Project Development

For this project, I collaborated with the same client as in the previous marketing project (Hand Picked). However, this time my focus shifted from marketing to development. Working in a group of two, we were tasked with creating Easter eggs for the website. My responsibilities included conducting research, designing the features, and carrying out the development work. This role allowed me to contribute to various aspects of the project, from conceptualization to execution.

Problem Description

The ExploreBreda website is a recent addition to the digital showcasing of the already existing company, designed to showcase the vibrant attractions and unique charm of Breda. As a new platform, it is crucial to implement strategies that will attract a significant number of visitors and foster a strong online presence. Currently, the website faces challenges primarily due to a lack of marketing efforts and limited recognition among potential users. To address these issues and enhance user engagement, we propose the idea of Easter Eggs into the website's design and usability.

LO:Interactive Media Products

What i did:

For this project, our target audience remained consistent: international students in the Netherlands. To gather valuable insights, we conducted research through a survey. Our primary research question was, 'How do international students feel about discovering Easter eggs on the Explore Breda website?' The survey results provided answers to this question

and revealed the types of Easter eggs our target audience finds most appealing ***(see Figure 1)***.

One of the Easter egg ideas I proposed was a simple Wordle game. In this game, users guess a word related to the Netherlands. I designed the page for this Wordle mini-game ***(see Figure 2).*** The design approach was intentionally straightforward to align with the original website's aesthetic. By maintaining a simple and cohesive design, I aimed to enhance the user experience without overwhelming them with unnecessary details.

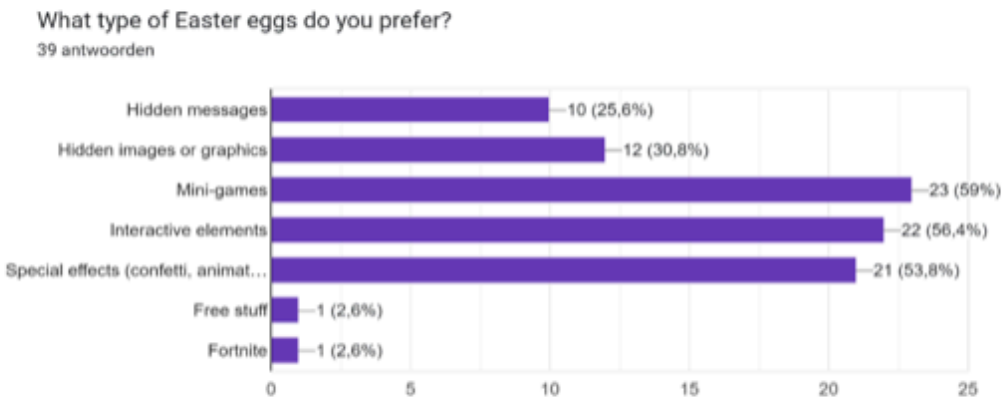
Figure 1: some survey questions

Do you think Easter eggs enhance your experience on a website?
By asking this question we find out how our audience feels about Easter eggs on a website.

74,4% agrees more than disagrees that Easter eggs enhance their experience on a website.

This question helped me recognize that incorporating Easter eggs into a website can significantly enhance the experience for our target audience. The insights gained confirmed that these hidden features can add an element of surprise and delight, making the interaction more engaging and enjoyable for international students.

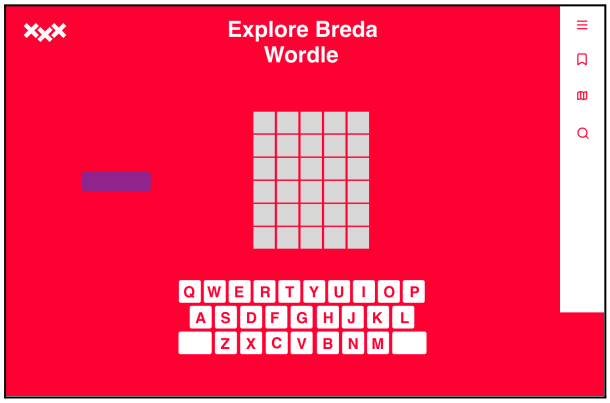
What type of Easter eggs do you prefer?
By asking this question we will know what kind of Easter egg is interesting to our audience.

