Certificate Program In Software Design - Logistics

Duration – 80 Hours

Program Description

This program focuses on applying core software design principles and methodologies to build robust, maintainable, and efficient applications for the logistics domain. Participants will learn how to design software solutions that address logistics-specific challenges such as fleet management, supply chain optimization, warehouse operations, and last-mile delivery.

Learning Goals

- Understand software design principles (SOLID, DRY, KISS) and their application in logistics solutions
- Gain proficiency in object-oriented and domain-driven design (DDD)
- Apply design patterns for logistics-related use cases
- Model logistics processes into effective software components
- Learn UML and other modeling techniques for system design
- Bridge business requirements with technical design artifacts
- Design software that is extensible, maintainable, and aligned with logistics workflows

Course Topics

- Introduction to Software Design & Principles
- Object-Oriented Design & Domain-Driven Design (DDD) for Logistics
- UML & Modeling Logistics Systems
- Design Patterns in Logistics Applications (e.g., Factory, Observer, Strategy, Adapter)
- Service-Oriented and API-Centric Design for Logistics
- Designing for Scalability, Flexibility, and Maintainability
- Case Studies: Designing Solutions for Warehouse Management, Transportation & Last-Mile Delivery
- Capstone Project: Software Design Blueprint for a Logistics Use Case