



COMP1841

Web Programing 1



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Github: https://github.com/vampireplus123/Web_Programing_1_COMP1841_University-Of-Greenwich_001323726_Huynh-Hoang-Tuan-Anh.git

Drive: <https://drive.google.com/drive/folders/10PL9DnHoja4jPj6-a1hwqIKk8q0jvtay?usp=sharing>

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2. Introduction:

The value of student assistance for their academic work and collaborative learning in the digital age cannot be emphasized. The need for forums where students may seek advice, share knowledge, and interact efficiently grows along with the complexity of courses. In light of this, it becomes essential to construct a functional CRUD (Create, Read, Update, Delete) data-driven website designed especially to help students with their coursework.

This one-off coursework aims to utilize MySQL and PHP to the fullest, using PHP PDO programming to guarantee stability and security. The system attempts to offer a smooth and effective user experience by putting relational database design principles—including referential integrity—into practice.

The proposed system, which takes inspiration from sites like as Stack Overflow, will function as a straightforward but effective way for students to ask questions, share their perspectives, and get help with their assignments. The website will serve as a primary center for student involvement, allowing them to control their produced content and submit, amend, and remove questions.

Additionally, the system will have administrative features that will enable the control of module names and authors, which is crucial for properly classifying and organizing the posted queries. Furthermore, a contact form will be incorporated to provide direct communication between students and system administrators, so promoting an accommodating and encouraging learning environment.

3. How Does It Work ?

Firstly, I break the structure of the system, I realize that using seperated database help me in manage information easily.

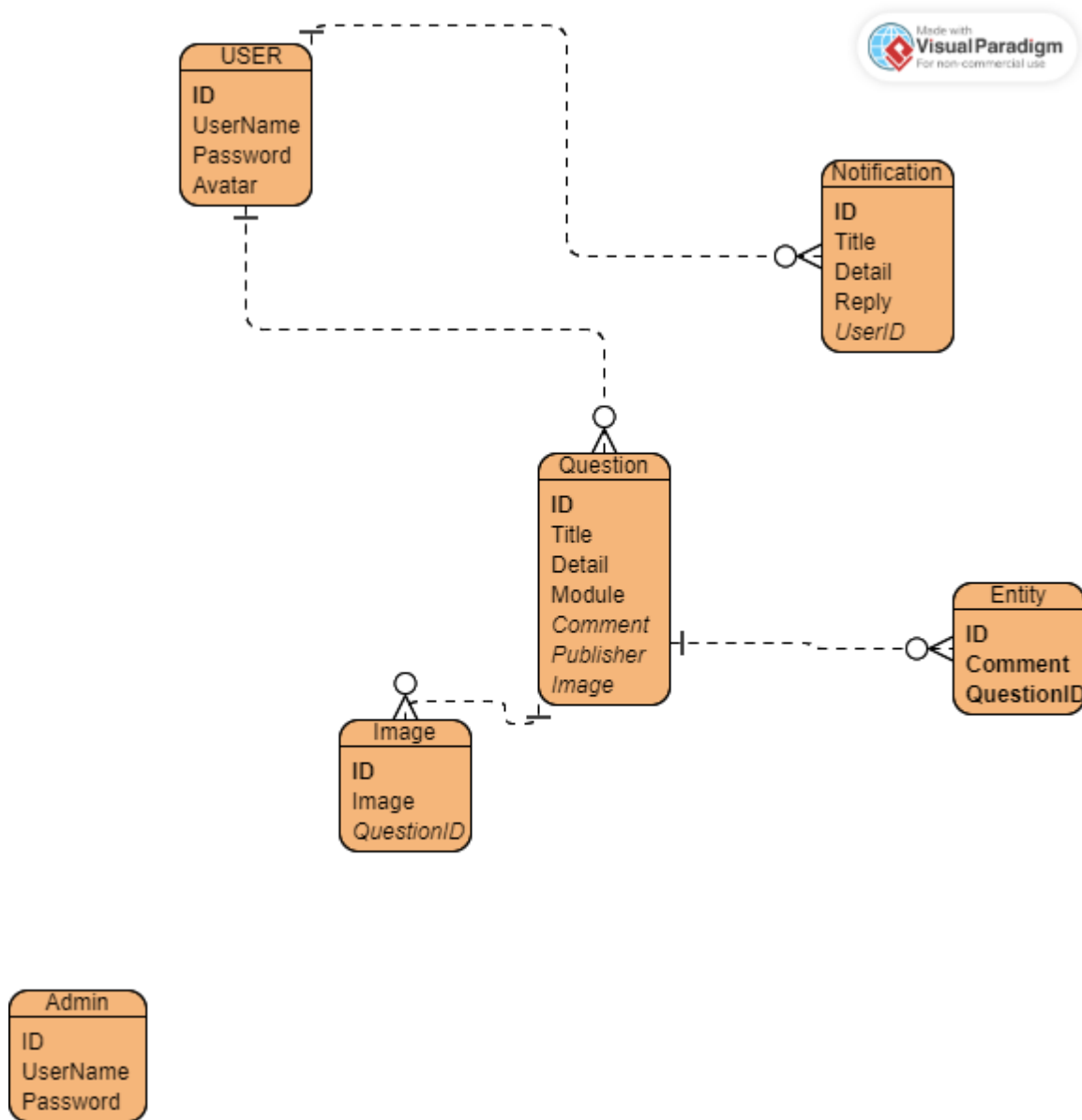
3.1 Structure Of Database:

