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Report

WEB TECHNOLOGIES AND SECURITY

COURSE WORK

PROF.:- DR. JAMES ROONEY

SOCIAL MEDIA WEBSITE

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Introduction

I have created a web application named ***Friendzone***, whose present feature is based on different popular social media websites.

This application allows users to upload, visit, react and express daily thoughts and images from their day-to-day life. This website was built with HTML5, CSS5, PHP, jQuery, JavaScript, and Ajax. To host locally I have used *phpMyAdmin*. I have applied some basic functionality as per the requirements. I have taken some implementation reference from some YouTube channels (Programming, 2022).

Site Information and Access

URL:- https://www.teach.scam.keele.ac.uk/msc/x6d04/allpages/

Username:- james123

Password:- Jamesr@007

PHP Securities

There are many security measures we need to take into consideration. It is critical to keep an eye on its security implications and risk. Some of the ways that hackers can intercept our website and try to take control or take advantage of our website are (Sweetcode, 2022): -

- **Spam:-** Crafty spammers take advantage of social network popularity to develop new spamming techniques week after week.

- **Least privilege principle:-** The principle of least privilege are we should give privilege to some specific user on the need-to-know basis.

- **Encryption password:-** Password is the most important security feature that we need to consider and for we use hashing in the password to store in the database and allow user to make that password strong enough that no other than user can make a guess on that.

- **Data hiding:-** social media and social networking services are important for developing relationships and friendships. This fact raises privacy concerns, such as the theft of personal information, identity theft, and the use of data by advertising companies.

- **Security through obscurity:-** This process is very essential regarding the implementation of security within the system by ensuring secrecy and confidentiality to secure our website design.

- **Brute force attack:-** Hackers try to access on the any pages by putting random names, so we need to consider the security and divert them back to index page. We cannot let them do force browsing to our website.

- **SQL Injection:-** It is the type of vulnerability that gives users access to the database associated with application and allows them to execute any SQL.

- **PHP Injection:**- PHP Object Injection is an application-level vulnerability that could allow an attacker to perform various malicious attacks, such as code injection, SQL injection, pipeline traversal, and denial of service, depending on the type of application. depends on the context.

- **Phishing:**- In phishing hackers can fish for data, so they can get your details that way without having to struggle with your website directly. Phishing comes in a variety of flavours. A common trick is to present the user with a link to an interesting picture and the question "is this you on this photo?" The landing page is then a phishing page designed to steal the passwords.

- **Path Traversal:-** It where someone browse path and tries to go through our system and look for path or folder until they find a

weak point there and then our data is open to use. So, proper placement of links and data is necessary.

- **General Principles of Security:-** The measures we must put in place or to keep in mind when creating our website so that we limit the amount of our possible security risks.

Application Functionality Covered

I have covered the following Functionalities in my social media application (Rooney, 2022):-

- The site has a secure login system that allows users to register for and log in to accounts.
- A reader (an unregistered user) can view all posts from all users.
- Any user can create an account and start posting right away.
- Each user has a page that lists all their posts, as well as any comments associated with those posts, with the most recent posts appearing first.
- A post contains the main text of the post as well as an optional photo.
- Only posters are authorized to delete their own previous posts.
- After registered, a user can edit their own profile, which includes a brief biography and contact information.
- Both interfaces (mobile and desktop) perform the same functions and display the same content, but in separate ways according to the device.
- All posts must be timestamped with the date and time they were created.
- To prevent site attacks, all forms will validate the data entered, both in terms of appropriate data and security.
- If the user is logged in, the user's public profile page displays a paginated list of their previous posts.
- Within the registration form, jQuery validators check the password strength and username availability.

