

BIT607 Web Development: Assignment 2

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Part 2 report

Security

The Open Web Application Security Project (OWASP) and other organizations publish regular reports on the most common website security issues. The most recent OWASP top 10 report was published in 2021 (<https://owasp.org/Top10/>).

Broken access control: This is the exploitation of improperly enforced restrictions on authenticated users to access unauthorized data/functionality. Common methods to prevent BAC include

- Deny access to functionality by default.
- Use Access control lists and role-based authentication mechanisms.
- Do not just hide functions.

Cryptographic failures: this relates to applications not properly protecting sensitive data. common protection would be encryption when at rest or in transit.

Injection: this is the inserting of code where it should not be (like forms) to execute unintended commands or access unauthorized data. Protection from injection can be done via input validation (e.g checking that forms contain only valid data (no text or special characters in fields they shouldn't be present))

Vulnerable and outdated components: Using prebuild code(components) is standard practice in all programming not just web design this saves time and is important for developing good applications, however it is also a major potential vulnerability as these components could contain security vulnerabilities. Outdated or deprecated components are much more likely to have such vulnerabilities.

Cross-site Scripting:

Security logging and monitoring:

responsiveness

HTTP caching can improve responsiveness by storing a local version of the website on the user's computer so that when they revisit the site the user only must download new pages rather than redownloading the page every time they visit. HTTP caching is supported by all browsers and doesn't take too much work to set up.

A content delivery network is a system that stores images for a website in locations across the world and when the website is accessed serves them images from the closest site for better loading times

(h) Explain how HTTP caching and Content Delivery Networks could further improve responsiveness.
(app. 200 words)

Responsive design

In my application I have made sure to consider responsive design in all parts of the application.

Navigation: I made my navbar change its layout into a dropdown when viewed on a smaller screen this improves ease of use on smaller devices like mobile.

Images: Any large images scale to their allowed area meaning they don't become oversized on smaller devices. An example of this is the image on the index(home) page.

Embedded items: the google maps and google calendars that I have embedded change their design and resolution depending on breakpoints in screen size.

Menu: on the menu page the number of items per column changes based on screen size so that it collapses to single column for mobile sized devices.

Margins: the margins on the sides of the site decrease based on breakpoints in screen size. This allows the site to look nice at larger resolutions but also not force content to be squished by those same margins on smaller devices.

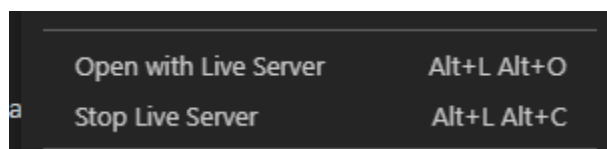
Visual studio extensions

The Visual Studio extensions I have used for this project are:

Live Server: this plugin allows for viewing and updated version to your site as you edit and save it without having to swap to your browser and refresh,

<https://marketplace.visualstudio.com/items?itemName=ritwickdey.LiveServer>

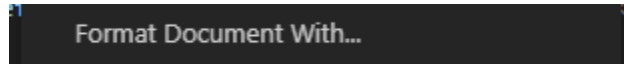
How you start live server



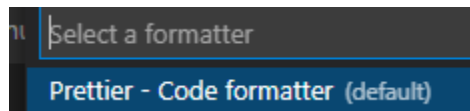
Prettier: this plugin formats your code and css to enforce a consistent style and improve readability

<https://marketplace.visualstudio.com/items?itemName=esbenp.prettier-vscode#:~:text=Prettier%20Formatter%20for%20Visual%20Studio,account%2C%20wrapping%20code%20when%20necessary.>

Other than some live formatting you can use Prettier by



Then select



Network testing – chrome dev tools

(k) Document all the steps you had taken to test your application's network performance, using Chrome's Development Tools. These steps should demonstrate how you evaluated page load times, and any actions taken to improve page loading times and any further tests that were carried out. You may include screenshots that demonstrate how this tool was used

Privacy Statement

Our Privacy Statement

We understand that your privacy is important to you. It is important to us too. That is why we protect your personal information and are clear and open about what we do with it.

We act in accordance with the New Zealand Privacy Act 2020

What information do we collect?

We collect personal information from you when you make a reservation with us.
The information we collect is your name, email, phone number and booking details.

How do we use your information?

We use your information to make your reservation and contact you.

Keeping your information safe

We do not share your information with any other organizations. We store your records in secure systems and facilities, using trusted third parties.

Accessing, updating and correcting your information

Under the New Zealand Privacy Act 2020 you are allowed to request any person information we have of yours and request its deletion or correction.

If you have any questions about the information, we hold you can contact privacy@haukai.nz And we will arrange to update and or delete your information as requested.