Coursework Database Structure:

- **User:**
 - o ID
 - o UserName
 - o Password
- **Question:**
 - o ID
 - o Name
 - o Tags
 - o Comments
 - o Publisher
- **Comment:**
 - o ID
 - o Comment
 - o QuestionID

- **Image:**
 - ID
 - ImageField
 - QuestionID
- **Notification**
 - ID
 - Title
 - Detail
 - Reply
 - UserID
- **Admin**
 - ID
 - UserName
 - Password

Diagram:



4. Tech in use

HTML (HyperText Markup Language):

HTML is the backbone of web pages. It provides the structure and content of a webpage through a system of markup tags. HTML defines the basic layout of a webpage, including headings, paragraphs, images, links, and other elements. It's essential for creating the semantic structure of your web content.

CSS (Cascading Style Sheets):

CSS is used to style the HTML elements defined in your webpage. It allows you to control the presentation, layout, and design of your website, including aspects such as colors, fonts, spacing,

and positioning. CSS enables you to create visually appealing and consistent designs across multiple pages of your website.

JavaScript (JS):

JavaScript is a versatile programming language that adds interactivity and dynamic behavior to web pages. With JavaScript, you can create features like interactive forms, animations, image sliders, and much more. It's particularly useful for enhancing user experience by providing real-time feedback and responsiveness.

PHP (Hypertext Preprocessor):

PHP is a server-side scripting language commonly used for web development. It's used to handle tasks that cannot be accomplished by HTML and CSS alone, such as processing form data, interacting with databases, and generating dynamic content. PHP runs on the server, which means it can dynamically generate HTML content before sending it to the client's web browser.

Bootstrap:

Bootstrap is a front-end framework that provides a collection of pre-designed and pre-built components, layouts, and stylesheets to streamline the process of building responsive and mobile-first websites. It's based on HTML, CSS, and JavaScript, and it offers ready-made solutions for common web design challenges, such as grid systems, navigation bars, buttons, forms, and more.

In project, using HTML, CSS, JavaScript, PHP, and Bootstrap together allows to:

- Create the structure and content of your webpage with HTML.
- Style and design your webpage with CSS, ensuring consistency and visual appeal.
- Add interactivity and dynamic behavior to your webpage with JavaScript.
- Handle server-side operations, such as form processing and database interaction, with PHP.
- Utilize Bootstrap's pre-designed components and responsive grid system to build a mobile-friendly and visually consistent layout.

5. Function of the website:

Displaying a list of questions/posts (Homepage):

This function serves as the landing page of the website where users can browse through a list of posts/questions.

- Each post typically includes the title, content, author, date/time of posting, and possibly other metadata such as tags or categories.
- Pagination is implemented to limit the number of posts displayed per page, with navigation options to navigate between pages.
- Users can click on a post title to view the full post and its comments, if applicable.

User Page (User Profile/Management):

Users have their own profile page where they can manage their posts and account settings.

Key functionalities include:

- Add Post: Users can create new posts/questions by providing a title, content, and optionally uploading a screenshot.
- Edit Post: Users can modify the content of their existing posts.
- Delete Post: Users can remove their posts from the platform.
- Upload Avatar: Users can upload an avatar/profile picture to personalize their profile.
- Authentication and authorization mechanisms ensure that users can only perform actions on their own posts and profile..
- Tracking notification

Upload Screenshot (Post Creation/Editing):

This feature allows users to upload screenshots along with their posts to provide visual context or aid in explaining their questions or problems.

- Upon creating or editing a post, users can select an image file from their device and upload it to the server.
- The uploaded screenshots are stored securely and associated with the respective post for easy retrieval and display.

