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Module 6 Assignment

CSD380-DevOps

Architecture in Software

When building a new program, it is important to understand what the different architecture types that are can be used. There are several different architecture types for building a program, such as monolith, microservice, trunk-based, and others. Usually when a company is just starting out, they start with a monolith program. This is because the code is small and easy to read and understand. However, after it grows it needs to create more code to add to the program. Eventually, the program gets too big and muddled that the program needs to be re-evaluated.

In the case study, Evolutionary Architecture of Amazon (2002), it discusses how Amazon was able to transform their monolithic program that they began with to a more reliable microservice program. Amazon started out by using a monolithic design for its program. The program ran fully on a web server and the web server got and sent information to a database. This web server held all the information used for Amazon. Eventually, all the coding became too much, and the program could not hold any more information. In 2001-2005, Amazon switched from the two-tier monolith it used to a microservice program. Since Amazon was one of the first companies to switch from a monolith program to a microservice program the developers had to create a lot of new code. They also had to figure out how to switch from a monolith program to a microservice program.

Amazon learned many lessons during this process. The first was that it was important to create a higher level of ownership and control. They were able to do this by updating their code more often instead of waiting several years. The second lesson was that it is important to ensure that program users cannot access their back-end project. The third lesson is to have different teams for the several types of services offered.

By following these lessons to create a better, more clearly understood program Amazon was able to create a program that was quicker and easier to use. They also update the code much more regularly than what had been done in the past.

Source:

The DevOps Handbook
How to Create World-Class Agility, Reliability, & Security in Technology Organizations
by Gene Kim; Jez Humble; Patrick Debois; John Willis; Nicole Forsgren
The DevOps Handbook