ER diagram of Database

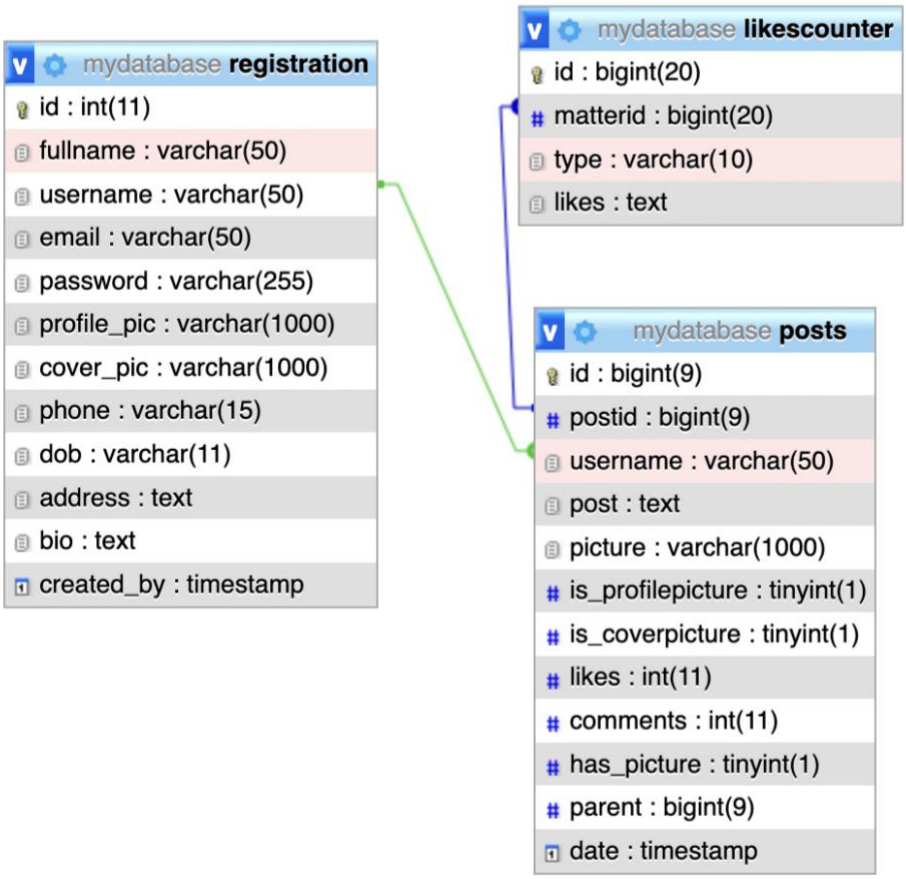

FIGURE I ENTITY RELATIONSHIP DIAGRAM

Site Map

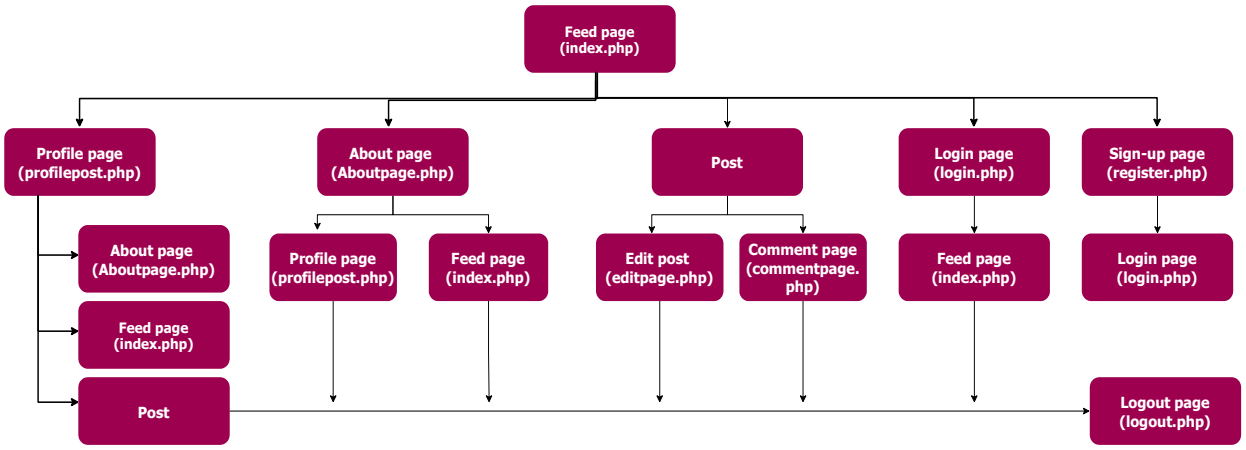

FIGURE II SITE MAP

Reference

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https://www.youtube.com/channel/UCItTNvcjpPzzMi92VRq3zNw
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Rooney, J., 2022. *CourseWork,* Newcastle: Keele University.

Sweetcode, 2022. *Sweetcode.* [Online]
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[Accessed 20 April 2022].