Projects

1. Node.js / socket.io Chatting Platform (2021.10.27 ~ 2021.11.08)
- Goal of The Project: To create a chatting platform using Node.js and socket.io where users can freely chat while implementing cool functions.

My Responsibility: Learn new concepts regarding Node.js and socket.io including real time pushing, asynchronous programming, and drawbacks of its use. Had to challenge myself familiarizing with optimizing the power of socket.io including bi-directional and event-based communication. Created multiple functions where the users can create public/private rooms, kick/ban other users, and send private messages.

2. Active (AJAX) Calendar (2022.03.02 ~ 2022.03.21)
- Goal of The Project: To create a responsive calendar by using fetch calls from Javascript to PHP calls to let users list events on the calendar to make their schedule visually clarifying.

My Responsibility: Create a calendar that can go as far in the future and the past as possible. Allow the users to push events (including date, location, time) to specific calendar days. Devoted most of my time trying to create unique id for each day and making fetch calls to make unique events inputted into those days without using brute force code. Make all actions from AJAX to allow web pages to be updated asynchronously so that all functions work without having to refresh the webpage. Learn the concept of API and use fetch calls to the PHP backend to apply to the calendar API created.

3. News Forum (2022.02.09 ~ 2022.02.21)
- Goal of The Project: To create a News Forum utilizing PHP functions and manipulate database tables where users can various functions to communicate with other users within a news post.

My Responsibility: Implement PHP functions to allow users to login, create news posts, and make/edit/delete comments on the posts. In addition, manipulated PHP calls to store new users in the database as well as new posts and comments to the database. Challenged myself to learn about web security and implemented security against SQL injection attacks, hashed users' passwords, and passed tokens in forms to prevent CSRF attacks. Overcame the challenge by researching solutions to prevent these attacks and came up with prepare queries, password_hash() function and attaching session variable to token when passing forms.

4. File Share Portal (2022.01.24 ~ 2022.02.07)
- Goal of The Project: To create a platform where users can share different files and save them on the website with other users.

My Responsibility: Implement PHP functions to allow users to login, create news posts, and make/edit/delete comments on the posts. In addition, manipulated PHP calls to store new users in the database as well as new posts and comments to the database. Had few communication problems and working in GitHub with a partner due to understanding codes that an another person writes. Frequently meeting face-to-face and explaining our logic to each other made the process easier.

5. Express.JS Open Music Evaluation Platform (2021.11.10 ~ 2021.12.08)
- Goal of The Project: To create an open music evaluation platform where users can create their own user profile and chat with other users to propose to vote on whether they like the music or not.

My Responsibility: Learning Express (Node.js) web application framework for the first time was an obstacle that I had to overcome. Slowly familiarized myself with Express and created extra functions that I didn't create in my previous projects including profile image and profile music by implementing routing for requests for clients. Additionally mixed the code with socket.io to apply chatting functions and creating chatting rooms.

6. Python Scripting (2022.02.23 ~ 2022.03.02)
- Goal of The Project: To write a python code that reads through a text file (statistics of baseball players) and parse each of their average batting rate and rank them from highest to lowest.

My Responsibility: Employed regular expressions to parse the data texts and assigned each variables (name of the players, number of batting, number of runs, number of hits) to calculate for the rate of successful battings for each player. Printed the final result by ranking each player on the player's successful rate of batting. It was my first time writing a Python script on terminal and reading through a text file; thus, I needed the time to invest learning how I can execute my Python code and what regular expressions I need to successfully read through the data.

7. Responsive Instagram Clone (2022.02.11 ~ 2022.02.25)
- Goal of The Project: To create a Instagram Clone (frontend functions) that mimics the look of the actual Instagram website.

My Responsibility: Mastered the usage of HTML and CSS to create navigation bar including the search bar and icons, unique posts from users, suggested friends, and stories from friends. Took advantage of media queries to make the webpage responsive to make the webpage look user-friendly not only for laptops but for tablets and mobile phones.

8. Personal Website (2021.08.21 ~ Present)
- Goal of The Project: To create my own portfolio website that introduces my ambition, my interests, my projects, and my resume to the audience.

My Responsibility: Since I first got to know HTML and CSS, I created the website. I haven't been able to fully update my website despite the knowledge I acquired through my projects. I am planning to renew my website as my school year ends. The challenge that I am facing is to choose what templates I could use to accurately, yet simply, send my message through my website.

9. UNICEF / UYSC (2017.08~ 2020.05)
- Goal of The Project: To help schools in Cambodia by providing them educational resources bought from fundraising in South Korea and actually teaching students with modern educational curriculum for few days and renewing their school facilities by building basketball nets and painting their school buildings.

My Responsibility: As the vice president, my role was to organize 25 students and assign them into specific groups (teachers, painters, builders) and communicate with local teachers to understand their needs. Working as the leader of the team gave me a lot of pressure, but knowing that there was no other person who was willing to take the responsibility to get this job done, I decided to manage weekly group meetings and exec meetings to make sure our group knew why and what we had to do given the short time we had in our trip.