Admin Page (Administrative Dashboard):

The admin page is accessible only to authorized administrators and provides a range of functionalities to manage the website and user activity.

Key functionalities include:

- Receive Notifications: Admins receive notifications for new posts, comments, or user activities requiring attention.
- Create User: Admins can create new user accounts, assigning roles and permissions as needed.
- Delete User: Admins have the authority to delete user accounts, with options to suspend or ban users if necessary.
- Reply to User: Admins can directly interact with users by replying to their posts or messages, providing assistance or guidance.
- Security measures are implemented to safeguard admin access and ensure that sensitive actions are performed securely.

Ability to manage list of module names.

This function is arrange the question to module. This is will be inser by user. User can use it by using filter. The module is already exist by developer.

6. Detailed consideration of any legal, social and ethical issues including personal data storage and an understanding of GDPR. ⁶

Legal, Social, and Ethical Considerations

Several legal, social, and ethical considerations have been made in the construction and management of our website, especially those pertaining to the keeping of personal data and adherence to the General Data Protection Regulation (GDPR).

Storage of Personal Data

Personal information including user IDs, usernames, and passwords are stored in our system. We have put strong security procedures in place to safeguard this information because we recognize how critical it is. Every piece of personal information is securely saved, and access is closely regulated. Even in the case of a data breach, passwords are salted and hashed to prevent unwanted access.

Recognizing the GDPR

The General Data Protection Regulation (GDPR) is a piece of EU legislation that safeguards people's personal information and privacy throughout the EU and EEA. The transmission of personal data outside of these areas is likewise covered.

We have put the following procedures into place as part of our dedication to GDPR compliance:

- **Consent:** Prior to collecting and using our users' personal data, we make sure to have their unambiguous and explicit consent.
- **Right of Access:** Users are entitled to see their personal data as well as details on its processing.
- **Erasement Rights:** This feature, also referred to as the "right to be forgotten," enables users to ask that their personal information be removed from our servers.
- **Data Portability:** Users are entitled to a machine-readable copy of their personal data and to have it moved to a different controller.
- **Privacy by Design:** From the beginning of the design process all the way through to the end, we have included data protection into our business procedures and processing operations.

Social and Moral Concerns

Like any technology, we acknowledge that our platform may have social and ethical ramifications. We work hard to establish a courteous and upbeat atmosphere for our users. We

strictly prohibit harassment, hate speech, and discrimination in any form. Additionally, we recognize the value of digital wellbeing and exhort users to use our platform sensibly.

Finally, we pledge to maintain and operate our platform in a way that respects and supports societal norms, legal requirements, and ethical standards. This dedication, in our opinion, is essential to both our success and the confidence that our users have in us.

7. Overview of system

Page Of User:

Home Page:

I've developed this page with navigation bar using Bootstrap include Logo, Drop down, Admin Login. The main body which is will show the all the question, the button to Ask Question and filter that show the question with the the module

Greenwich Of University Home Admin Login

Question Ask Question General Filter

Hi
Asked by: anh
All

How can I print in Python
Asked by: anh
All

a
Asked by: anh
General

Hi
Asked by: anh
All

Login:

This page allow user can login the page to access all the features of the website if user does not exist in database it will turn into error

Greenwich Of University Home

Username
Username
Password
Login


Profile Page

This page provide user can see their profile also update their avatar, they can tracking their question and message to admin. Beside, they can delete or update their question but can not edit the message to admin. If user click update it will display a table that user can update

Greenwich Of University

Home

Admin Login



Upload image

Submit

anh

Your Questions:

- Hi
- How can I print in Python
- a
- Hi

Your Questions

Number of Question	Question Name	Question Details	Delete	Update
1	Hi	a	Delete	Update
2	How can I print in Python	a	Delete	Update
3	a	a	Delete	Update
4	Hi	a	Delete	Update

Notifications


Title	Content	Reply
Hi	Hi admin	Hi cc

Profile Page.1

Greenwich Of University

Home

Admin Login



Upload image

Submit

Update Question

Updated Question Title

Hi

Updated Details

a

Save Changes

Your Questions

Number of Question	Question Name	Question Details	Delete	Update
1	Hi	a	Delete	Update
2	How can I print in Python	a	Delete	Update
3	a	a	Delete	Update
4	Hi	a	Delete	Update

Notifications

Title	Content	Reply
Hi	Hi admin	Hi cc

Profile Page.2

Ask Question:

This page allow user create their new questions with the modules will be arrange it have to chosen by user.

