**DEVOPS AND AGILE OVERVIEW**

**What is DevOps?**

DevOps is a combination of the terms 'Development' and 'Operations'. It is a culture and a set of practices that bring together software development and IT operations. The main goal of DevOps is to shorten the system development life cycle while delivering features, fixes, and updates frequently in close alignment with business objectives.In simple terms, DevOps helps teams work together—developers write the code, and operations teams deploy and maintain it efficiently. This approach increases collaboration, automation, and continuous delivery of software.

**Advantages of DevOps**

***1. Faster Delivery:***

DevOps enables continuous integration and continuous delivery (CI/CD), helping teams release software faster and more frequently.

***2. Improved Collaboration:***

Developers and operations teams work together closely, reducing misunderstandings and delays.

***3. Higher Efficiency:***

Automation of repetitive tasks, like testing and deployment, saves time and effort.

***4. Better Quality:***

Continuous testing ensures that errors are detected early, leading to more stable and reliable releases.

***5. Enhanced Customer Satisfaction:***

Faster updates and fewer bugs result in happier users.

***6. Scalability and Security:***

Infrastructure as Code (IaC) and automated monitoring improve system scalability and security.

**What is Agile?**

Agile is a project management and software development methodology that emphasizes flexibility, collaboration, and customer satisfaction. Instead of building the entire product at once, Agile teams work in small iterations called 'sprints'. Each sprint delivers a working part of the product.Agile focuses on adaptability to change. If customer requirements evolve, teams can easily adjust their plans. It values individuals and interactions over strict processes, and working software over lengthy documentation.Popular Agile frameworks include Scrum, Kanban, and Extreme Programming (XP). These approaches help teams deliver value continuously and respond quickly to feedback.