a unique background image and content.

4. Navigation Bar (index.php):

The navigation bar provides links to various sections, including "My Profile," "Login," "My Study Goals," "Virtual Study Room," "My Schedule," "My Chats," "Find Friends," "About Us," and "Donate."

5. Footer (index.php):

The footer includes a call-to-action section encouraging users to join the virtual study room and unlock a world of knowledge.

It also displays the copyright information for the year 2023.

6. Login Processing (login.php):

When the user submits the login form, the data is sent to login.php for processing.

login.php checks the entered username and password against a database.

If the credentials are valid, the user is redirected to the dashboard (dashboard.php).

If the credentials are invalid, an error message is displayed.

7. Dashboard (dashboard.php):

The dashboard is a protected page, meaning users need to log in to access it.

If a user is not logged in, they are redirected back to the login page.

This page includes a welcome message and some placeholder content.

Important Notes:

The code assumes the existence of a MySQL database with a table named users to store user information.

It uses PHP sessions for basic user authentication.

The code should be enhanced for security, such as using prepared statements to prevent SQL injection and using password hashing.

**PHP Code Functionality for about.php**

The page provides information about the Virtual Study Room, including its history, mission, and a call for support through donations.

Navigation links allow users to explore different sections of the platform.

The page layout and styling are managed using an external stylesheet (style.css).

**PHP Code functionality for routes.php**

This PHP code is a simple routing system that directs incoming requests to the appropriate controller file based on the provided URI (Uniform Resource Identifier). Let's break down its functionality:

Code Explanation:

$uri = parse\_url($\_SERVER['REQUEST\_URI'])['path'];

Extracts the path component from the current URI using parse\_url.

This gets the part of the URL after the domain, e.g., "/about" for "http://example.com/about".

$routes = [...]

Defines an associative array where keys are URIs, and values are the corresponding controller files.

routeToController($uri, $routes)

Calls the routeToController function with the extracted $uri and the defined $routes.

function routeToController($uri, $routes)

Checks if the provided $uri exists in the $routes array.

If it does, includes the corresponding controller file using require.

If not, calls the abort function, indicating a 404 error.

function abort($code = 404)

Sets the HTTP response code based on the provided $code (default is 404).

Outputs an error message: "Sorry. Not found."

Includes a view file based on the $code. For example, if $code is 404, it includes "views/404.php".

Terminates the script using die().

routeToController($uri, $routes);

Executes the routing process by calling routeToController.

How it Works:

When a request is made to the server, the script extracts the path from the URI.

It then checks if the path corresponds to a defined route in the $routes array.

If a match is found, it includes the corresponding controller file. If not, it triggers a 404 error.

The abort function handles the 404 error, setting the HTTP response code and displaying an error message.

Example:

If the URI is "/about," it includes the "controllers/about.php" file.

If the URI is "/contact," it triggers a 404 error, displaying the "Sorry. Not found." message and including "views/404.php."

**Snapshots of my Website:**

Homepage:

A computer and a mug on a table

Description automatically generated

A group of people looking at a computer

Description automatically generated

A group of people sitting on a table looking at a computer

Description automatically generated

A group of people in a classroom

Description automatically generated

A group of women sitting at a table with laptops

Description automatically generated

**Description of my Homepage:**

The homepage of the provided HTML code is an essential part of the website for the "Virtual Study Room" platform. It serves as the initial landing page for users and provides an introduction to the platform's key features and purpose. Let's take a closer look at the components of the homepage:

1. \*\*Header\*\*:

- The header contains the title "Welcome to the virtual study room." This title serves as a welcoming message and an immediate indication of the website's purpose.

2. \*\*Navigation Bar\*\*:

- A navigation bar (`<nav>`) is present, offering a menu of links to various sections and pages. These links likely allow users to navigate to different parts of the website, including their profile, login, study goals, virtual study room, schedule, chats, finding friends, an "About Us" page, and a "Donate" page. This navigation bar provides easy access to different features of the platform.

3. \*\*Main Content\*\*:

- The main content is organized into sections, each enclosed in a `<section>` element. The homepage consists of three primary sections:

a. \*\*"About Us" Section\*\*:

- This section provides information about the platform. It includes:

- A title ("About Us") for the section.

- An image that represents the virtual study room, allowing users to visualize the environment.

- A descriptive paragraph that explains the purpose and benefits of the virtual study room. It mentions features like remote and collaborative learning, access to resources, and support services.

b. \*\*"My Courses" Section\*\*:

- In this section, users can explore their enrolled courses. It includes:

- A title ("My Courses") for the section.

- An image that might relate to the course content.

- A list of course links, where each link likely leads to a specific course or subject.

c. \*\*"Find Friends" Section\*\*:

- This section focuses on social interaction and collaboration among students. It includes:

- A title ("Find Friends") for the section.

- An image representing social connections.

- A description of the "Find Friends" feature, explaining how users can connect with others based on subjects, interests, or study goals.

- A call-to-action button ("Find Friends") that encourages users to utilize this feature.

4. \*\*Footer\*\*:

- The footer (`<footer>`) is at the bottom of the homepage.

- It includes a call-to-action with a title ("Ready to boost your studies?"), an image to emphasize the message, and a button ("Get Started") that encourages users to take action and explore the platform.