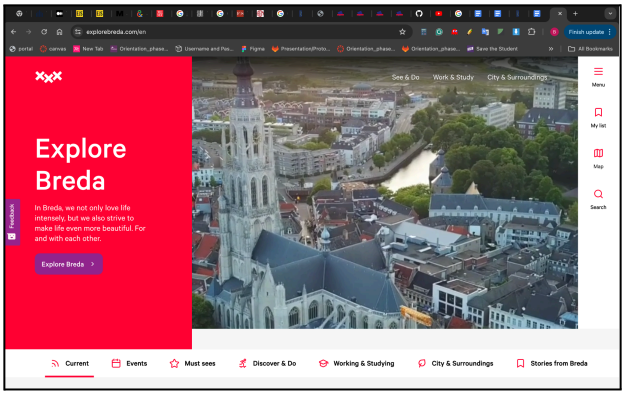


59% of the participants prefers mini-games, 56,4% also prefers interactive elements and 52,8% also prefers special effects.

This question helped me identify which types of Easter eggs are most appealing to our target audience. The insights gained allowed us to tailor our hidden features to better match the preferences and interests of international students, ensuring a more engaging and enjoyable user experience.

Figure 2: wordle design





I designed the Wordle game to seamlessly match the website's aesthetic. Given that the website features a simple design, I opted for a straightforward approach for the Wordle game as well. This ensured that the game complemented the overall look and feel of the site, providing a cohesive and user-friendly experience

What i learned:

Designing the Wordle mini-game taught me how to balance simplicity with user engagement. By maintaining a straightforward design, I was able to create an enjoyable and interactive experience that seamlessly fits within the existing website framework. This approach ensured that the game remained accessible and appealing without overwhelming users, aligning perfectly with the website's aesthetic and functionality.

How I think it went:

I believe the project went well. Our ideas resonated with the preferences of our target group, aligning closely with what they would have liked in a mini-game. The successful creation of the mini Wordle game reflects this synergy, demonstrating our ability to effectively engage and appeal to our audience through thoughtful design and execution.

LO:Development and vision Control

What I did:

After completing the design of the Wordle page, I proceeded with its development. Creating the HTML and CSS was straightforward, thanks to my strong skills in these areas. As a result, I was able to develop a visually appealing and functional page with ease ***(see figure 3)***.

For the JavaScript portion, I required some assistance since my skills in this area are still developing. I turned to YouTube tutorials to learn and

implement the necessary JavaScript code. These tutorials were incredibly helpful, guiding me through the process effectively ***(see figure 4)*** .

One important feature I integrated was a Dictionary API. This ensures that users enter real words rather than random letters, maintaining the game's challenge and enjoyment by only accepting valid words. This addition significantly enhanced the gameplay experience ***(see figure 5)***.

For this project, I utilized a Git repository on GitHub. I created a new branch to work on my tasks independently, avoiding direct changes to the main branch. Each time I completed a task in my branch, I committed the changes and sent a merge request. I then created a pull request from the main branch, and if everything was correct, I merged my branch with the main branch ***(see Figure 6)***.

