Vance, William. "Project Reflection." *Cloud and Crypto Computing (App Development and Emerging Technology)*, 9 May 2025.

At the start of this project, I initially attempted to quickly complete the tasks, hoping to leave enough time for debugging. I immediately began working in Figma to prepare the designs, ensuring they were ready for development. After finishing the designs in Figma, I created some basic UML diagrams to guide the backend development. Once those were done, I moved on to the iOS platform to create a rough template for the design. I started with iOS because it's not my preferred platform, and I wanted to get it out of the way as soon as possible.

Following that, I focused on building a rough frontend template. Once I had a basic design, I set up the backend routes and tested them using Postman. After verifying that the backend routes were functioning properly, I connected the web frontend, or admin panel, to the backend routes. I resolved any bugs that arose and made sure everything worked smoothly. The next step was linking the iOS frontend to the backend server, which proved to be somewhat frustrating, as we had already gone through this process three times earlier in the year.

By the end of Day 1, Thursday, May 8, 2025, I felt that significant progress had been made, though I knew Day 2 would present a much bigger challenge: working with Solidity. On Day 2, I focused on refining the Solidity code that I had started the previous day. The main challenge was setting up HardHat and figuring out how to run everything through Visual Studio, a task we had never completed before. Once that was resolved, I connected the backend admin routes to the Solidity code. This proved to be extremely difficult, as I spent about two and a half hours trying to understand what was wrong. The solution was simpler than I expected—adding an "s" to "Admin" to properly connect the routes. Although I felt a bit silly for missing that, at least it wasn't a more complex issue.

After fixing that, I returned to the web frontend and created the necessary elements for the new routes, ensuring they were properly linked to the backend and Solidity. From that point on, it was mostly debugging and problem-solving. At one point, everything seemed to be working except for the admin functionality. I quickly realized that I had forgotten to pass in the admin's name when creating the account, which prevented me from logging into the system. Once I corrected that, the admin panel looked good and was dynamic with CSS. However, I noticed there was a large blank space in the middle of the page, so, in my usual fashion, I decided to fill it with a coconut image. I found a suitable PNG online and added it to the page—enjoy the coconut, Morgan!

After that, I continued checking and debugging the elements I had created. While GitHub Copilot wasn't very helpful on the frontend, I relied on ChatGPT for assistance. Copilot did help generate most of the initial routes, but many of the bugs that arose were related to minor issues like spelling errors or incorrect imports, which were inconvenient but not critical. For example, I

had to manually add ".ts" to seven different imports while the auto-navigation feature was active, which was a bit annoying. On Monday there was actually an issue where after I made it confirm if you were admin for everything, I may or may not have removed myself from the system, meaning I was no longer an admin in an admin panel that requires one admin. Yeah, that was fun.

Overall, I found the project to be enjoyable and a good test of what we've learned throughout the year. My main issue with the project was Solidity. I felt that I could have implemented the admin system using MySQL and SHA256 checks for user existence, which seemed like an easier solution. While I understand that Solidity adds an extra layer of security, especially when considering SQL injection vulnerabilities, it still felt somewhat unnecessary. One of the biggest lessons I learned this year is that clients can be very demanding, but working through challenges like these helps to build stronger solutions. Oh, right, one last thing: thanks, ChatGPT, for formatting this in what I assume is MLA; it's what I requested, so yeah.