The homepage aims to provide users with an overview of the virtual study platform's purpose and features, guiding them to explore different sections of the website. The combination of informative content, imagery, and navigation options allows users to quickly understand what the platform offers and how to get started.

**About Us page:**

A screenshot of a website

Description automatically generated

The "About Us" page is a crucial section of the website for the "Virtual Study Room" platform. It provides detailed information about the platform's history, mission, and how users can support it. Let's explore the key elements of this "About Us" page:

1. \*\*Header\*\*:

- The page features a header with the title "About Us." The title is styled with a black color, making it prominent and easy to identify.

2. \*\*Main Content\*\*:

- The main content is structured into sections enclosed within `<section>` elements. Each section focuses on a specific aspect of the platform's story and purpose.

a. \*\*"Our Story" Section\*\*:

- This section provides an overview of the platform's history and purpose. It includes:

- A title ("Our Story") for the section.

- A descriptive paragraph explaining that the platform is designed to provide a dynamic and interactive learning environment. It emphasizes collaboration, accessibility, and support within a virtual setting.

- Information about the platform's founding in 2020 by educators and tech enthusiasts with a clear mission.

b. \*\*"Our Mission" Section\*\*:

- This section outlines the mission and goals of the platform. It includes:

- A title ("Our Mission") for the section.

- A descriptive paragraph detailing the platform's commitment to empowering learners. It lists core objectives, such as facilitating remote and collaborative learning, offering access to study resources, promoting group work, and providing support services.

- A bulleted list that summarizes the key elements of the mission.

- A paragraph emphasizing the commitment to enhancing the learning experience and helping students worldwide achieve their academic and personal goals.

c. \*\*"Support Us" Section\*\*:

- In this section, users are encouraged to support the platform. It includes:

- A title ("Support Us") for the section.

- A paragraph inviting users to make a donation if they find the platform valuable. It highlights how contributions help maintain and improve services for students and learners.

- A call-to-action button ("Donate") that links to the donation page ("donate.html").

3. \*\*Footer\*\*:

- The page concludes with a footer that displays the copyright notice ("&copy; 2023 Virtual Study Room").

The "About Us" page serves the purpose of introducing users to the platform's background, mission, and how they can contribute to its mission by making a donation. The black title color helps draw attention to the page's central message and adds to the overall visual appeal. This information is crucial for users who want to understand the platform's values and objectives.

**Brief description of my Milestone 3 PHP Code’s functionality:**

The provided PHP code is responsible for handling user authentication for a basic login system. Here's an explanation of the functionality of the code:

Access the code via clicking this link: <https://github.com/avneeshnaha/Semester-Project-123.git>

1. \*\*User Data Array\*\*:

- At the beginning of the script, an array named `$users` is defined. This array stores sample user data, including usernames and passwords. In a real-world application, this data would typically be retrieved from a database.

2. \*\*Session Start\*\*:

- The `session\_start()` function is called to initiate a PHP session. Sessions are used to store user-specific information across multiple pages and requests.

3. \*\*Form Handling (POST Request)\*\*:

- The code checks if the current request method is POST. This is typically the method used for form submissions (e.g., when a user submits their login credentials).

- If the request method is POST, the code proceeds to handle the login attempt.

4. \*\*Login Attempt\*\*:

- The code retrieves the username and password submitted via the POST request. These values are stored in the variables `$username` and `$password`.

5. \*\*User Authentication\*\*:

- The code then iterates through the `$users` array to compare the submitted username and password with the stored user data.

- If a matching user is found (i.e., the submitted username and password match a user in the array), the code sets a session variable named `$\_SESSION['username']` to the submitted username. This session variable is used to identify the authenticated user in subsequent pages.

6. \*\*Successful Login Redirect\*\*:

- After a successful login, the code redirects the user to the "dashboard.php" page using the `header("Location: dashboard.php")` function.

- The `exit()` function is called to terminate the script, ensuring that no additional HTML content is output.

7. \*\*Login Error Handling\*\*:

- If no matching user is found in the `$users` array, an error message is stored in the `$error` variable. This message indicates that the username or password is invalid.

8. \*\*HTML Login Form\*\*:

- The code contains an HTML form that allows users to input their username and password for login.

- The form submits a POST request to the same page ("login.php") for processing.

9. \*\*Error Display\*\*:

- If an error message exists in the `$error` variable (indicating an unsuccessful login attempt), it is displayed to the user in red text.

In summary, this code provides a basic login functionality where users submit their credentials, and the script checks if the provided information matches any user data in the `$users` array. If a match is found, the user is authenticated and redirected to a dashboard page. If there is no match, an error message is displayed. Note that in a real-world application, user data would be stored securely in a database, and password hashing and other security measures would be employed for user authentication.

Project Goals:

* To create a functioning PHP Script for my Virtual Study Room website
* To effectively follow and recreate the scripts which were taught by Jeffrey Way during the Laracast walkthroughs.
* Have a fully functioning website on the department AWS server.
* Successfully adding a database and linking it to my project

What was achieved:

* Was able to mostly recreate what was taught by Jeffrey Way.
* PHP code written seems to run without any errors.

Improvements:

* Could have worked and elaborated the project more, seems unfinished in its current state.
* Need to add more PHP elements.
* Was not able to implement the database properly.

Pointer to my repository: <https://github.com/avneeshnaha/Semester-Project-123>

<https://github.com/avneeshnaha/Semester-Project-123.git>

Self Evaluation: 2/4