Figure 3: final website design

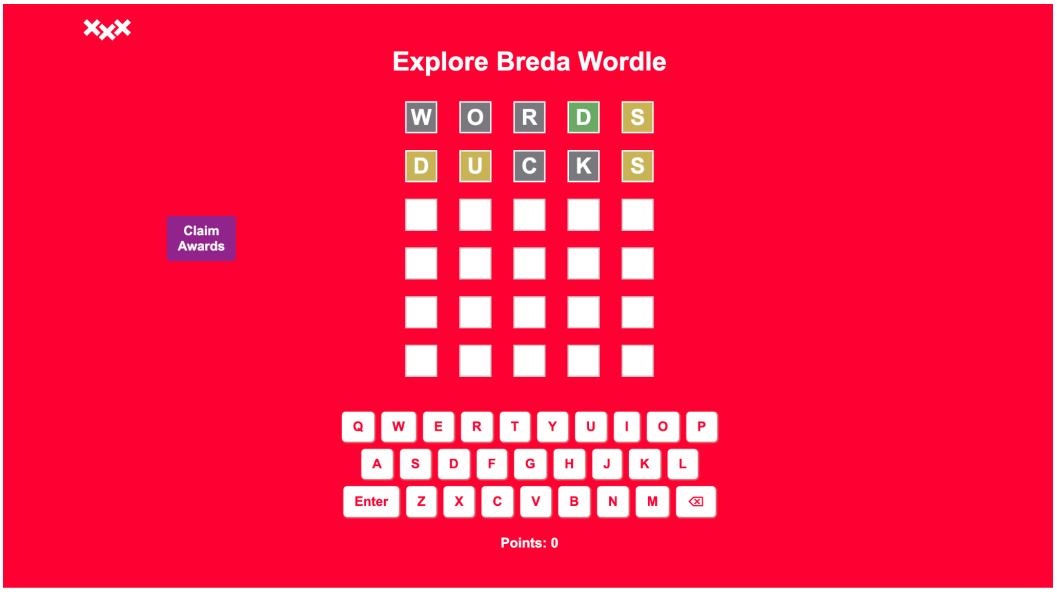


Figure 4: some JS code from the wordle Game

```
var height = 6; // number of guesses
var width = 5;  // length of the word

var row = 0;     // attempt #
var column = 0;  // current letter for that attempt

var gameOver = false;
var words = ["TULIP", "DUTCH", "TRAIN", "EUROS", "STUDY"]; // Hardcoded words
var word = words[Math.floor(Math.random() * words.length)].toUpperCase();
var points = 0; // Points variable

window.onload = function(){
```

In this line of code i set a var height and with, this would determine the length of the word and the number od tries that you have to guess the word. Var row and colum set the coordinates on which tile the first letter goes. If filled row 0 with 5 letters it turns column = 5. If the word guessed is wrong, Row goes to 1 and column goes to 0 again because in row 1 you haven not put any letter. Each letter that you put in the column is +1 and there's a max of 5.

In var words i set the words that the users had to guess.

```
async function handleKeyUp(e) {
    if (gameOver) return;

    if(e.code >= "KeyA" && e.code <= "KeyZ") {
        if (column < width) {
            let currentTile = document.getElementById(row.toString() + '-' + column.toString());
            if (currentTile.innerText === "") {
                currentTile.innerText = e.key.toUpperCase();
                column += 1;
            }
        }
    } else if (e.code === "Backspace") {
        if (0 < column && column <= width) {
            column -= 1;
        }
        let currentTile = document.getElementById(row.toString() + '-' + column.toString());
        currentTile.innerText = "";
    } else if (e.code === "Enter") {
        if (column === width) {
            let guessedWord = "";
            for (let c = 0; c < width; c++) {
                guessedWord += document.getElementById(row.toString() + '-' + c.toString()).innerText;
            }

            const isValid = await isValidWord(guessedWord);
            if (isValid) {
                update();
                if (row < height - 1) {
                    row += 1;   // start new row
                    column = 0;  // start at 0 for new row
                }
            } else {
                alert("Invalid word, please try again.");
            }
        }
    }
```

In this line of code i added sn evenlistener that will detect every A-Z key that the user presses to send that letter into the game. And each letter gets colum with +1. I also added a line of code that whe you press the back space it delete a word and it also makes the colum -1.