Greenwich Of University Home Admin Login Search Search

Ask a Question

Question Name

Modules

General

Question Detail

Submit

Question Page:

After create the question user will locate to the question they have create also they can see the comment. This page also access from Home but you can not post comment if you don't login. This page allow owner can upload screen short.

Greenwich Of University Home Admin Login

Hi Upload image Submit

Comment

Post a Comment

Your Comment

Submit

Send Message To Admin:

This page allow user send message to admin.

Greenwich Of University Home Admin Login

Send Message to Admin

Title

Enter post title

Your Message

Enter post content

Submit

Page of Admin:

Admin Home:

To access to Admin we need to login by admin account (Admin Home.1) , it will seperate with the user table, to split user and admin clearly. In this situation the admin account have been implement already in code.After we login admin can create, delete user also reply their message (Admin Home.2)

Admin Home.1



ID	Username	Action
1	anh	Delete
2	huydeptrai	Delete
3	toideptrai	Delete

Admin Home.2

Notification Page:

The place for admin can view the message (Notification.1). And can reply if admin pressed reply it will appear a label that admin can reply the user (Notification.2)

Admin Notifications

ID	Title	Detail	Reply
1	Hi	hi admin	Reply

Notification.1

Admin Notifications

ID	Title	Detail	Reply
1	Hi	Hi admin	<div><div>Reply</div><div>Enter your reply</div><div>Submit Reply</div></div>

Notification.2

Create User:

This is will create the new user and update into the database.

Create User

Username

Password

8. Testing Schedule

User:

Test case ID	Test case senario	Test case	Pre-condition	Test steps	Test data	Expected result	Actual result	Status
TC_Login	Verify the login of user	Enter valid user	Need a valid account user	<ul style="list-style-type: none"> Enter user name. Enter password. Click Login 	<valid user name> <valid password>	Locate to Home Page	Locate to Home Page	Passed
TC_Login	Verify the login of user	Enter invalid user	Need an ivalid account user	<ul style="list-style-type: none"> Enter user name. Enter password. Click Login 	<invalid user name> <invalid password>	Invalid User will shown	Invalid User will shown	Passed
TC_Upload Avatar	Authorized User want Upload Avatar	Upload avatar	Need a valid user. Image < 5000mb	<ul style="list-style-type: none"> Choose image. Upload Imaghe. 	<Image less than 5000mb> <Image is in the exist type>	The Avatar will show	Shown the Avatar	Passed
TC_Ask Question	Authorized User want to ask question	Ask Question	Need a valid user.	<ul style="list-style-type: none"> Enter the title Enter the question detail Choose the exist module Click the create question button 	<Question Title> <Question detail> <Module>	Locate to the the created question	Locate to the the created question	Passed
TC_Screen Short	Authorized User want to ask question with screen short	Upload Screenshort	Need a valid user. Need the question Screen short	<ul style="list-style-type: none"> The user's question Upload image is less than 5000mb Click upload 	<Owner of the question> <Image is less than 5000mb>	Show the Screen short	Show the Screen short	Passed

TC_Screen Short	Not the owner of the question want to upload screen short instead of owner	Upload Screen Short	Need another user instead owner Image <5000mb	<ul style="list-style-type: none"> Upload the image less than 5000mb 	<Another user> <Image is less than 5000mb	Show the error notification	Show the error page	Fail
TC_Post Comment	Authorized want to post comment of the question	Post comment	Need an authorized user	<ul style="list-style-type: none"> Authorized user Input the comment Click the comment button 	<Authorized user> <Content>	Show the error if the input is empty. Post comment if input is not empty	Show the comment	Passed
TC_Post Comment	Unauthorize want to post comment	Post Comment	Need unauthorized user	<ul style="list-style-type: none"> Input the content Click the comment button 	<Unauthorized user> <Content>	Show the error	Show the error	Passed
TC_Post Comment	Authorized want to post comment of the question	Post comment	Need an authorized user	<ul style="list-style-type: none"> Authorized user Input the comment Click the comment button 	<Authorized user> <Content>	Show the error if the input is empty. Post comment if input is not empty with the name who post that comment	Show the comment	Fail
TC_Send Message To Admin	Authorized want to ask the admin	Ask the admin	Need an authorized user	<ul style="list-style-type: none"> Authorized user Title Detail 	<Authorized user> <Title> <Detail>	Show the profile with the question have been ask to admin without reply	Show the profile with the question have been ask to admin without reply	Passed

