

✔ Congratulations! You passed!

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1. Which of the following best describes software architecture?

1 / 1 point

- ☐ It captures implementation details.
- ☐ The choice of technology stack drives the software architecture.
- ☒ It represents the earliest design decisions.
- ☐ It describes how the application should be coded.

✔ **Correct**

Correct! Software architecture choices represent the earliest design decisions in development.

2. Which of the following are artifacts that result from designing the software architecture?

1 / 1 point

- ☐ Software requirements specification (SRS)
- ☐ Administrator user guide
- ☐ Test cases
- ☒ UML diagrams

✔ **Correct**

Correct! UML diagrams are often produced when designing software architecture.

3. Components in a well-structured design should be _____.

1 / 1 point

- ☒ tightly cohesive
- ☐ loosely cohesive
- ☐ tightly coupled
- ☐ loosely constrained

✓ **Correct**

Correct! Components in a well-structured design should be tightly cohesive and loosely coupled.

4. Which of the following is an advantage of using UML diagrams when designing software architecture?

1 / 1 point

- ☐ They describe which parameters should be passed when instantiating an object.
- ☐ They all use JavaScript.
- ☒ They serve to bring new team members up to speed quickly.
- ☐ They explain which methods should be included when coding an object.

✓ **Correct**

Correct! UML diagrams offer a visual way to explain the design of software which helps to bring new team members up to speed quickly on a project.

5. Which of the following best describes encapsulation?

1 / 1 point

- ☐ Designing a component so it operates in different environments.
- ☐ A component should be easily replaced with another component.
- ☒ Bundling data and methods to hide an internal state, so a component's specific implementation is not exposed.
- ☐ A component's design so it doesn't have dependencies on other components.

✓ **Correct**

Correct! This is a description of encapsulation.

6. Which of the following best describes a service?

1 / 1 point

- ☐ It is a type of object.
- ☐ A focus on the decomposition of a design into logical components.
- ☒ A unit of functionality that focuses on a solution to a business need, is deployed independently, and is reused by multiple systems.
- ☐ A service defines, composes, and implements loosely coupled independent components so they work together to create an application.

☒ **Correct**

Correct! This is a description of a service.

7. Which statement is true regarding a 2-tier architecture?

1 / 1 point

- ☐ A 2-tier architecture consists of a decentralized network of nodes that are both clients and servers.
- ☒ The interface resides on client machines and makes requests to a server for data or services.
- ☐ A 2-tier architecture consists of producers and consumers of events.
- ☐ The two different tiers are the application tier and the data tier.

☒ **Correct**

Correct! The interface resides on the client machines and makes requests to a server for data or services in a 2-tier architecture.

8. Which of the following architecture patterns are mutually exclusive?

1 / 1 point

- ☒ Peer-to-peer and two-tier
- ☐ Three-tier and microservices
- ☐ Microservices and event-driven
- ☐ Peer-to-peer and event-driven

☒ **Correct**

Correct. In a peer-to-peer architecture, each node is both client and

server whereas a two-tier architectural pattern involves clients communicating with servers on separate machines.

9. Which of the following environments is intended for developers to use while they are actively coding the application?

1 / 1 point

- ☐ Production
- ☒ Development
- ☐ Staging
- ☐ QA

✓ **Correct**

Correct! The development environment is intended for developers to use while they are actively coding the application.

10. Which of the following is a security device that monitors traffic between an internal and an external network?

1 / 1 point

- ☐ Web server
- ☐ Load balancer
- ☒ Firewall
- ☐ Router

✓ **Correct**

Correct! A firewall is a security device that monitors traffic between an interior and an exterior network.