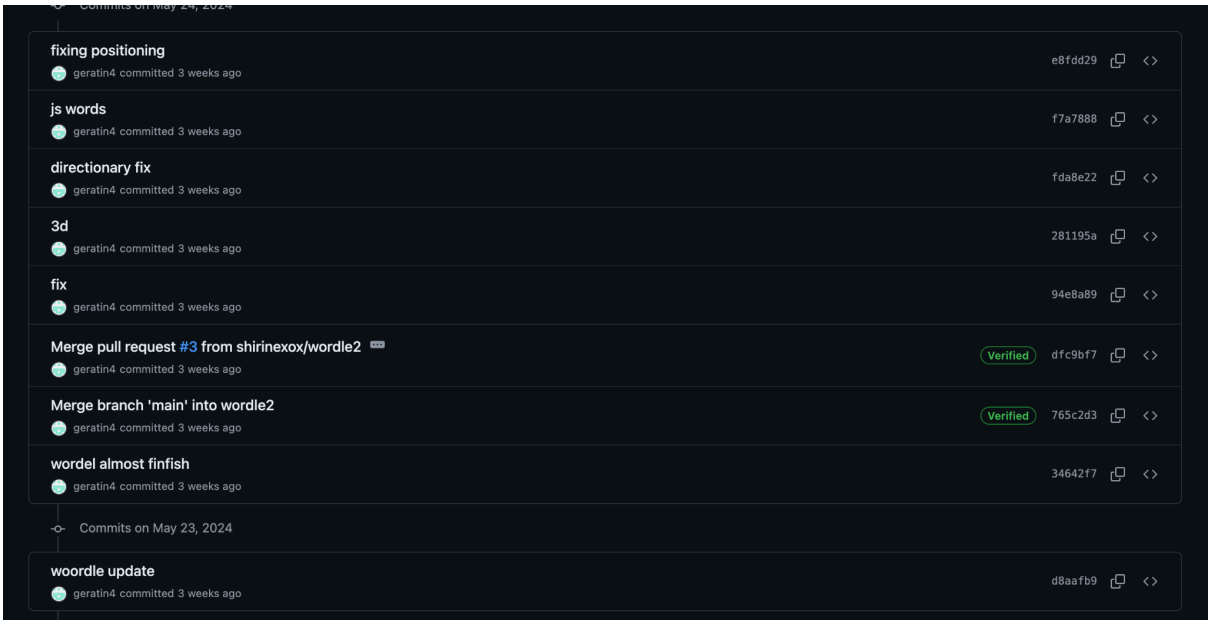
Figure 5: API

```
async function isValidWord(word) {
    if (words.includes(word.toUpperCase())) {
        return true;
    }

    try {
        const response = await fetch(`https://api.dictionaryapi.dev/api/v2/entries/en/${word}`);
        return response.ok;
    } catch (error) {
        console.error('Error fetching from dictionary API:', error);
        return false; // fallback to false if the API call fails
    }
}
```

This line of code is the API that gets word forms dictionaryAPI and checks it with the word that was entered by the user to check if its a real world.

Figure 6: GIT Repository



Each time I committed changes to the repository, I included descriptive messages detailing the specific modifications I made in that commit. This

practice ensured clear communication of updates and facilitated easier tracking and understanding of changes within the project.

What i learned:

I learned how to create a mini-game using HTML, CSS, and JavaScript. Throughout this process, I significantly deepened my understanding of JavaScript. For instance, I learned how to add an event listener that detects when any key is pressed and only registers the action when the key is released. This experience not only enhanced my coding skills but also provided practical knowledge of integrating interactive features into web applications.

How I think it went:

I believe the project went well overall. I successfully created a functional mini Wordle game. Although I encountered some challenges with certain aspects of the game, I was able to resolve them, and the final product worked as intended. This experience demonstrated my ability to troubleshoot and overcome obstacles in the development process.

