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Module 1.3 Assignment

The History of DevOps

The Lean movement started in the mid-1900s with the Toyota Production System. This system was based on the pillars of Just in Time, Jidoka (automation with a human touch), and Kaizen (continuous improvement). The Americans saw how successful Toyota was and started researching its procedures. The book *Lean Thinking* by James P. Womack and Daniel T. Jones was written as a result of this research. They defined Lean as "a way of production that allows added value while generating less waste." The five lean principles are value, value stream, flow, pull, and perfection. These principles were initially used for physical goods production but were adopted by those in the software field as well. The book *Lean Software Development* lists the seven principles of Lean Software Development. These principles are eliminate waste, build quality in, create knowledge, defer commitment, deliver fast, respect people, and optimize the whole.

The Agile Manifesto, published in 2001 by seventeen software developers, introduced four core values and twelve principles that promoted flexibility, adaptability, and customer collaboration. The four core values are individuals and interactions over processes and tools, working software over comprehensive documentation, customer collaboration over contract negotiation, and responding to change over following a plan. The Agile Software Development movement laid the groundwork for DevOps by highlighting the need for better collaboration between development and operations teams.

The Continuous Delivery movement emerged as an extension of Agile practices. It focuses on automating the software delivery process, ensuring that code can be reliably released anytime. Continuous Delivery involves automated testing, continuous integration, and frequent, incremental releases to improve software quality and reduce time to market.

DevOps combines the two words development and operations and was created by Patrick Debois for the first DevOpsDays conference in Belgium in 2009. It bridges the gap between development and operations teams. It aims to foster collaboration and efficiency. It incorporates Lean, Agile, and Continuous Delivery practices to improve productivity and streamline the software development process.

Sources:
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