

# Design Patterns Interview Questions And Answers Guide.



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## Design Patterns Job Interview Preparation Guide.

### Question # 1

How to test the quality of design?

#### Answer:-

Manufacturing in the quality of the design. design pattern

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### Question # 2

Explain What are 5 common problems in the software development process?

#### Answer:-

Problems

â€¢Poor requirements - if the requirements are not clear, unfinished, too common, and not testable, then there will be problems.

â€¢Unrealistic schedule - if too much work is given in too little time, problems are inevitable.

â€¢Inadequate testing - no one will know whether or not the program is any good until the customer complain or systems collide.

â€¢Futurities - requests to pile on new features after development is underway; extremely common.

â€¢Miscommunication - if developers do not know what's needed or customer's have wrong expectations, problems are assured.

Solutions

â€¢Solid requirements - clear, complete, detailed, cohesive, attainable, testable requirements that are agreed to by all players. Use prototypes to help nail down requirements.

In 'agile'-type environments, continuous close coordination with customers/end-users is necessary.

â€¢Realistic schedules - allow adequate time for planning, design, testing, bug fixing, re-testing, changes, and documentation; personnel should be able to complete the project without burning out.

â€¢Adequate testing - start testing early on, re-test after fixes or changes, plan for adequate time for testing and bug-fixing. 'Early' testing ideally includes unit testing by developers and built-in testing and diagnostic capabilities.

â€¢Stick to initial requirements as much as possible - be prepared to defend against excessive changes and additions once development has begun, and be prepared to explain consequences. If changes are necessary, they should be adequately reflected in related schedule changes. If possible, work closely with customers/end-users to manage expectations. This will provide them a higher comfort level with their requirements decisions and minimize excessive changes later on.

â€¢Communication - require walkthroughs and inspections when appropriate; make extensive use of group communication tools - groupware, bug-tracking tools and change management tools, intranet capabilities, etc.; insure that information/documentation is available and up-to-date - preferably electronic, not paper; promote teamwork and cooperation; use prototypes and/or continuous communication with end-users if possible to clarify expectations.

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### Question # 3

What is the publish/subscribe model?

#### Answer:-

The publish/subscribe model is an approach to distributed system communication in which publishers publish information to a subject address and subscribers subscribe to information at a subject address. The publish/subscribe model has the benefit of making publishers independent of location. This enables subscribers to subscribe to information without having to know the location of a publisher.

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### Question # 4

Explain What is good design?

#### Answer:-

These few characteristics are signal of good design and code:

- 1.Extensibility without drastic modification.
- 2.Good code is easy to read and maintain, and well documented.
- 3.Expose clear interfaces to avoid bad coding and increase reusability.
- 4.Easy to test.
- 5.Easy to debug.
- 6.No duplication (no redundancy).
- 7.Good code gets re-used.

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### Question # 5

What are the advantages of asynchronous architectures?

#### Answer:-

Asynchronous architectures decouple senders and receivers. This brings about performance advantages for both the sender and the receiver. The sender is able to even out his communication traffic over the course of a day. This is helpful in cases where sender and receiver communicate over low-bandwidth lengths. The receiver can even out its processing load by processing the sender's message as time permits.

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### Question # 6

what is the difference between the Adapter Pattern and Proxy Patterns? its seems both are almost similar?

#### Answer:-

Comparing Adapter Pattern with other Patterns:

1. Adapter converts one interface to another, Decorator doesn't alter interface but adds responsibility. Facade makes an interface simpler. Decorator is thus more transparent to the application than an adapter is. As a consequence, Decorator supports recursive composition, which isn't possible with pure Adapters.
2. Adapters allows client to make use of libraries and subsets without changing any code. Decorators allow new behaviour to be added to the classes with out altering the existing code.
3. Adapter make things work after they're designed, Bridge makes them work before they are.
4. Bridge is designed up-front to let the abstraction and the implementation vary independently. Adapter is retrofitted to make unrelated classes work together.
5. Adapter provides a different interface to its subject. Proxy provides the same interface. Decorator provides an enhanced interface.
6. Facade defines a new interface, whereas Adapter reuses an old interface. Remember that Adapter makes two existing interfaces work together as opposed to defining an entirely new one.

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### Question # 7

What is Architecture and what is design? Are they related?