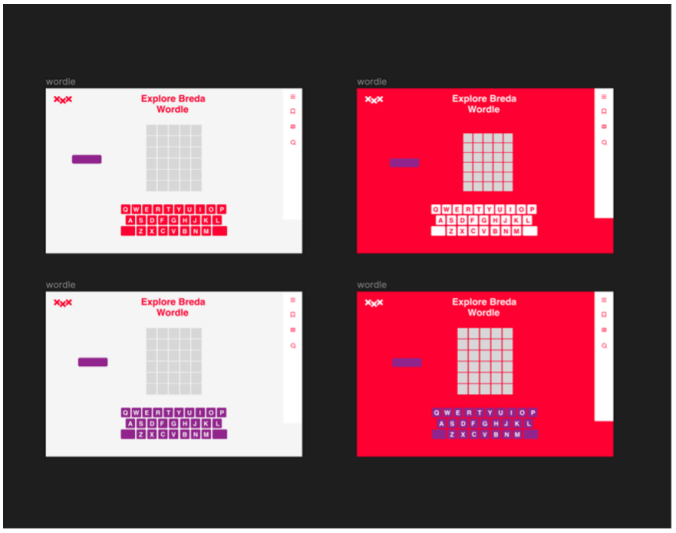
LO: Interative design

What I did:

For this project, I designed the page for the mini Wordle game. I didn't go through many iterations; I created four different designs, varying only in colour ***(see Figure 7)***. Additionally, I created a 3D animation of the Explore Breda logo using ***Blender***. This 3D model was intended for use as a VR object, allowing users to see the 3D logo spin when they scan an image on the website ***(see Figure 8).*** This added an interactive and

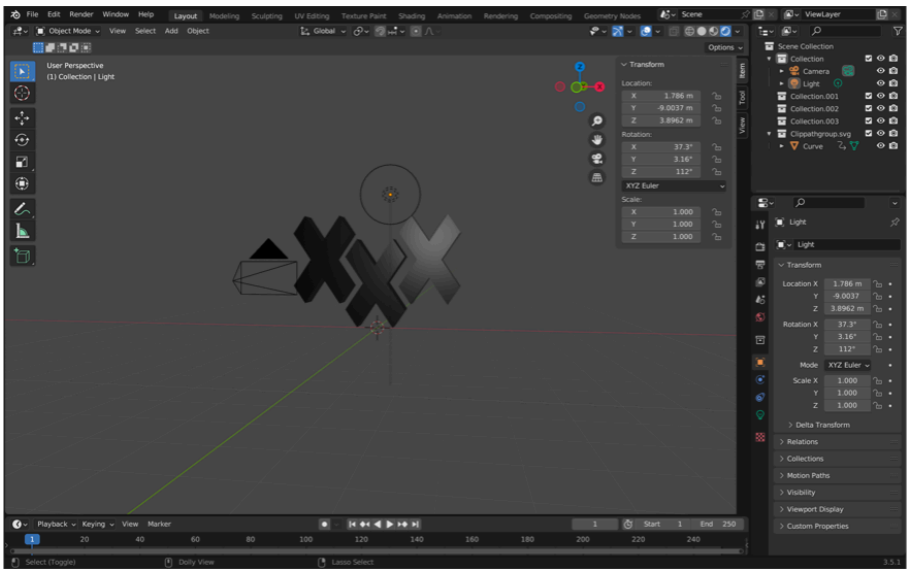
immersive element to the project, enhancing the user experience with innovative technology.

