

TOP 10



DESIGN PATTERNS

INTERVIEW

QUESTIONS &

ANSWERS



Q1.

WHAT ARE **SOLID** PRINCIPLES?



- A set of guidelines that helps developers to make a good software system design.
- SOLID is a combination of five fundamental designing principles:

Single Responsibility Principle (SRP)

Open/Closed Principle (OCP)

Liskov Substitution Principle (LSP)

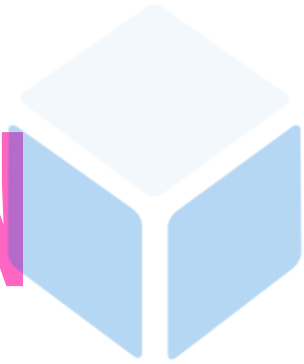
Interface Segregation Principle (ISP)

Dependency Inversion Principle (DIP)



Q2.

WHAT IS SINGLETON PATTERN?



Ensures that a class has only one instance and provides a global point of access to it.

EXAMPLES

Need a single instance of an object throughout the application

- Exception Logging
- Database Manager
- Business Layer Manager



Q3.

WHAT IS **FACTORY** PATTERN?



Allow us to create object without exposing the creation logic.

EXAMPLES

- Need to create different logger types like Console Logger, Database Logger and File Logger etc.
- Need to create different report types like PDF and Word etc.





Q4.

WHAT IS **BUILDER** PATTERN?



Used to build a complex object by using a step by step approach. Builder interface defines the steps to build the final object.

EXAMPLES

Construct Report/Email Builder Class

- Set Header
- Set Body
- Set Footer



Q5.

WHAT IS ADAPTER PATTERN?



Acts as a bridge between two incompatible interfaces.

EXAMPLES

- Need to convert third party objects to application types
- Ado.Net SqlDataAdapter, OracleAdapter, MySqlAdapter



Q6.

WHAT IS **FACADE** PATTERN?



Hides the complexities of the system and a higher-level interface that makes the subsystem easier to use.

EXAMPLES

- User Registration Process
- Process An Order
- Creating User Follower Workflow



Q7.

WHAT IS BRIDGE PATTERN?



Separate abstraction from its implementation so that both can be modified independently. Involves an interface that acts as a bridge between the abstraction & implementation.

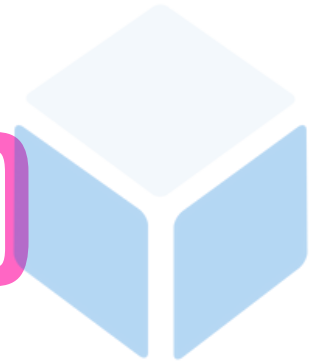
EXAMPLES

- In Payment using Credit Card & Debit Card but in future add more like UPI.
- In Messaging using SMS and Email but in future add more like WhatsApp.



Q8.

WHAT IS **COMMAND** PATTERN?



A request is wrapped under an object as a command and passed to the invoker object. Further invoker object passes the command to the appropriate object to handle it.

EXAMPLES

- Menu systems in Editor, IDE like apps.
- Auditing & logging of all changes via commands.



Q9.

WHAT IS STATE PATTERN?



Allows an object to alter its behavior when its internal state changes.

EXAMPLES

- Task States: ToDo, Doing, Done
- Validation States: Invalid, Valid
- A Machine (Printer) States: Ready, Printing, Done



Q10.

WHAT IS OBSERVER PATTERN?



Allows a single object to publish its state changes to other observer objects that depend upon it.

EXAMPLES

- Send notification about state change to Followers and Subscribers.



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