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Started on	Wednesday, 23 October 2024, 3:26 PM
State	Finished
Completed on	Wednesday, 23 October 2024, 3:30 PM
Time taken	4 mins 12 secs
Marks	9.00/10.00
Grade	4.50 out of 5.00 (90%)

Question 1

Correct

Mark 1.00 out of 1.00

How are map-reduce instances expected to communicate with each other?

- ☒ a. Via <key, value> pairs emitted from map instances ✓
- ☐ b. Direct data sharing between map functions
- ☐ c. Using intermediary communication tiers
- ☐ d. Through shared memory buffers

The correct answer is: Via <key, value> pairs emitted from map instances

Question 2

Correct

Mark 1.00 out of 1.00

18. What is a challenge faced when using the shared-data pattern?

- ☐ a. Data cannot be made persistent
- ☒ b. It introduces performance bottlenecks at the shared store ✓
- ☐ c. Data is difficult to share among multiple components
- ☐ d. It creates complex dependencies between servers

The correct answer is: It introduces performance bottlenecks at the shared store

Question **3**

Correct

Mark 1.00 out of 1.00

12. Which of the following is a potential weakness of the shared-data pattern?

- ☐ a. Independent data stores are required for each component
- ☐ b. Data accessors cannot communicate with the store
- ☒ c. Shared-data store may become a bottleneck ✓
- ☐ d. Data is never persistent

The correct answer is: Shared-data store may become a bottleneck

Question **4**

Correct

Mark 1.00 out of 1.00

Which term refers to the abstraction used by external servers to build their application view?

- ☐ a. Client
- ☐ b. Metaobject protocol
- ☒ c. Personality ✓
- ☐ d. Adapter

The correct answer is: Personality

Question **5**

Correct

Mark 1.00 out of 1.00

13. What type of connector is used in the shared-data pattern?

- ☐ a. Peer-to-peer messaging
- ☒ b. Data reading and writing ✓
- ☐ c. Event dispatcher
- ☐ d. Request/reply

The correct answer is: Data reading and writing

Question 6

Correct

Mark 1.00 out of 1.00

What is the primary function of the metaobject protocol (MOP) in the Reflection pattern?

- ☒ a. Enable dynamic changes to metaobjects ✓
- ☐ b. Provide communication facilities between servers
- ☐ c. Encapsulate external services
- ☐ d. Manage hardware resources

The correct answer is: Enable dynamic changes to metaobjects

Question 7

Correct

Mark 1.00 out of 1.00

What is a significant benefit of the Microkernel pattern?

- ☐ a. It eliminates the need for external communication protocols
- ☒ b. It separates policy and mechanism for flexibility ✓
- ☐ c. It guarantees high performance under all conditions
- ☐ d. It increases the system's design complexity

The correct answer is: It separates policy and mechanism for flexibility

Question 8

Incorrect

Mark 0.00 out of 1.00

What is a common concern with adding a scheduling policy to a system?

- ☐ a. Complex tier mapping
- ☒ b. Increased latency between components ✗
- ☐ c. Difficulty in future modification
- ☐ d. Reduced data availability

The correct answer is: Difficulty in future modification

Question **9**

Correct

Mark 1.00 out of 1.00

What is a key characteristic of map functions in the map-reduce pattern?

- ☐ a. They are deployed as a single instance
- ☐ b. They maintain a persistent state
- ☒ c. They are stateless and independent ✓
- ☐ d. They communicate frequently with each other

The correct answer is: They are stateless and independent

Question **10**

Correct

Mark 1.00 out of 1.00

What is the primary focus of the Design for Change principle in adaptable systems?

- ☐ a. Reducing system complexity
- ☐ b. Implementing new hardware support without redesign
- ☐ c. Increasing system performance under load
- ☒ d. Allowing modification without impacting core functionality ✓

The correct answer is: Allowing modification without impacting core functionality

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