

**Southern New Hampshire University**

*CS-470 Full Stack Development II*

*8-1 Assignment: Final Reflection*

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<https://youtu.be/TxIrbmSLVDk>

**Experiences and Strengths:**

This course has been an eye opening introduction to coding and technology, helping me build foundational skills and reach some initial learning goals. One of the most exciting topics for me was containerization and its use with Docker and Docker Compose. I came in with no prior knowledge of containers, so starting from the ground up to create my own and get it running was incredibly valuable. I also appreciated the course's coverage of cloud tools like AWS. Although I was new to these tools, the assignments made it easier to understand how they work together in real world scenarios. One of my strengths is my enthusiasm to learn. I'm eager to continue building on what I've learned here and gain more experience as I work toward becoming a Full Stack Developer.

**Planning for Growth:**

Utilizing microservices and a cloud based architecture can streamline application management and enhance efficiency. Serverless tools handle infrastructure needs, which removes the responsibility of maintenance and allows developers to concentrate on the code itself. Furthermore, applications can automatically scale up or down in response to demand, which provides flexibility without requiring manual adjustments. To estimate costs for serverless options, analyzing historical usage data is typically effective for predicting future expenses. On the other hand, containers tend to offer more predictable costs since they need to stay active continuously to handle incoming requests, making expense forecasting simpler.

***Explain several pros and cons that would be deciding factors in plans for expansion:***

One advantage of serverless microservices is their scalability and the pay-as-you-go model, where you're charged only for what you use. However, a drawback is that for more complex applications, serverless architecture may not fully meet the application's requirements.

***What roles do elasticity and pay-for-service play in decision making for planned future growth?***

The elasticity and cost-efficiency of serverless tools make them an attractive option, especially for supporting future growth plans. These benefits can be crucial considerations when planning for scalability and expansion, which is especially useful for managing fluctuating traffic or seasonal peaks without over-provisioning. The pay-for-service model means that costs align directly with usage, allowing organizations to pay only for the resources they need rather than maintaining costly, unused capacity. Together, these features make serverless and cloud solutions appealing for businesses anticipating growth, as they can scale efficiently and budget more predictably.