

Website with Dynamic Content

by Lowri Jones

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WEBSITE WITH DYNAMIC CONTENT

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Web Technologies

Table of Contents

Abstract.....	2
Security Issues.....	2
Spambots.	2
CAPTCHA (Completely Automated Public Turing test to tell Computers and Humans Apart).	2
Usernames and passwords.	2
SSL (Secure Sockets Layer)	2
How does an SSL work.	3
Cross site scripting (XSS)	3
Conclusion and Evaluation.....	3
References	4

Abstract.

The report below outlines the different security issues that will need to be taken into consideration if the dynamic website becomes a live website.

Security Issues.

Spambots.

Spambots use computer programs called Spambots to complete repetitive tasks and they are set to target forms online that are unprotected. It is possible that a spambot could enter an incorrect email address or phone number into a web form which can cause a negative reputation to the business' information sending process. [1]

If the Website based on Lowri Jones School of Dance becomes live, it is vital that the possibility of spambots must be taken into consideration along with the different ways to protect their web forms.

CAPTCHA (Completely Automated Public Turing test to tell Computers and Humans Apart).

A popular and common way that a business can protect their forms from Spambots is through the use of CAPTCHA. CAPTCHA is a free solution that is quickly inserted into online forms, sending the user challenges which helps to detect real users against bots. [1] One disadvantage of using CAPTCHA with challenges is that for those with a visual impairment or elderly users may struggle to understand what it is asking from them. However, another style of CAPTCHA that is more beneficial is the use of questions such as simple maths although spambots are becoming smarter at answering simple questions.

Another way that businesses can protect their web forms is through honeypot CAPTCHA which is precisely an extra form input hidden in the CSS which isn't visible to human users, tempting the spambots to fill in. [2] If this field has information entered in the company will know it was a spambot.

Username and passwords.

When creating a new account on a website using a web form, it is vital that you use a strong username and password to protect your data. By choosing a username and password that is considered 'Weak' it is possible that a hacker may find it easy to break into your account. [3] On most websites there is a set of rules that a new user must abide by when choosing a username and password, this has been put in place to lower the chances of a hacker breaking into your account. [3]

Username and Passwords have been used in the development of the Dynamic Website based on Lowri Jones School of Dance.

SSL (Secure Sockets Layer)

A Secure Sockets Layer is a protocol that is created to secure any data connections between web clients and the server whilst using a network that isn't secure like the internet. [4] SSL has made it possible to exchange online transactions securely between both customers and businesses. [4] By using an SSL it also safeguards and helps to avoid any misuse of data such as home addresses and phone numbers. [5] If the Lowri Jones School of Dance website were to become live, this is something that would have to be included due to holding personal data about their users in their databases.

How does an SSL work.

The SSL protocol firstly needs the authentication from both ends such as the server and a browser in order to secure the connection. [5] This is where an SSL certificate is issued by a third party. [5] This certificate ensures that the user is accessing the correct website and or admin through the connection. [5] An SSL certificate links the server to the organisations identity and is installed onto their web server so that whenever a user accesses a secured website it gives them a secure connection between the browser and the server. [5]

Cross site scripting (XSS)

Cross-Site scripting is considered one of the top 10 most critical security risks that have been released. XSS allows a way of avoiding the SOP concept in a weak website, whenever a user inputs data into the website which is then shown on a page for the attacker to insert their own code. [6] The owners of the website won't know about this attack as it relates to the website where it is injected. [6] From here it is very easy for the user to insert JS code and be able to view any personal data like an admin. [6]

One way that a website could prevent XSS attacks is through Escaping. This is not allowing any users apart from admin to add their own code and censoring any data that is entered, disallowing certain characters that could cause harm to the website or to the personal data of it's users. [7]

Conclusion and Evaluation.

If the Lowri Jones School of Dance website was to become Live, it would be vital for the necessary security procedures to be put into place. One of the above security features that has already been implemented into the website is the use of 'Usernames and Passwords', a user to this website will not be able to view the website without logging in which is another aspect of this security feature. Before deployment of this website, it will be beneficial to include CAPTCHA methods on all 3 forms as it will help to protect against hackers.

After having read about the damages that the above security issues can cause, it is important that all of them are included to ensure that all personal data and information is protected from any type of hacker.

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Website with Dynamic Content

GRADEMARK REPORT

FINAL GRADE

53/100

GENERAL COMMENTS

Instructor

Database - Tables are OK, but they're all standalone - this will have a knock-on effect to the coding as you won't be able to show you can do joins. The style field would be good candidate for normalisation 5/10

Range of coding (eg joins, searches, admin tools)

Add a user isn't working, because you've left the username out.

The login is confused. You've set the session ok as `$_SESSION["username"]` but I can't get into any of the pages because you've protected them with `$_SESSION["firstname"]` which doesn't exist? So I couldn't see the pages as I kept getting redirected. I had to manually change the code to get access!

Once I was in, some good searches are available, albeit singly - it would have been nice to be able to search for Freestyle on Wednesday (for example)

Edit is not working properly (all the records were edited and delete doesn't seem to be entirely working either.

All in all you've had a go at the code but it's not entirely working.

14/30

Overall Integration - Problem with the session variable aside, I like the layout and it's quite easy to navigate with the bar at the top. It took me ages to find the Edit and Delete buttons because they appear to be blue text on a blue background. 7 /10

Report

Issues identified/How issues relate to your website.

Some issues have been identified and related back to your website, although quite briefly. You haven't stated if you think your website is vulnerable to XSS, and I would have liked to see a few more issues mentioned

16/30

Total 42 /80

Overall - 53%

PAGE 1

PAGE 2

PAGE 3

PAGE 4

PAGE 5
