

Coursework 2 Design Description

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Introduction to Web Technologies

1. Description of the added features

- (1) I implemented collapsible functionality for the navigation bar and footer, but I chose to do so only in tablet and mobile screen sizes, as touchscreen devices are easier to manipulate and larger screen devices, such as laptops, are not required.
- (2) Another necessary implementation is the validation of the information on the form in my contact.html page and the addition of a button to clear the typed information with one click. In order to prevent issues such as malicious messages, it is essential to verify the legitimacy of the form information, for example the name, email address and message are set to forbidden to be empty, and the email address must be a legitimate email address and cannot be fabricated out of thin air. After submitting the contact message, I also added a pop-up box to remind the user that her/his message has been submitted successfully.
- (3) Another feature that I am proud of is the introduction of a slideshow-like functionality in my Personality.html. Originally, I was just displaying a bland description of my personalities and hobbies. The whole page looked very plain, but now with JavaScript, I have added event listeners for the left and right buttons. Depending on which button the user clicks, the content of the page changes accordingly.
- (4) The most challenging feature to implement was the dark and light mode switch. Nowadays, most web pages offer a dark and light mode toggle, which not only avoids irritating the user's eyes (especially in dimly lit environments) but also makes for a better user experience. The classic dark mode is in favour of a black colour scheme, but I decided to implement a dark green colour scheme. It makes my web pages more attractive, and the green colour also relieves eye strain. In order to implement a custom dark mode, I have a colour palette specifically defined for the dark mode. I have placed the toggle button on the lower side of the navigation bar to make it easier for the user to find. To enable the same colour theme to be used when switching to a different web page, I applied local storage here. With this implementation, the user's choice of dark or light mode will be stored in local storage when they click the toggle button. On each page load, the stored value will be retrieved and the body background will be updated accordingly.
- (5) Finally, I added a music player to my index.html because I thought it would

be good to put a piece of my favourite background music to set the mood in a self-introduction website. The music player has the ability to display a progress bar, play time and the name of the background music.

2. Justified changes in implementation

The trickiest part is the need to vary the content displayed to users of different screen sizes. For example, I would love to allow mobile and tablet users to experience the slideshow-like descriptions of my personality introduced in my `personality.html`, but from personal experience, and especially from my personal preference, I prefer to slide my finger directly across the page, so I have chosen to display it in the previous style in a width of less than 1024px.

Additionally, originally, I wanted to add a mouse click effect that would spread hearts (or cherry blossom petals and so forth) in different directions wherever the mouse was clicked, but given that this would require sufficient mathematical knowledge (e.g. calculating the number and angle of each spread, etc.), my current level of JavaScript ability is not sufficient to implement this feature, so I have to give up.

I was torn between using JQuery or JavaScript because many of the features can be implemented in both of them. I finally decided to implement the most of the code in JavaScript because it is similar in format to most other programming languages which makes me feels more familiar.

3. My Testing Process

As I had already partially implemented making my web pages responsive in coursework 1, I focused on adjusting the responsiveness of the features I added in this assignment.

To ensure that my website is responsive, I utilize a variety of testing methods. One of the most important methods is using Chrome DevTools. This powerful tool allows me to inspect my webpages and identify any coding issues that may cause display problems. Through the DevTools, I can view my website's HTML, CSS, and JavaScript codes and modify them in real-time to optimize the user experience.

I also utilize the “toggle device toolbar” function, which allows me to simulate different devices' screen sizes and view how my website looks on them. This feature is essential for identifying potential responsiveness issues and making necessary changes. I can check my website on any devices and even customize the screen size to test my website's responsiveness on any device. Specifically, I defined the minimum screen size to be 320px wide, and then with this feature I can clearly see how my web pages will look on a user's device of that size.

4. References

Bootstrap. n.d. *Bootstrap Icons*. icons.getbootstrap.com. [Online] [Accessed 1 April 2023]. Available from: <https://icons.getbootstrap.com/>

Caniuse. 2019. *Can I use... Support tables for HTML5, CSS3, etc.* [Online]. [Accessed 3 April 2023]. Available from: <https://caniuse.com/>

Chen, Y.-P. 2021. *Lingering Blossom*. [CD] Realm of Tranquil Eternity - Disc 1: Sakura and Violet Thunder. [Accessed 6 Apr. 2023] Available from: <https://youtu.be/1xMRU4D9ODc>

Google. 2019. *Google Fonts*. [Online]. [Accessed 10 February 2023]. Available from: <https://fonts.google.com/>

Leeds International Study Centre. n.d. *International Foundation Year in Science, Engineering and Computing*. [Online]. [Accessed 11 Feb. 2023]. Available from: <https://www.leedsisc.com/programmes/international-foundation-year/science-engineering-computing>

Ritsumeikan University. 2015. *Campus Scenery_BKC*. [Online]. [Accessed 2 February 2023]. Available from: <https://en.ritsumei.ac.jp/photo-tour-detail/>

Svgrepo. 2023. *SVG Repo - Free SVG Vectors and Icons*. [Online]. [Accessed 2 February 2023]. Available from: <https://www.svgrepo.com/>

University of Leeds. n.d. *About*. [Online] www.leeds.ac.uk. [Accessed 11 Feb. 2023]. Available from: <https://www.leeds.ac.uk/about>