TC_Send Message to Admin	Unauthorized want to ask the admin	Ask the admin	Need an unauthorized user	<ul style="list-style-type: none"> An unauthorized user Title Detail 	<unauthorized user> <Title> <Detail>	Show the login page	Show the login page	Passed
TC_Update The Question	Authorized want to update the question	Update the question	Need an authorized user	<ul style="list-style-type: none"> Profile Page Choose the question in the list Click the update Enter New title Enter new content 	<authorized user> <Update button listener> <New Title> <New Content>	Show the field to change the detail of the question, then return into the profile page	Show the field to change the detail of the question, then return into the profile page	Passed
TC_Delete The Question	Authorized want to delete question	Delete Question	Need an authorized user	<ul style="list-style-type: none"> Click the delete question 	<question is belong to that user.> <Delete question listener>	Delete the question from the list question of the user. Return to the profile page	Delete the question from the list question of the user. Return to the profile page	Passed

Admin:

Test case ID	Test case scenario	Test case	Pre-condition	Test steps	Test data	Expected result	Actual result	Status
TC_Login Admin account	Admin want to login	Login	Need valid admin account	<ul style="list-style-type: none"> Click login button Input valid account 	<Valid username.> <Valid Password>	Login to admin home	Login to admin home	Passed
TC_Login Admin account	Admin want to login	Login	Need invalid admin account	<ul style="list-style-type: none"> Click login button Input invalid account 	<Invalid username.> <Invalid Password>	Show the notification	Return to the login	Fail

TC_Create New User	Admin want to create new user	Create new user	Need valid admin account	<ul style="list-style-type: none"> Click the create button Enter the new user Enter new password 	<input doesn't empty> <user doesn't exist>	Return to the admin home with the new user	Return to the admin home with the new user	Passed
TC_Delete User	Admin want to delete user	Delete User	Need valid admin account	<ul style="list-style-type: none"> Press the delete button 	<Delete button have been pressed>	Return to the admin with user have been removed	Return to the admin with user have been removed	Passed
TC_Notification From The User	Admin want to reply the questions from users	Reply notification	Need valid admin account	<ul style="list-style-type: none"> Click the notification button Press reply button Enter the reply Submit 	<The reply content>	Show the box to notice that success	Show the box to notice that success	Passed
TC_Notification From The User	Admin want to reply the questions from users	Reply notification	Need valid admin account	<ul style="list-style-type: none"> Click the notification button Press reply button Enter the reply Submit 	<The reply content>	Show the box to notice that success if the reply weren't have reply before	Still can reply although already reply	Fail

9. Evaluation

This website has basic features of a forum, such as create, delete user in the admin site. In the other hand, user can ask question, search by filter with the exist modules, also post the comment.

In the front-end side, there are suitable for most of the platform, by using Bootstrap it consume less time to make navigation. For all the things that need to be emphasized, it always follow with a background for user can easily notice, for example red for logout, delete, green for create, blue for update.

In the back-end side, I split the website like a field that will do the action, so that most of the page I usually create more than 1 file.

In the other hand, this website still lots of problem: it will locate to a page instead of appearing the notification, it make user have to press the back button. Back-end there are a lot of steps run

repeatedly, for example connect database. The name of the database is not intuitive, it cause to hard for maintaince or create new feature. There are still not have like a template that another dev can reuse it.

10. Future Recommendations

From my point of view, I would recommend that creating a system that developer can reuse it to avoid doing the same action repeatedly. Redesign the database, I would make the dabase easy to read more. Improve user experiences, by creating more fetures that help user comsume less time in using website, such as notification instead of the page. Seperating the user and admin, for example admin manage the notification and user, but now the create the new user will depent on user instead of the admin

11. Conclusion.

In conclusion, the report provides a comprehensive analysis of the website project, outlining its functionalities, technologies used, and structure. It offers perceptions into legal, social, and ethical issues while demonstrating a dedication to user privacy and data protection by following GDPR guidelines.

Although the project establishes a strong basis for a forum-style platform, it also points up certain shortcomings. Redesigning the database for improved readability and scalability, streamlining backend operations, and improving user experience with real-time notifications and more functionality are all suggested

. All things considered, the report is an invaluable tool for comprehending the development process and provides practical suggestions for improving and developing the platform. Through the implementation of future additions and the resolution of these issues, the website can develop into a more advanced, easily navigable, and scalable solution that satisfies user needs while adhering to ethical and legal norms.

12. Refernces:

Software Testing Material. (n.d.). Test Case Template With Explanation. [online] Available at: <https://www.softwaretestingmaterial.com/test-case-template-with-explanation/> [Accessed 29 April 2024].