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CS 470 Final Reflection

This course has helped me gain a strong and more tactile understanding of full stack and cloud development. I was able to develop a full project and gain a strong grasp of how the different elements function together. As a software developer, I have been able to gain the strength to learn and apply new concepts. I have also been able to understand containerization and how to best apply those principles. I have been unable to create a system store entirely in cloud storage that is able to interact with itself. With these tools and foundations, I will be able to perform the necessary cloud development that would allow our systems to run.

When you are wanting to understand how to efficiently utilize your cloud services, it is important to think about a few things. When you are wanting to have a better way to handle scaling, a serverless option will provide you with the tools and ease to handle that issue without the need to reform your entire project. Serverless architecture will also help decrease your cost because it will only run when necessary whereas containers will need to be run constantly, whether they are being used or not. Containers do provide a more predictable cost however for this very same reason. You will pay a consistent price with containers because the system is constantly running whereas with a serverless architecture you may end up paying more if the product is being used more or less if not as many people are using it.

As you look towards plans for expansion, it is important to look at many factors as well. Cloud computing can provide incredible benefits, but it does pose a few cons as well. Cloud computing is a great resource to use to help decrease your infrastructure costs as the cost of

maintenance of your servers is now pushed to your cloud software. This also helps reduce the need for employees to focus on server maintenance freeing them up for testing and development. Cloud computing also provides a strong level of security and protection from unplanned downtime. Scalability and automation are also able to be increased with cloud computing while still being able to save on space. Cloud computing still has its downsides however as you have limited control over your product while it is in the cloud control. It can also be difficult or even impossible to move your server on premises or to another cloud provider as the platforms may be different. It also allows for slower backups or restores because it is so heavily reliant upon the internet. This can also lead to inaccessibility if your internet goes down or slower internet function while and backups or updates are being performed.

As you plan for future growth, it is important to get a good understanding of how your service will grow. If you have a service that plans on growing steadily, traditional scalability may be all you need. However, if you know that you may experience heavier traffic times than usual with an then later reduction, it is import to have some cloud elasticity as you will need to be able to move effortlessly between lower and heavy volume.