

# 11 Lecture - CS504

## Important Mcqs

**Which of the following is NOT a software design principle?** a) Encapsulation b) Abstraction c) Polymorphism d) Inheritance **Solution: c) Polymorphism**

**Which design pattern is used to decouple objects and promote loose coupling?** a) Observer b) Singleton c) Factory d) Prototype **Solution: a) Observer**

**Which software design principle states that software entities should have only one reason to change?** a) Single Responsibility Principle (SRP) b) Open-Closed Principle (OCP) c) Liskov Substitution Principle (LSP) d) Interface Segregation Principle (ISP) **Solution: a) Single Responsibility Principle (SRP)**

**Which design pattern is used to create objects without specifying their exact class?** a) Adapter b) Prototype c) Builder d) Abstract Factory **Solution: b) Prototype**

**Which design principle promotes the idea of coding to an interface rather than an implementation?** a) Dependency Inversion Principle (DIP) b) Interface Segregation Principle (ISP) c) Liskov Substitution Principle (LSP) d) Open-Closed Principle (OCP) **Solution: b) Interface Segregation Principle (ISP)**

**Which design pattern is used to provide a simple interface to a complex subsystem?** a) Facade b) Decorator c) Proxy d) Composite **Solution: a) Facade**

**Which design principle suggests that classes should be open for extension but closed for modification?** a) Interface Segregation Principle (ISP) b) Liskov Substitution Principle (LSP) c) Single Responsibility Principle (SRP) d) Open-Closed Principle (OCP) **Solution: d) Open-Closed Principle (OCP)**

**Which design pattern is used to encapsulate the creation of an object into a single function call?** a) Singleton b) Abstract Factory c) Builder d) Factory Method **Solution: d) Factory Method**

**Which software design principle suggests that high-level modules should not depend on low-level modules but both should depend on abstractions?** a) Dependency Inversion Principle (DIP) b) Liskov Substitution Principle (LSP) c) Interface Segregation Principle (ISP) d) Single Responsibility Principle (SRP) **Solution: a) Dependency Inversion Principle (DIP)**

**Which design pattern is used to encapsulate a request as an object, thereby allowing users to parameterize clients with queues, requests, and operations?** a) Iterator b) Command c) Strategy d) Memento **Solution: b) Command**