

**BIT607-Web Development**

**Assignment 3**

**By Daley Robertson**

**Table of contents**

- 1.** Title page
- 2.** Table of contents
- 3.** The user experience, Static vs Dynamic
- 4.** The user experience, Static vs Dynamic continued
- 5.** Security- Parkerian hexad information security attributes
- 6.** Security- Parkerian hexad information security attributes continued
- 7.** Web hosting options
- 8.** Web hosting options continued
- 9.** Marketing strategy
- 10.** Marketing strategy continued
- 11.** SSL certificates
- 12.** Content delivery networks
- 13.** Plugins
- 14.** Plugins continued
- 15.** Plugins continued
- 16.** Key website links-GitHub & Password details.

**The user experience, Static Vs Dynamic**

Overall, this website has met the requirements of the client taking into consideration the needs of both the internal and external stakeholders when considering what dynamic and static elements to include on each webpage. Please see below a description of the elements chosen and the rationale behind the decisions made on each page.

**Home page**

On the home page the one dynamic element is that images are designed to resize the user's device, such as local customers who are using their desktop at home compared to tourists who are using their mobile phone on the road. A static element on the main page is the information displayed about Haukai's culture and kai does not change, only the size of it depending on the device used to access the web application.

**Reservations webpage**

A dynamic element within this web page is the reservations form, as the user completes the booking process the form is adjusted as it goes give the user feedback while using the web application. The benefit of this is that it lets the user know what information is missing or if there is a booking available in real time while completing their reservation. This means the customers no longer need to contact the business via phone and wait to confirm these details.

**Contact**

A static component of the contact web page is the contact details of the business, if this is not displayed to all users correctly this will affect business for the owners. A dynamic feature of this contact web page is the google map embedded code that links the exact location of the business, allowing users to zoom in and out to see where this business is located reducing the need to search outside of the website via google maps.

**Menu/food drinks**

An important feature of the menu web page is the static information of the price points of each item on the menu. This information will be accessibility checked to ensure that it does not have common color-blind combinations such as red and green. To ensure that this web page has usability for different devices when you access it a dynamic element is the images of the sample menu items are resized depending on the viewport used.

**The user experience, Static Vs Dynamic-continued****Staff access/staff roster**

A dynamic element for the staff roster page is the google calendar roster which is set view a per day viewing displaying staff's hour & contact numbers. As the dynamic content is used via google calendar this allows staff to adjust the way this information is displayed depending on their preference, giving them the option to change to a weekly view instead of per day if preferred. This ensures staff adjust their view to what suits them, improving their user experience.

**Privacy**

This page's content is static, clearly displaying the company's privacy statement, with fixed heading sizes breaking up each section of the page. On this page there was no dynamic content added to remove any distraction from the important privacy information that needs to be understood. A static element used on this page as well as the rest of the web application pages is the use of a navigation bar. This is displayed at the top of all web pages allowing users to access each site with one click rather than having to go to and from the homepage.

**Security- Parkerian hexad information security attributes****Confidentiality**

A potential information security breach for the business that involves the Parkerianhexad information security attribute of confidentiality is when a staff member's information might be stolen. If a third party was to gain access to the staff roster, they could obtain the staff members contact information that could be sold to other parties for malicious purposes. To combat this the business has put in place password protection for gaining access to the business's staff access page.

**Integrity**

If a user were to gain access to the businesses files they could disrupt the running of the business by removing or adjusting client information or staffing contact details. To reduce the risk of the integrity of the system being compromised the business can be diligent when entering passwords on networks that are not considered safe, such as public Wi-Fi.

**Availability**

An information security threat that would impact availability is a denial-of-service attack. This could either crash the businesses website or greatly reduce the speed at which the site is operated at. This will have a flow on effect on customers that are browsing the website deciding if they want to eat at the restaurant or not. If they are unable to see the businesses contact details or book a reservation using an online form this will reduce the customer base the business can service. To combat this the business should have a contingency plan and have their ISP providers' details ready to be in touch in the case that such an event occurred.

**Authenticity**

A risk regarding authenticity that could be a factor for the business is that reservations being made online do not notify the customer correctly. This could result in no shows for scheduled reservations and frustrations for the owner of the business, as a big booking can have an important financial impact for a small business. A way to limit this issue is to complete regular testing of the website so make sure email confirmation of bookings are sent and received, including adding messages to check junk email if confirmation is not received within a certain timeframe.

