

## ## Title:

E-Commerce Website Development with 8 Microservices and Three-Tier Architecture on Azure AKS

## Abstract:

In an increasingly digital world, creating scalable and reliable e-commerce platforms is crucial. This project focuses on developing an e-commerce website using eight microservices, each responsible for specific functionalities such as user management, product catalog, shopping cart, order processing, payment gateway, inventory management, notification service, and review system. The application will be deployed using a three-tier architecture on Azure Kubernetes Service (AKS).

The microservices architecture ensures that each component of the application can be independently developed, deployed, and scaled, enhancing flexibility and fault tolerance. The three-tier architecture—comprising the presentation tier, application tier, and data tier—facilitates organized and efficient data flow and resource management.

Deploying the application on Azure AKS enables automated scaling, load balancing, and self-healing, ensuring high availability and efficient resource utilization. Azure Monitor and Application Insights will provide real-time monitoring and troubleshooting capabilities.

Expected outcomes include a robust e-commerce platform that can handle high traffic loads, provide seamless user experiences, and demonstrate the practical implementation of modern software development and cloud deployment techniques.