

IS 601 Reflection Document

I came into this course with a component level of experience as a Computer Science major. I knew going in this was more of an introduction to developing web based applications. A lot of the material at the beginning of the course was a review for me with a lot of concepts. However, even at those stages, I had to adapt to making efficient code and have it work in all different testing scenarios. For previous projects, assignments, and work, I would simply program a project and write code that was inefficient with added fluff. The biggest lessons learned in this course was making sure that code can be efficient and making sure to not write meaningless code. The principles of Look Before you Leap and Easier to Ask for Forgiveness than Permission made me a better programmer.

As the course progressed, there was more that I learned and used for the first time such as using Github Workflows, Logging, and Docker. I knew of Docker prior to this course and I may have used it, but I did not understand it. The homeworks involving Docker got me to sit down and actually learn Docker, its functions and use it for a project. These skills will be a valuable asset in the real world. The adherence to coding stands and using CI/CD pipelines was also new to me. Creating automated workflows and deploying applications makes programming far easier for testing.

For this final project, using FastAPI and having to debug a project and make my own modifications was also a great way for me to learn. I gained more confidence in looking at massive projects and implementing new features. My largest addition was using the Minio bucket to upload profile pictures. This gave me practical experience using external storage services for a real web application. Handling the various test cases and finding flaws on a big application honed my skills to observe every small detail. As I will be graduating, these skills will be crucial in future software engineering roles. Overall, this final project allowed me to demonstrate the use of third party tools and a focus on making additions with security, scalability, and providing a good user experience. From this project and the course as a whole, I deeply got a greater understanding of being a developer and it allowed me to continue the non-stop journey of learning something new. For one of last classes as a student, I will be using these skills in the workforce.

Project Links and References

Repository and Deployment

- **GitHub Repository:** <https://github.com/mgallo185/is601-final>
- **Docker Hub:** <https://hub.docker.com/r/mgallo185/is601-final>
- **GitHub Workflows:** <https://github.com/mgallo185/is601-final/actions>

Feature Implementation

- **Profile Picture Upload with Minio:** [Issue #8](#)

QA Issues

- **First registered user is automatically set as an Admin:** [Issue #5](#)
- **Email verification logic added during user creation:** [Issue #6](#)
- **Password validation with strength requirements:** [Issue #9](#)
- **Unique constraints enforced on email and nickname:** [Issue #13](#)
- **Profile picture URL validation to ensure valid input:** [Issue #17](#)
- **Fixed issue where is_professional field was not updating:** [Issue #15](#)
- **Fixed Dockerfile and Workflows action file:** [Issue #3](#)

Testing

- **Minio Testing Issue:** [Issue #20](#)
- **General Test Fixtures:** [Issue #27](#)