**Security- Parkerian hexad information security attributes-continued****Possession**

A possession information security risk is the loss of the business laptop that has access to staffing contact information that is uploaded. Losing this kind of information will worry staff members that are affected and therefore it is important to have contingency plans in place that have all personal information behind password protected files or pages.

**Utility**

The creation of fake bookings or bookings made in error can have an impact on the business. If users take up booking spaces, for example booking on the wrong day, this takes the opportunity to make another meal or serve another customer at another time. To reduce the prevalence of incorrect bookings being submitted, having a confirmation page of reservations being made will support that likelihood of bookings that are received are correct.

**Web hosting options**

Web Hosting options: <https://1stdomains.nz/hosting/> <https://www.crazydomains.co.nz/>

**Uptime**

Both of the above web hosting options provide over 99% guarantee, with 1stdomains promising 99.99% and crazy domains providing 99.9%.

**Customer support**

In regard to customer support, crazy domains provide 24/7 tech support which gives it an advantage over 1stdomains which has the hours of 8am to 6pm NZ based support via phone or email. This makes crazy domains the clear winner in terms of customer support options.

**Features**

Both services provide 24/7 server monitoring with DDOS support being provided by Crazy Domain and a free SSL certificate being provided by 1stdomains. The main difference between the two options is when email support is compared. Crazy domain provides a minimum of 150gb of email support with its basic plan as part of the webhosting, however 1stdomains costs extra to add email support and it is only 5gb. Another difference is that 1stdomains offers only the hosting for 1 website but if you get a premium or unlimited account with Crazy Domains you have the option to host unlimited sites. A final standout difference between the two hosting options is that Crazy domains offer a 60-day money back guarantee for customers to trial their services and then have the option to cancel their service if they are not satisfied with the service. There are many other features mentioned for these providers, however the features mentioned are some of the main differences and similarities.

**Space and traffic limits**

1stdomains advertises unlimited disc space with unlimited data traffic, in comparison Crazy domains economy package provides 150gb of disc space with unlimited bandwidth as well.

**Cost (purchase, renewal)**

1stdomains offers 8.25 per month for its plan and this is the only price option for its plan. To see further information around renewal you are required to login to your account. In contract Crazy domains offers a range of prices to different systems/technology options, such as Linux, windows, WordPress & website builder. For a windows economy package this is 15.50 per month for a 1-year period and provides email support. Alternatively, it provides the option of signing up for longer terms of 2, 3 and 10 years, providing a discount for each period, with 10 years giving a 50% discount on the monthly cost. In regard to renewal costs, based on the information available there did not seem to be renewal costs over the monthly cost advertised for the plans.

**Web Hosting options continued****Penalties**

In the FAQ's & information available on both sites I was unable to find information about penalties, however this could be obtained by messaging their customer service team.

**Recommendations/public ratings.**

Crazy domain has a total of over 2400 review from customers giving it an average of 3.5/5, in comparison there is no recommendations or public ratings available on the 1stdomain site.

**Recommendation for the business**

Based on the above comparison the best option would be using all in one web hosting service of crazy domain which gives the business the option of selecting it package and the level of support it requires. There is also 24/7 tech support and live chat options under Crazy domains which 1stdomains is not able to provide. The business's website does not require the unlimited disc space that 1stdomain offers and 150gb is more than enough for the current level of information needing to be stored. In addition to this, Crazy domains also provides a 60-day money back guarantee so that if the business was not happy with its service it has the option to change within this period.



## Marketing strategy

### Domain name registration, availability, marketing potential and cost

#### PROTECT YOUR BRAND <sup>Why?</sup>

Domain	Status	Price	Add
haukai.kiwi	✓ Available	NZ\$85.95	ADDED
haukai.nz	✓ Available	<del>SALE NZ\$97.45</del> NZ\$74.95	ADDED
haukai.co.nz	✓ Available	<del>SALE NZ\$68.95</del> NZ\$52.89	ADDED
haukai.net.nz	✓ Available	<del>SALE NZ\$68.95</del> NZ\$52.89	ADDED
haukai.au ?	✓ Available	NZ\$112.99	+ ADD
haukai.com.au ?	✓ Available	NZ\$112.99	+ ADD
haukai.com	Unavailable		
haukai.net.au ?	✓ Available	NZ\$112.99	+ ADD
haukai.net	✓ Available	NZ\$68.95	+ ADD
haukai.sydney	✓ Available	NZ\$117.25	+ ADD
haukai.melbourne	✓ Available	NZ\$130.95	+ ADD
haukai.org.au ?	✓ Available	NZ\$112.99	+ ADD

As found on the domainz.net website the above options are shown. Firstly, you add in your desired website name, and it provides the extensions available. It clearly states which domains are available and others such as haukai.com which are not. With consideration to businesses marketing strategy and supporting the brief which aims to share some of New Zealand's Māori Culture it suits the business to select one of the top 4 options, linking the website to New Zealand rather than a more global option such as .NET.

