Final Project Reflection

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Web Technologies

CS 330

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While working on our web diary application as a team project, I was able to get hands-on experience in building a complete web application from the ground up. This project challenged me to move beyond theoretical knowledge and apply concepts such as database integration and user authentication in a real-world context.

One of the most significant things I learned was mastering the implementation of complex filtering and sorting systems. Creating the journal page required me to think through how users would want to interact with their diary entries, for example, selecting moods and using dates. This project opened my eyes to the usefulness of PHP and how it makes communication with our database easy. Understanding how array_filter() and usort() work together deepened my appreciation for PHP's built-in functions and how to leverage them effectively.

Security emerged as another critical learning area. Implementing user authentication and ensuring each user could only access their own entries taught me that security isn't just a feature but a fundamental architectural concern. I learned how to sanitise user inputs consistently, validate data before processing, and structure our authentication system to protect against common vulnerabilities. Seeing how easily security holes can emerge when you're not vigilant made me much more conscious about defensive programming practices.

Additionally, working with Supabase as our backend presented its own challenges. Unlike working with a local database where I could directly inspect tables, I had to learn to work through API calls and handle asynchronous responses properly. Debugging issues required developing new skills such as reading error messages carefully, checking network requests, and verifying that our data structures matched what the API expected. This experience taught me patience and how to isolate the problem, test one component at a time, and verify assumptions before moving forward.

Finally, the project taught me how to better work in a team. Coordinating with teammates meant establishing coding standards, communicating about dependencies, and sometimes refactoring my work to integrate better with others' contributions.

The most valuable takeaway from this project is that true learning happens through persistence and problem solving. Reading documentation, experimenting with different approaches, and gradually building understanding created lasting knowledge that I can apply to future projects.