Figure 7: Wordle designs

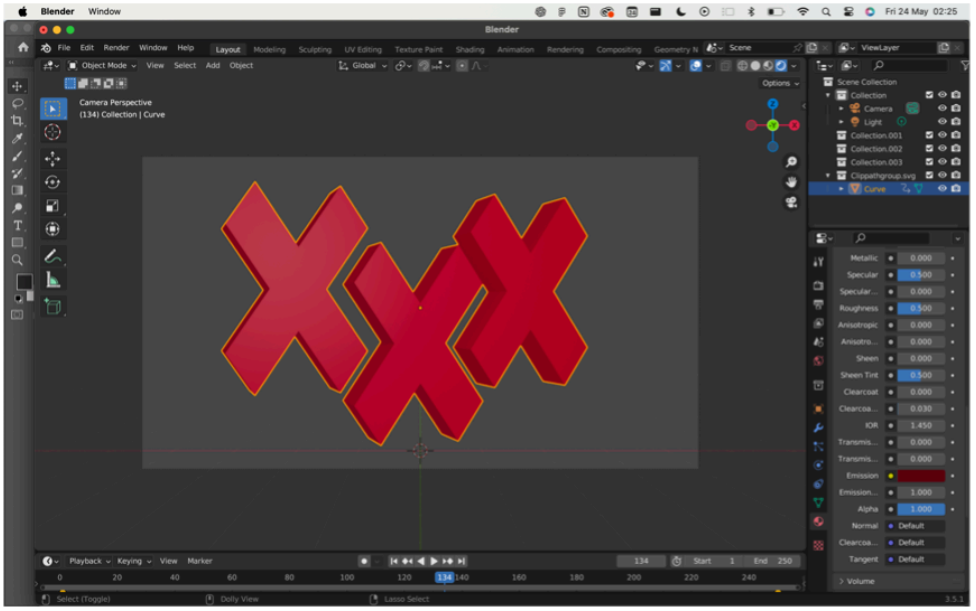


These are the different Wordle designs I created. The layout remained consistent across all versions, with only the colors changing. By experimenting with various color schemes, I aimed to find the most visually appealing design that would enhance the user experience. Ultimately, this approach allowed us to select the most effective color palette for the final product.

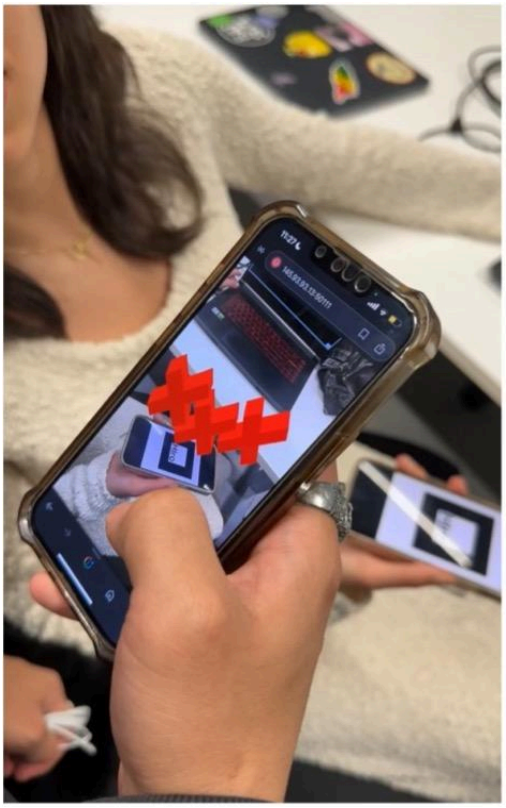
Figure 8: Blender 3d sculpture



Since we wanted to create an AR Easter egg, I chose to use the three X logo from Breda. First, I converted the logo into an SVG file, then imported it into Blender to transform it into a 3D object. This process allowed us to integrate the recognizable symbol into our AR experience, adding a unique and engaging element to the project.



After converting the logo into a 3D object in Blender, I coloured it red to match the actual Breda logo. This attention to detail ensured that the AR Easter egg was visually consistent with the original branding, enhancing its authenticity and recognizability.



When the user shows the QR code to the camera, the red logo appears as an AR element. This interactive feature brings the 3D logo to life, providing a dynamic and engaging experience for the user, seamlessly integrating the AR Easter egg into our project.

What i learned:

I have learned to use several features of Blender, particularly how to animate within the software. I discovered that it's possible to import SVG illustrations and utilise them as sculptures, which opens up a variety of creative possibilities for integrating detailed vector graphics into 3D animations. This newfound capability allows for greater flexibility and creativity in designing intricate and dynamic visual elements.