#### Answer:-

Architecture: Defines multi-layer design to implement a complex business solution and shows how each layer interact with each other efficiently. Depicts the different layers involved in the application. Addresses gray areas such as performance issues, high availability of the critical applications.  
Design Models: Talks more about the individual components that build the complex application. It shows the relationship between these objects and how they are logically separated.

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### Question # 8

What is software quality?

#### Answer:-

Whether all functionalities are working as per expected?



Whether customer is delighted with the solution?  
Whether actual functionalities can be scalable and extensibility is there?

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### Question # 9

What is difference between GoF and J2EE patterns?

#### Answer:-

GoF DESIGN PATTERN

=====

The Gang of Four were the first publishing a book about design patterns. The patterns are rather basic in nature and can be applied to almost any object oriented system.

J2EE DESIGN PATTERN

=====

J2EE patterns are much more specialized, obviously. Many are in fact specialized versions of GoF patterns, applied to problems specific to J2EE development.

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### Question # 10

What is design pattern?

#### Answer:-

A design pattern is a general reusable solution to a commonly occurring problem in software design. A design pattern is not a finished design that can be transformed directly into code. It is a description or template for how to solve a problem that can be used in many different situations. Object-oriented design patterns typically show relationships and interactions between classes or objects, without specifying the final application classes or objects that are involved.

Design patterns reside in the domain of modules and interconnections. At a higher level there are Architectural patterns that are larger in scope, usually describing an overall pattern followed by an entire system.

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### Question # 11

What is difference between Function Oriented Design and Object Oriented design?

#### Answer:-

Function oriented design is dividing a bigger problem set to small functional units and then structure/organize/sequence these functional units to design the solution.

OOD is identifying objects (entities) involved in the system and designing solution based on their relationships and interactions.

FOD approach is mainly used for computation sensitive application, whereas OOD approach is mainly used for evolving system which mimicks a business process or business case.

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### Question # 12

Maps ip address with domain name?

#### Answer:-

No Answer is Posted For this Question

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### Question # 13

Did you use OOA/OOD methodologies? Did you use design patterns?

#### Answer:-

No

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### Question # 14

Explain three types of components comprise an application design?



### **Answer:-**

An application design is comprised of legacy components, vendor products, and developmental software.

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### **Question # 15**

Suppose we have file(ps), dont know how many records are there. move half of the records to 2 files. how can we do?

### **Answer:-**

Question confirmation: Move half-half records to 2 diff. files.

Precondition: You must be knowing how to read record.

Solution:

1. Read file from top.
2. Move each record in alternative file.

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### **Question # 16**

What WYSIWYG web design tools are available?

### **Answer:-**

WYSIWYG stands for What You See Is What You Get. The WYSIWYG web design tools available are Microsoft Silverlight, Microsoft Expression Blend, Adobe Dreamweaver etc.

In such editors you edit not directly the source code of your documents, but its presentation as it will appear in the final document.

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### **Question # 17**

What are the Design Patterns you know explain?

### **Answer:-**

Basic(  
interface,  
Abstract parent class,  
Private methods,  
accessor methods,  
constant data manager,  
immutable object,  
monitor  
)

Creation(  
Factory method,  
Singleton,  
Abstract Factory,  
Prototype,  
Builder  
)

Collectional(  
Composite,  
Iterator,  
Flyweight,  
Visitor  
)

Structural(  
decorator,  
adapter,  
chain of responsibility,  
facade,  
proxy,  
bridge,  
virtual proxy,  
counting proxy,  
aggregate Enforcer,  
Explicit Object release  
Object cache  
)

behavioral(  
Command,  
Mediator,  
Memento,  
Observer,  
Interpreter,  
State,  
strategy,  
Null Object,  
Template Method,  
Object Authenticator,



Common attribute registry  
)  
concurrency(  
critical section,  
consistent lock order,  
guarded suspension,  
read-write lock  
)

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### **Question # 18**

Identify three types of systems or system upgrades that may be ideal candidates for a Waterfall Development Model strategy?

**Answer:-**

- 1.rainfall
- 2.ground waterfall
- 3.drought

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- 2 : [Technical Writer Frequently Asked Interview Questions and Answers Guide.](#)
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- 4 : [Software Design Tools Frequently Asked Interview Questions and Answers Guide.](#)

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