### Marketing of key words

The decision of what words to have for the meta tag in the website is key in attracting traffic to the site. For the restaurant some of the key words would be local, Māori, restaurant, kai & taste. These key words encompass the value that this restaurant aims to bring to the local community.

## Marketing strategy-continued

### How to submit this site to search engines

With google there are two options to submit your site, the first is to wait for your site to be picked by Google's crawlers which review the site map of your site. This may take some time, so the other option is to voluntarily submit this to google itself under the side bar on the left once you have logged in. It gives you the opportunity to directly submit your URL to the search engine.

Another provider that you can submit your website to is Bing. To do this you need to sign into Bing's web master tools and create your account. Within this account's menu you need to locate the section where it says configure my site. One of the options provided is to submit a URL, allowing your site to be queued to begin indexing eventually being added to Bing's search engine.

### Benefits of pay per click advertising

One of the main benefits of pay per click advertising is that it's a fixed amount that you pay for. Therefore, you can plan this advertising cost into your business. Haukai can plan what percentage of their income they want to designate attracting new customers via advertising due to the known fixed nature of the costs. Another benefit is that depending on the key words used for your advertising the costs could be cheaper. If Haukai is one of the only online Māori food providers the cost to advertise will be less than if they were a pizza business competing against large businesses, such as Dominos & Pizza hut. A final benefit of pay per click advertising is that you can target individuals that are looking for the service the company offers due to the key words used in their search. Please see the below example of costs using the key word of kai.

Your plan can get 3 clicks for NZ\$5.15 with a NZ\$30 average daily budget

Maximise clicks improves the probability of reaching these estimates by getting you the most clicks, even when budget constrained

Clicks

3

Impressions

14

Cost

NZ\$5.15

CTR

19.3%

Avg. CPC

NZ\$1.93

+

Add conversion metrics

Rate this forecast

+

Keywords

Columns

<input type="checkbox"/> Keyword ↑	Ad group	Clicks	Impressions	Cost	CTR	Avg. CPC
<input type="checkbox"/> kai	Ad group 1	2.67	13.80	NZ\$5.15	19.3%	NZ\$1.93

## SSL Certificates

### Providers:

- <https://www.crazydomains.co.nz/ssl-certificates/>

- <https://www.discountdomains.co.nz/ssl-certificates>

	Crazy domains	Discount domains
Types of SSL certificates offered	Standard SSL & Extend validation certificates designed for ecommerce	Validation domain, Validation organization and Validation extended. -Standard SSL & Extend validations certificates designed for ecommerce
Features	-30-day money back guarantee -Range from 10k to 1.75million for warranty depending on type of SSL cert purchased -official site seal -instant activation for standard SSL, 3-5 days for EV SSL certs. -single to multiple website protection depending on type of SSL cert purchased.	-Range from 10k-1.75 million warranty depending on plan -256 bit encryption -mobile friendly -issued within minutes or within a week depending on the plan -installation included with purchase.
Purchase cost	Range from 110.72 for standard SSL to 630 annually for multiple cert protection for multiple websites.	Range from 40 to 250 annually depending on if you are option for a standard SSL or SSL EV option.
Renewal cost	Unlimited free issues for the life of the certificate	None found

### Recommendation

Based on the above details, as the business is gathering customer contact details and holding staff names and contact information you will want to give customers an additional level of comfort when providing this information. For this reason, the standard SSL options are not suitable for the business. However, at the same time the business does not process any ecommerce transactions like a larger business would therefore it is not necessary to purchase the more expensive SSL extended validation options. Based on the 2 above providers I would go for the Discount domains Validation organisation SSL certificate which requires a greater level of validation and will provide the required security for the company to store its customers and staff contact details.

