# CI453 Group Project Report

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# The Website

Below are some animated screenshots of the website highlighting areas in which the brief was met. A screenshot of a computer

Description automatically generatedA screenshot of a computer screen

Description automatically generated

This addition of an interactive password generator game gives the target audience an interactive way to come up with their own passwords and explains the concept of choosing a password this way in a manner that may be more appealing to some children compared to the password security page that highlights and explains the key information.

A screenshot of a computer screen

Description automatically generatedA screenshot of a computer screen

Description automatically generatedA screenshot of a quiz

Description automatically generated

The above screenshots show a quiz that covers questions regarding password security and online privacy. This addition considers the target audience as it gives the children an interactive way of consolidating what the website has taught them.

A screenshot of a computer screen

Description automatically generated

This screenshot shows a table displaying which information is suitable and which is not. This addition was made so the target audience could focus on important aspects of the page and the use of colour can help the children to associate which information is good and bad to help them remember.

## Meeting the Project Criteria

### Project Management Fundamentals

Good project management skills are key to the success of a group project as they ensure that everyone is spending their time and resources effectively. By assigning members roles and setting clear goals, we were able to plan a timeline of the project, which helps make sure everyone knows what they’re doing and that tasks are being divided evenly. The first step to achieve this was to create a Gantt chart to give us an outline of when we should have each section complete. A Gantt chart is a visual representation of the tasks and timeline of a project that helps to ensure you stay on schedule, making it easy to tell which part of the development stage we should be at by this point.

A graph with numbers and a yellow line

Description automatically generated with medium confidence

We arranged to meet up once a week to check in on each other's progress and make sure we were all ready to move onto the next stage of development, and to provide each other assistance with their section if required. For example, the most common issue we encountered was people having difficulty structuring their HTML and CSS so we would be able to assist each other and make sure that all pages had a consistent style between them. At the end of the meetup sessions, we would upload our work to a shared GitHub and make sure that all the files were the latest versions so that we didn’t accidentally overwrite each other’s work with the GitHub merges.

### Working as a team

Part of project management is making sure that the work is divided fairly among the group to each of their specialties. We had three members in our group, one who was skilled at developing code but struggles with writing tasks, another who was the opposite and preferred writing over coding, and a third who had a healthy mix of both categories and no strong preferences either way. This worked out well as it allowed each of us to work on two web pages: the first user worked on the home page and a JavaScript focused page, the second on two research pages, and the third on research and a JavaScript page.

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| --- | --- | --- |
| Name | Strengths | Tasks |
| Carlo | Researching, designing  Developing in css and html, communication | Website:  Created Github to coordinate and manage the sharing of resources. Designed, researched and developed the online privacy and password security pages. Made the base css file for styling on the webpage.  Report:  Website section. Annotating images and explaining how the brief has been met. |
| Charlotte | Programming, communication | Organised meetups and the project timeline. Designed and developed the home page and password generator. Assisted with HTML/CSS/JS skills and knowledge. |
| Charlie |  |  |

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# Individual experiences

## Carlo

My responsibilities for this task were to design, research and develop the ‘Online Privacy’ and ‘Password Security’ sections of the webpage. Using the NCSC website and some other online resources, I was able to design and develop two interactive, informative webpages. To meet the requirements of considering the target audience in the design and development of these pages, I incorporated several techniques to try and keep the page as engaging as possible.

I kept the style of writing simple, using language that was not too academic to make sure the target audience would understand everything fully. I also used short sentences and avoided long paragraphs, when possible, to help break up the text and keep the page engaging.

The inclusion of the ‘did you know’ and ‘top tips’ sections in my pages were included to give the target audience facts and tips that are memorable and short. Separating them from the rest of the page content emphasises them as they are easily distinguishable from the rest of the page content.

In the ‘password privacy’ page, I included a small interactive segment where the user can hover over a possible password to see whether it is considered ‘secure’ or not. This inclusion gives the user a way of interacting with the page without entering one of the other pages and breaks up the page content.

To meet the brief of considering security mechanisms, I researched and discussed the user of password managers to store and maintain the security of complicated passwords as well as the use of 2-factor authentication with examples of how these mechanisms may work and be used if the user was to implement them.

Throughout the project, my biggest challenge was being able to manipulate CSS in the way that I wanted for certain elements. For example, although I was confident with the styling of the pages, I had to use some outside help to create the interactive hovering section. The website I used for this is included in the reference section.

Written and verbal communication was strong throughout the group as we had a WhatsApp group to discuss ideas and help each other with any queries when we were not meeting in person. I set up a GitHub for us to share the website files and work and help each other simultaneously as the project progressed.

## Charlotte

As the most experienced programmer and least skilled at researching and writing essays, I was put in charge of creating the home page and a random password generator, as well as assisting the others with their issues. Another member designed the base CSS that would be used throughout the site including font and colour palette, which I assisted in formatting and finding the correct CSS properties, as I have the technical CSS knowledge but no eye for design so to speak.

The homepage was relatively simple to design. We already had the light and dark blues designed, so I opted to create a section for each of the pages with an alternating colour palette, a summary I attempted to keep witty and age relevant, and an appropriate clipart image that matched the text colour of its section. Creating the alternating sections was easy, just a series of <div> tags where every other is given the ‘alt-palette’ class that changes its text and background colour. The most challenging part was finding the appropriate clipart in the right colour, and it ended up being easier to find the most appropriate image and alter the colour myself in photoshop (References to the original images are included in the code comments next to the image).

The password generator was more of a challenge. I based the page on a minigame I found on the NCSC site (reference also included in code comments) that used dice rolls to pick a different part of speech like verbs, nouns, or adjectives, and the user would pick a word from that category. Doing this three times gives you three random words that can be used as a secure password. I decided to replicate this with a random number generator and a set of word pools that would randomly choose 3 of 5 different parts of speech, before choosing 4 options from the associated pool of words. I wanted to include one of each letter while keeping the words simple, long enough and memorable to ensure they were appropriate for the target audience, but I had to leave out a few letters as there were no words that met all of those criteria for the group, notably there are no ‘x’ words.

Other than that, I didn’t have many issues developing the code, the biggest challenge I had was how to make sure it didn’t choose repeat words or word pools without removing them from the list so it could be reused. The solution was to have a separate list of chosen values that correlated to the item locations in the arrays and use a while loop to continuously pick a new value if the chosen value was in the list. The issue with this is that the loop would infinitely repeat on the first attempt as nothing was in the list, so I had to include an invalid value and remove that after the list was fully generated.