How I think it went:

I believe the project went quite well overall. I received positive feedback from both teachers and classmates regarding the Easter eggs I

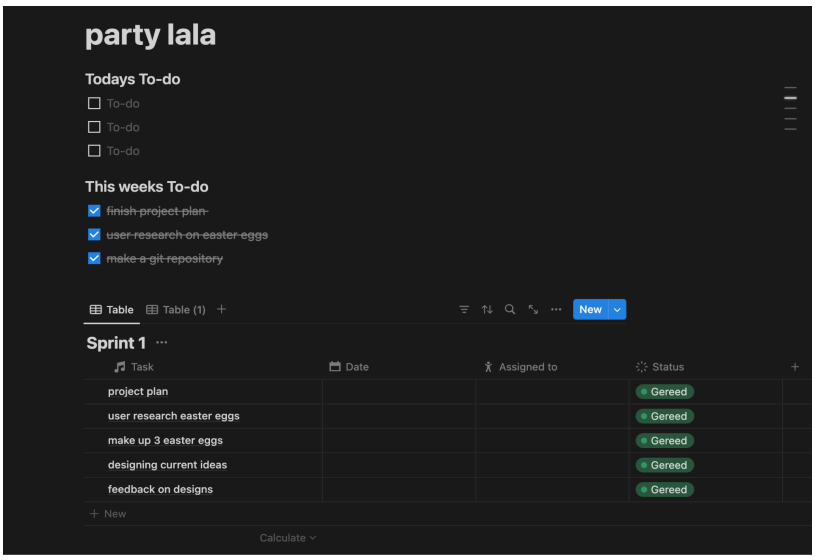
showcased. This affirmation from my peers and instructors was encouraging and validated the effort put into the project. Unfortunately, we did not receive any feedback from the client, as they were unable to attend our presentations. Nonetheless, the constructive responses from the academic environment were valuable and appreciated.

LO:Professional Standards

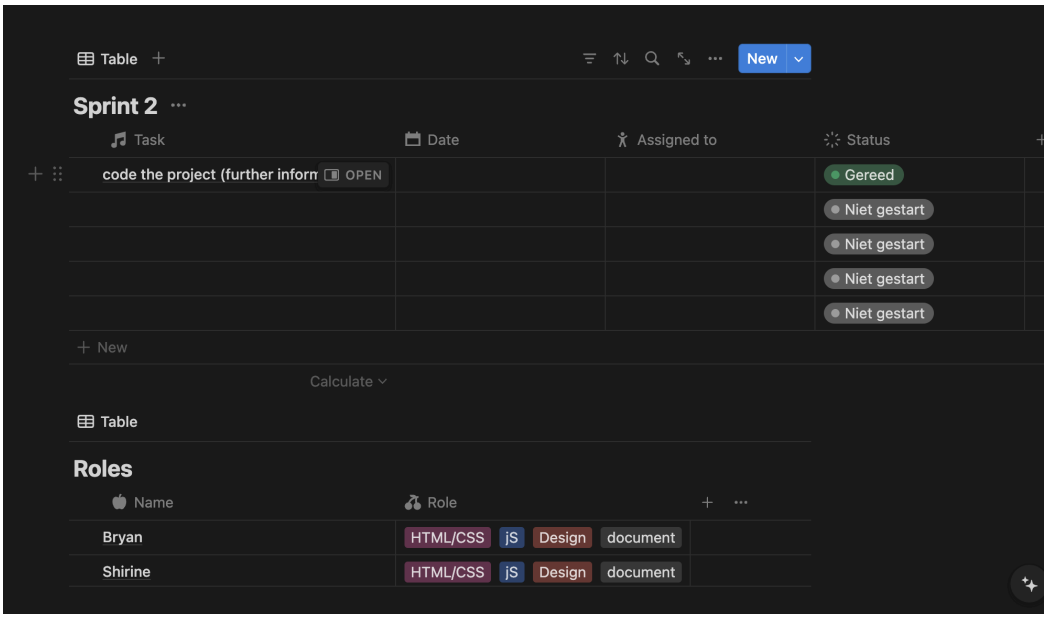
What I did:

For this project, my group partner and I used Notion to organise our workflow, dividing it into two sprints. Sprint one focused on brainstorming ideas for the Easter eggs, conducting research, and creating designs. Sprint two was dedicated to the development of the Easter eggs ***(see figure 9).*** Additionally, we set up a Git repository to collaborate on the development work ***(see figure 10)***. By working closely in this structured environment, we were able to efficiently manage our tasks and ensure a smooth progression from conceptualization to execution.