## Content Delivery Networks

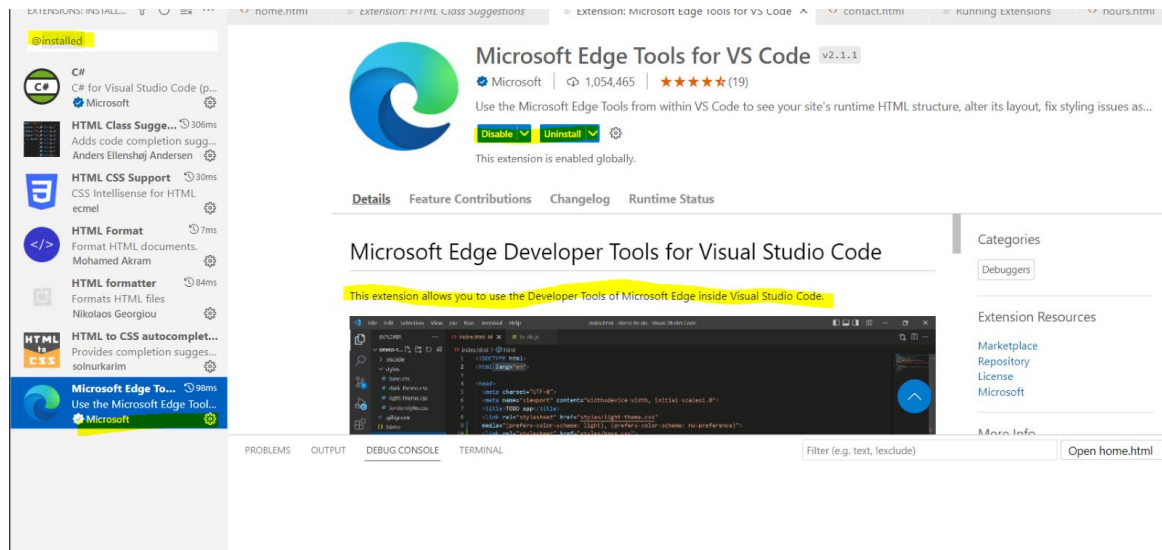
### Providers:

- <https://www.cdn77.com/>

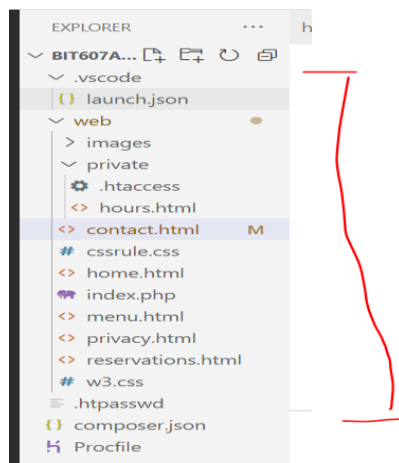
- <https://mothership.co.nz/>

	cdn77	mothership
Features	<ul style="list-style-type: none"> <li>-90+ Tbps network with global reach</li> <li>-3000 ISPs connected directly</li> <li>-98% average cache hit ratio</li> <li>-Advanced video delivery</li> <li>-Built in security with DDoS protection/Secure connections and Origin and content protection</li> </ul>	<ul style="list-style-type: none"> <li>-170+ CDN locations in 110 cities worldwide</li> <li>-HTTP Content push, which auto distributes content</li> <li>-Video on Demand, HD 1080p video files</li> <li>-Video streaming</li> <li>-Security, SSL, link encryption for Flash to protect against ripping, secure token support and geo-blocking</li> <li>-Offers reporting and analytics</li> </ul>
Purchase cost	Prices vary for prices up to 150TB of monthly traffic they are as follows: -6TB=\$199 -25TB=\$385 -50TB=\$580 -100TB=\$990 150TB=\$1390	No pricing info available on site, need to use contact form to get in touch.
Renewal cost	No renewal fees, plans can be changed at the end of the month every month depending on the needs of the business	No info available on site, need to use contact form to get in touch.

