Final Reflection

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CS 470 Project Two: AWS Cloud Development

Cloud Computing Reflection: Experiences, Strengths, and Growth Planning

This course helped me bridge the gap between writing code and understanding how real applications are deployed, scaled, and maintained in the cloud. Prior to this course, my experience focused mainly on building applications locally. Through this project, I learned how those same applications are prepared for real users by moving them into cloud-native, serverless environments using AWS.

Skills and Professional Readiness

Throughout this course, I developed several skills that directly support my professional goals as a software developer. I gained hands-on experience with containerization using Docker, which allowed me to package the application and its dependencies so it behaved consistently across environments. Docker Compose helped manage multiple parts of the system together, reinforcing how modern applications are built from cooperating components rather than a single monolithic system. I also learned how serverless architectures work in practice. Using Amazon S3 for frontend hosting and AWS Lambda with API Gateway for backend logic showed me how applications can run without managing servers directly. Instead of keeping systems running all the time, serverless functions operate more like motion-activated lights: they turn on when needed and shut off when they are not. This approach improves efficiency and reduces wasted resources. These experiences make me more marketable for entry-level software development roles, particularly those involving full stack development, cloud applications, or backend services. I am prepared to contribute as a mid level developer, API developer, or cloud-focused application developer.

Strengths as a Developer

One of my strengths as a software developer is my ability to understand systems as a whole. I can see how frontend interfaces, backend logic, databases, and cloud infrastructure fit together. I am also comfortable explaining technical concepts in a way that is accessible to nontechnical audiences, which is valuable when working on cross-functional teams. Security awareness is another strength. This project emphasized least-privilege access using AWS IAM, reinforcing the idea that security should be built into the design rather than added later.

Planning for Growth and Scalability

As this application grows, microservices and serverless components can be expanded to handle specific tasks independently. This is similar to adding specialized workers to a team rather than expecting one person to do everything. Each service can scale on its own, making the system more flexible and resilient. Scaling and error handling are largely managed by AWS services, which automatically adjust resources based on demand. Cost prediction relies on understanding usage patterns, since serverless pricing is based on execution time and request volume. While containers offer more predictable fixed costs, serverless solutions are often more cost-effective for applications with variable traffic.

Elasticity and pay-for-service models play a major role in future planning. These principles allow applications to grow without large upfront investments and prevent paying for unused resources. Overall, this course provided a strong foundation in cloud-native thinking and prepared me to design applications that are scalable, secure, and efficient.