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CS 470 Final Reflection

# 1. Experiences and Strengths: Explain how this course will help you in reaching your professional goals.

## 1.1. What skills have you learned, developed, or mastered in this course to help you become a more marketable candidate in your career field?

## In this course, I have learned the basic cloud computing skills by practicing with Docker containers and services like Amazon AWS Lambda, DynamoDB, S3, and Gateway.

## 1.2. Describe your strengths as a software developer.

## Now I’m prepared to make applications using the cloud. This way I can modernize traditional ones a create new ones using cloud infrastructure.

## 1.3. Identify the types of roles you are prepared to assume in a new job.

I can assume both an architect role, so I can design applications to use cloud services, and a developer role.

# 2. Planning for Growth: Synthesize the knowledge you have gathered about cloud services.

## 2.1. Identify various ways that microservices or serverless may be used to produce efficiencies of management and scale in your web application in the future.

Microservices allows companies to make application independent of the physical infrastructure and the operating system, so they can reduce cost and focus on the application logic and development.

2.1.1. How would you handle scale and error handling?  
  
Microservices scale in a virtually unlimited way as they are not tied to a physical server. Cloud services also provide logging services like Amazon Cloudwatch that are easy to integrate.

### 2.1.2. How would you predict the cost? An approach is making a list of all possible microservices calls that the app can make and estimating the cost of each one. Once the app is running on production, real data can be used to obtain a more accurate one.

2.1.3. What is more cost predictable, containers or serverless?  
  
Serverless has a more fine-grained payment model, as they are priced by service call instead of containers, which are more predictable, but this depends on the specific case.

## 2.2. Explain several pros and cons that would be deciding factors in plans for expansion.

## In the previous questions, I have mentioned some pros, like the virtually unlimited scalability and the focus on the application instead of the physical infrastructure.

## Some of the cons and: the cost can be higher than expected if there is an unexpected rise in the application usage and most clouds are not standardized which makes it hard to migrate a different provider and generates a dependency.

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

It’s important to make realistic estimates of the costs as there can be high if the application is not optimized for microservices or there is not a clear estimate of its usage. Depending on the scenario more traditional services like virtualized servers or containers can be preferable to microservices.