

Armando Gomez

CS-470-15369-M01 Full Stack Development II

8-1 Assignment:

Final Reflection

Professor George Johnson

Presentation: [https://youtu.be/ KI4Pha87T0](https://youtu.be/KI4Pha87T0)

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Experiences and Strengths

This program has really helped me progress towards my career objectives by providing me with an understanding of cloud development and serverless computing as well as microservice architecture. The practical experience I gained from developing and transferring a complete web application stack onto the cloud has broadened my expertise in utilizing AWS tools such as Lambda functions and API Gateway, besides S3 storage services. These abilities are quite valuable in today's Tech. sector, where cloud computing plays a role in delivering scalable and cost-effective solutions efficiently.

During the program I participated in to improve my skills when it comes to containerization using Docker and organizing microservices while also automating deployment processes. I also became proficient in serverless architecture, which will be beneficial for me in positions that focus on improving native applications. My knowledge of creating cloud applications has deepened my understanding of essential infrastructure and security requirements. As someone who works with software development, I am skilled in combining cloud services to enhance performance and develop strong applications that meet current web development norms.

I am ready to take on roles as a cloud engineer and devOps engineer while also excelling as a stack developer specializing in cloud native technologies and building applications based on serverless and microservice architectures that meet business objectives effectively in cloud

settings, with an emphasis on scalability and cost effectiveness to address market demands efficiently.

Planning for Growth

The information I've collected on cloud services like AWS will play a role in the future development and expansion of my web application capabilities. Utilizing microservices and serverless architecture offers benefits by enabling effective resource management and automatic scalability. With the help of AWS Lambda and API Gateway integration, I can manage spikes in workload without the requirement for manual oversight. Serverless computing significantly decreases the burden associated with infrastructure management, enabling smooth scalability of the application.

When it comes to managing growth and addressing errors efficiently in my system setup, I'd set up monitoring and logging tools such as AWS CloudWatch to actively monitor and address issues as they arise in time. Lambda's built-in fault tolerance mechanisms and automatic error handling features help keep my application robust when dealing with surges in user traffic. Predictions for costs in serverless computing are simpler as expenses align directly with usage levels. This implies that payment is contingent on the utilization of resources during execution. This approach offers predictability compared to containers, where resources need to be provisioned regardless of actual usage. If the software grows significantly in size and scope, you may consider using containers to manage costs for regular tasks.

In preparing for expansion and scalability considerations are key components to think about in depth and critically analyze different perspectives and approaches that could be beneficial for our growth strategy in the long term. Serverless architecture is a solution that allows for flexible resource allocation based on actual demand levels at any given moment. This feature is crucial for applications that experience variable traffic patterns. Conversely, containers provide a level of resource management control, which can be advantageous in scenarios where consistent connections or prolonged operations are necessary. Each method has its advantages and disadvantages; however, the choice for growth will be influenced by factors such as cost effectiveness, scalability and the specific workload requirements of the application in the long run.