**CS 470 Final Reflection**

**Name:** Elijah Paulk  
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**Introduction**

Throughout CS 470, I embarked on a journey that not only deepened my understanding of full stack web development in the cloud but also enhanced my ability to apply complex concepts to real-world applications. This reflection encapsulates my learnings, strengths as a developer, and strategies for future growth in the realm of cloud services.

**Experiences and Strengths**

CS 470 has been pivotal in shaping my career aspirations and refining my skills as a software developer. The course equipped me with proficient knowledge in designing and deploying robust APIs, conducting rigorous testing procedures, and documenting comprehensive project lifecycles. These skills are invaluable in positioning me as a competitive candidate in the field of software engineering.

As a software developer, my strengths lie in my meticulous approach to problem-solving, keen attention to detail, and a proactive attitude towards learning emerging technologies. Through projects in this course, I've honed my ability to collaborate effectively within teams, manage project timelines, and deliver scalable solutions tailored to meet client needs.

I am prepared to assume roles such as Full Stack Developer, DevOps Engineer, or Cloud Solutions Architect, leveraging my proficiency in cloud-native development, containerization strategies, and proficiency in cloud service platforms like AWS.

**Planning for Growth**

Synthesizing knowledge gained in cloud services, I envision the future growth of my web application through scalable architectures such as microservices and serverless computing. Microservices offer modular efficiency, allowing for agile development and easier scalability by isolating components. Serverless architecture, on the other hand, promises cost-efficiency and simplified management through event-driven computing, ideal for sporadic workloads.

In planning for scalability, robust error handling mechanisms are critical to maintaining uptime and user experience. Implementing automated scaling policies and load balancing strategies ensures seamless performance under varying traffic conditions.

Cost prediction between containers and serverless solutions depends on workload patterns and operational demands. Containers provide more predictable costs for consistent workloads, while serverless models offer pay-as-you-go flexibility but may require careful monitoring to optimize cost efficiency.

Prospective expansion plans must weigh factors like deployment complexity, operational overhead, and vendor lock-in risks. While containers offer greater control and portability, serverless solutions reduce administrative burdens and operational costs but may limit customization options.

Elasticity and pay-for-service models play pivotal roles in decision-making for planned growth. Elasticity ensures resources scale dynamically with demand, optimizing performance and cost-efficiency. Pay-for-service models align costs directly with usage, promoting financial transparency and scalability without upfront infrastructure investments.

**Conclusion**

CS 470 has not only equipped me with technical prowess but also instilled a strategic mindset towards leveraging cloud technologies for sustainable business growth. This reflection serves as a testament to my growth as a developer and my commitment to continuous learning and innovation in the evolving landscape of cloud computing.