Design Patterns

Duration – 4 days

Technical Requirements/ Scope of work/services required <u>The following</u>

<u>are the brief course coverage of this program:</u>

Introduction to Design Patterns, Implementation Patterns

- Open Close Principle (OCP)
- Single Responsibility Principle (SRP)
- Law of Demeter
- Dependency Inversion Principle (DIP)
- Liskov Substitution Principle (LSP)
- Interface Segregation Principle (ISP)
- Triangulate

Basics of Design Patterns, Reliability, Construction and Structural Pattern

- Composed Method Pattern
- Fluent Interface Pattern
- Template Method Pattern
  - Programming Exercise
- Creation Method Pattern
  - Programming Exercise
- Factory Method Pattern
- Abstract Factory Pattern
- Strategy Pattern
  - Programming Exercise
- Prototype Pattern
- Singleton Pattern
- Composite Pattern

▪ Programming Exercise

- Chain of Responsibility Pattern
  - Programming Exercise

Creational Design Patterns

Structural Design Patterns

Behavioral Design Patterns

- Null Object Pattern

    - Programming Exercise
- Guard Clause Pattern
- Builder Pattern
- Interpreter Pattern
    - Programming Exercise
- Flyweight Pattern
- Bridge Pattern
- Adapter Pattern
- Decorator Pattern
- Proxy Pattern
    - Programming Exercise
- Memoization
    - Programming Exercise
- Facade Pattern
- State Pattern
    - Programming Exercise
- Command Pattern
- Memento Pattern
- Observer Pattern
    - Programming Exercise
- Mediator Pattern
- Parameter Object Pattern
- Collecting Parameter Pattern
    - Programming Exercise
- Iterator Pattern
- Programming Exercise
- Dispatch Table Pattern
    - Programming Exercise
- Self-Shunting Pattern
    - Programming Exercise
- Pluggable Selector Pattern
- The Composite Design Pattern, The Flyweight Design Pattern, The Interpreter/Visitor Design
- The Chain of Responsibility Design Pattern and other advanced topics

Best Practices and Implementation Guidelines

Real-world Examples and Case Studies Hands-

on Implementation and Exercises Advanced

Topics and Emerging Trends Course

Conclusion and Q&A