Figure 9: Notion

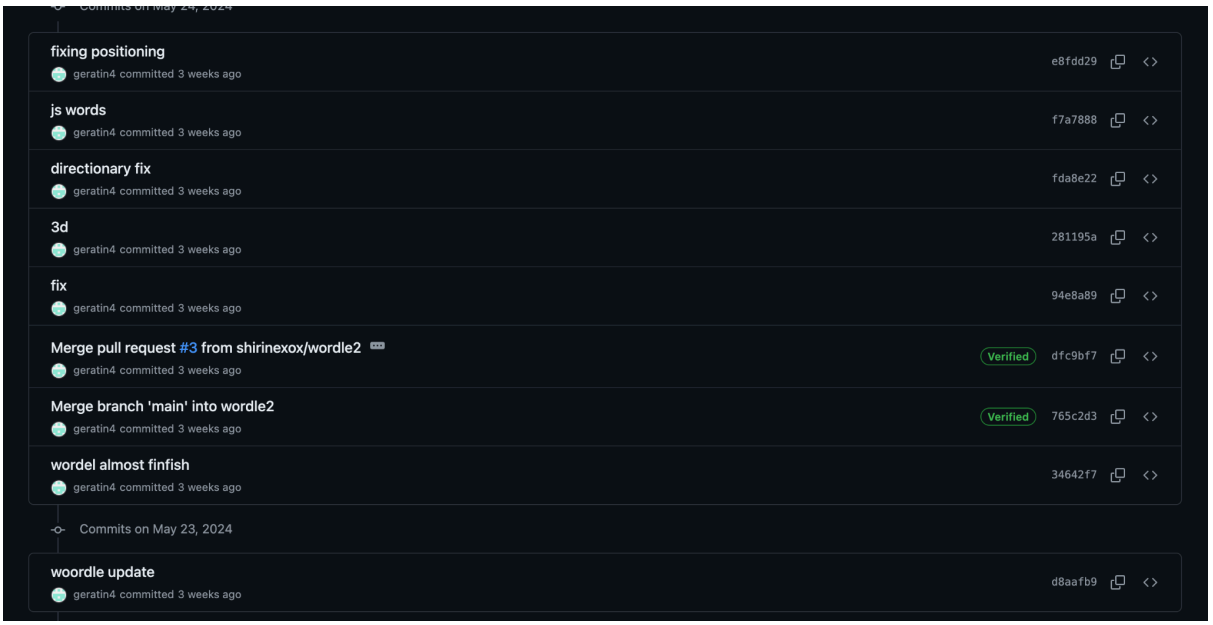


In Sprint one, we focused on all tasks except development. This included brainstorming ideas for the Easter eggs, conducting research, and creating designs. The actual development work was reserved for Sprint two. This structured approach allowed us to thoroughly prepare and refine our concepts before moving into the development phase. Additionally, we used a Git repository to collaborate effectively on the development tasks in Sprint two



In Sprint two, we focused on executing the development of the Easter eggs. This phase involved bringing our ideas and designs from Sprint one to life through coding and implementation. By dedicating this sprint solely to development, we ensured a concentrated and efficient effort in building the functional aspects of our project.

Figure 10: GIT Repository



Each time I committed changes to the repository, I included descriptive messages detailing the specific modifications I made in that commit. This practice ensured clear communication of updates and facilitated easier tracking and understanding of changes within the project.

What i learned:

I learned to work in short sprints and collaborate effectively in a duo. This was a new experience for me, as my previous group projects typically involved working with five people. Adapting to this smaller team dynamic and using shorter sprints allowed me to develop new skills in project management and teamwork.

How I think it went:

I believe the project went well, as I worked effectively with my partner. Using a Git repository for version control also proved successful, as I encountered no issues during the process. Overall, the collaboration and technical aspects of the project proceeded smoothly.