## Plugins

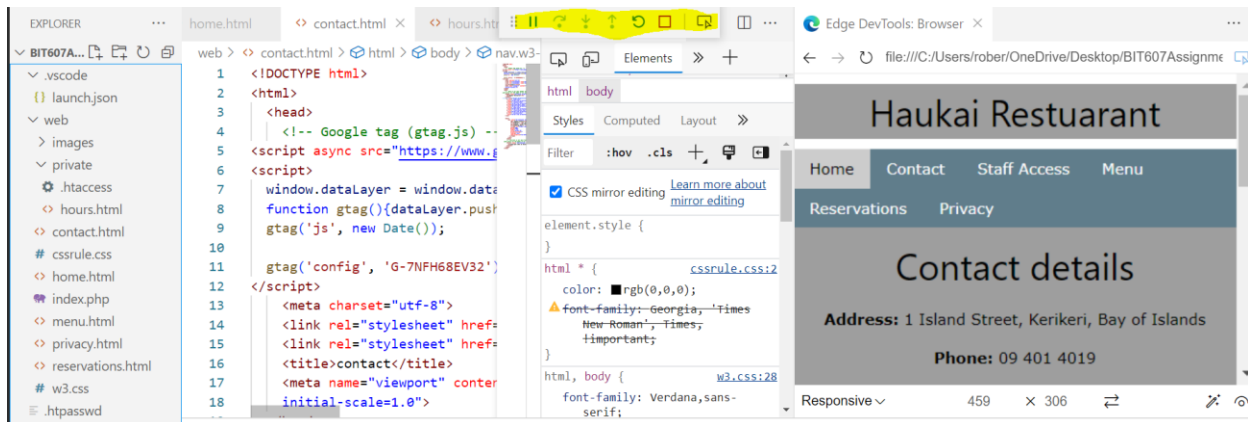


After you have searched and installed the above plugin this will now be available to use.



Go to the left of visual studio code and you will need to right click on your files and select open with edge dev tools

## Plugins continued

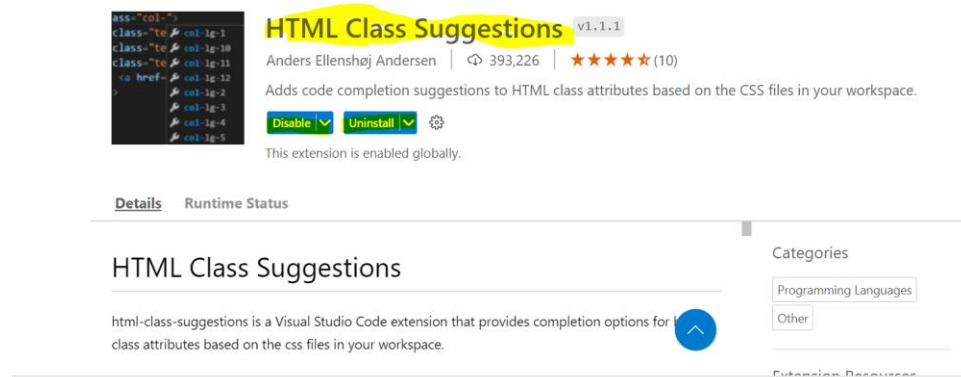


Next you have the ability to view your webpage side by side with your code. When you make an adjustment to the content or CCS of the page you can select the green refresh button highlighted in yellow in the above screenshot.

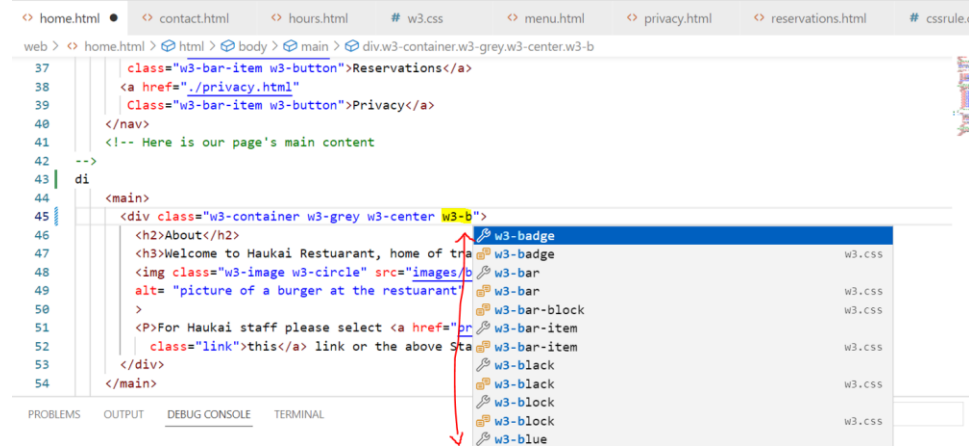
A huge advantage of using this plugin is the options real time feedback you can get from your code updates as the development of your site progresses.

## Plugins continued

Another plugin that was beneficial to the development of my website was the html Class suggestions extension. This provides suggestions for CCS class names based on the classes in your CSS file. When using W3 classes this makes the styling of the code very efficient as you can easily select what options are available when styling a particular element such as a div.



After this is downloaded you can type a class like below and it will automatically populate available options.



As you can see from the screenshot below, depending on what is entered it provides the available styling in the current CSS files held.

**Key website links**

GitHub- <https://github.com/ITNZ2022/BIT607Assignment3.git>

Heroku hosted website- <https://ancient-mountain-77669.herokuapp.com/>

Password protected Staff access webpage access details are found below:

Username: staffACCESS

Password: letmeinplease22