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Video Link: https://youtu.be/rlyZnScQ34A

During my time in this course, I have gained experience in how to take a given application and use technologies such as docker and MongoDB to create a working web application. I then learned how to take the application and migrate it to the cloud by using docker-compose and AWS. The skills that I gained from these activities that are relevant to my career field include cloud development, migrating applications to the cloud, how to create a full-stack application that utilizes MEAN along with tools such as docker, and postman to develop test and deploy my application to the cloud. One vital lesson that I was excited to learn was how to deploy a web application online, and I learned how everything can go wrong and how to trace down the issue to get the application up and running.
The strengths that I have as a developer are troubleshooting, and an eagerness to learn. In addition, I have learned the importance of staying persistent and taking the initiative to seek out and embrace continuous learning to help me solve, learn, and use my strengths in order the help make me a better developer. I also found the importance of soft skills as documentation and communicating with other developers is vital in this career field. As a developer, I am ready to take on various positions that will help me become a better developer and help others along the way. These include a QA tester, backend developer, front-end developer, API developer, or ideally a full stack developer.

Cloud computing is becoming more vital to businesses in both the products and tasks that

are undertaken in daily operations. Planning to grow as a developer you will need to gather and understand how cloud services work. In this course I was introduced to AWS services and learned very quick how this provided applications or products to add microservices to customers and understanding how these microservices are developed. Cloud services also let product become more efficient and scalable, in the application we utilized S3 and API gateway that provide way for application to take user request and allocate resource to meet the demand for all the users. Similarly the DynamoDB which is the database that was used once we moved the application to the cloud, also offers a way for memory to be stored and retrieved based on how much data needs to be stored. How application become more efficient is by the scaling of the microservice or application plus the fact that users will not need to worry about maintenance of the servers which also can help in cost.

There are many ways that we can handle errors with AWS they offer ways to prevent errors such as load balancing along with error logging. The cost is calculated based on user request and the utilization of resources. These automatically scale down and up based on how the usage for both. You can then calculate a estimate of what you would expect but also use data analysis, budgets the set how much you would like to be spend on. In my personal opinion I would say that traditional containers are more expensive are more predictable as you can calculate the cost based on resource allocation. The trade off here is that if the users are not very active or trends don't follow what was expected, would led to more expenses as not all the resources are utilized.

The pros and cons when deciding the factors when planning for expansion is that you can have more independent, auto scaling microservices, along with no infrastructure management, no maintenance. But the cons could be seen as an increase in complexity for a product, the dependency of a vender, and less control in you infrastructure as a whole.

Finally in the planning process you can think of Elasticity as a weight scale, as one side can represent the users request and resources used and on the other is the cost. Once the user request has been completed or the that resources are used less, the cost would go down. For pay-for-service is a billing system that bills you for what service you actually use and can change the billing when either more services are added or if the services are not used, this plus the Elasticity can play an important role when planning for the future growth of an application. By comparing current trends and data you can see how much growth will take place within the product and if the growth rate is larger then expected and not based on just prediction but actual results from the analyzed data, would be an indication that its time to use cloud services.