



DIGILEAF INC.

Leading Excellence Among Fellows

Methods in Solutions Analysis and Design

This course discusses various methods in systems analysis and design covering both structured and object-oriented. It covers how Object Oriented Analysis and Design uses the Unified Modeling Language. The course includes the application of design patterns and how it can be used to optimize system design.

Training Objectives

At the end of the course, the participants will be able to:

1. Differentiate Structured vs. Object-Oriented analysis and design.
2. Apply object-oriented analysis and design principles to software development.
3. Use various UML diagrams and tools to perform Object-Oriented Analysis and Design.
4. Describe Object-Oriented Design Principles in Software Design

Duration 2 day(s)

Topics

- I. Structured Systems Analysis and Design
 - a) Data Flow Diagram
 - b) Entity Relationship Diagram
- II. Strengths of Object-Orientation in Systems Analysis
 - a) How Object-Orientation Affects the Frame of Mind
 - b) Comparison of Structured Analysis vs. OO Analysis (Diagram Perspective)
- III. Introduction to Object Oriented Analysis and Design
 - a) Overview of the ICONIX Process
 - b) Introduction to UML 2.0
 - c) UML Diagrams Used with ICONIX
- IV. Requirements Analysis
 - a) Domain Modeling
 - b) Use Case Modeling
- V. Analysis and Preliminary Design
 - a) Robustness Analysis
 - b) Use Case (Analysis vs. Design "Ready")
 - c) Preliminary Design Review
- VI. Detailed Design
 - a) Creating Sequence Diagrams
 - b) Using Collaboration and State Diagrams
 - c) Updating the Static Model
 - d) Critical Design Review
- VII. Implementation
 - a) Creating Deployment Diagrams
 - b) Creating Component Diagrams
- VIII. Object-Oriented Design Principles
 - a) Characteristics of a Bad Design
 - b) OOD Principles: SOLID
 - c) Introduction to Design Patterns