Louis

Yg msh salah blok merah

Yg bener blok ijo

Yg multiple answer tapi salah blok kuning

Quiz 1

[Louis - 9/10]

1. Goals of employing Web services include ... (Select 2 correct answers)
   a. Enable the exploration to new business ventures.
   b. Redefine the roles of existing applications.
   c. Support application integration across business functions.
   d. Extend the life of legacy systems.

2. Benefits of middleware are ... (Select 2 correct answers)
   a. Delivering messages to multiple users
   b. Bridging differences among servers
   c. Simplifying the software developer's tasks
   d. Abstracting the hardware layer for the software layer

3. What are benefits of SOA? (Select 2 correct answers)
   a. Agility and interoperability
   b. Fast and responsive technology
   c. Reduced overheads and costs
   d. Reliable and professional vendor support

4. What is a "thin client" in the client-server architecture?

a. Client with the lowest privileges.

b. Client having minimal compute resources.

c. The client's screen is small in size, so it cannot display big contents.

d. Application code execution hardly occurs on the client.

5. Characteristics of Web services are ... (Select 2 correct answers)

   a. Self-centered

   b. Programmable

   c. Detachable

   d. Platform-independent

6. Which are non-functional properties of a Web service? (Select 2 correct answers)

   a. Output formats

   b. Service endpoint

   c. Price rate

   d. Mean time between failures

7. Which statement is CORRECT about SOA?

   a. It is a design philosophy.

   b. It is synonymous with Web service.

   c. It is built on top of HTTP/Web.

   d. It is a programmable library.

8. What can represent a service's logic? (Select 2 correct answers)

   a. A process

   b. An agent

   c. A task

   d. A bot

9. What are characteristics of a distributed system? (Select 3 correct answers)

    a. Concurrent execution

    b. Providing minimum resource guarantee

    c. Component faults are expected and anticipated

    d. Many servers but one system

10. Which communication style supports many-to-many?

    a. Remote Procedure Call (RPC)

    b. Synchronous Messaging

    c. Store and Forward

    d. Publish/Subscribe

Quiz 3

[Louis - 7/10]

1. A service description is needed so that ... (Select 2 correct answers)
   a. the service can be assembled with other services.
   b. the service and its detailed processes can be explained by the developer.
   c. the service can run correctly.
   d. the service can be published and discovered.

2. What are the roles of SOAP? (Select 2 correct answers)
   a. Routing a message packet to the right destination.
   b. Processing messages in a heterogeneous, distributed environment.
   c. Transfering data without knowing the content.
   d. Exchanging structured and typed information between hosts.

3. What does a WSDL document describe? (Select 2 correct answers)
   a. Data formats and procotols to access the service
   b. Terms and conditions that a user must agree upon before accesing the service
   c. The list of operations of the service
   d. The location to get more details about the service

4. Which communication style is used in this SOAP message?

   <env:Body>

     <w:ShowTemperature>

       <location>Surabaya</location>

     </w:ShowTemperature>

   </env:Body>

a. RPC

b. Publish/Subscribe

c. CORBA

d. Document

5. Elements in Service Implementation of WSDL: (Select 2 correct answers)

a. binding

b. transport

c. types

d. port

6. Which element of WSDL contains the service interface?

a. portType

b. types

c. part

d. message

7. Characteristics of SOAP header: (Select 2 correct answers)

a. Security

b. Modularity

c. Extensibility

d. Durability

8. What is the root element of a WSDL 1.1 document?

a. definitions

b. service

c. Envelope

d. description

9. The news website sends the summary of headlines to all subscribers. Which message exchange pattern is suitable for that service?
   a. Notification
   b. One-way
   c. Request/response
   d. Solicit/response

10. Every minute a sensor sends its environment's temperature to a controller Web service. Which message exchange pattern is suitable for that service?
    a. Request/response
    b. Notification
    c. Solicit/response
    d. One-way

Quiz 4

[Louis - 10/10]

1. Which HTTP header is used to negotiate the representation of a resource?
   a. Accept-*
   b. application/*
   c. Content-*
   d. Negotiate-*

2. Code points that must be escaped in JSON strings are ... (Select 3 correct answers)
   a. hex digits representing any Unicode code point
   b. delete
   c. solidus
   d. quotation mark

3. Drawbacks of JSON: (Select 2 correct answers)
   a. No support for real numbers
   b. No support for Unicode characters
   c. No support for binary data
   d. Semantics must be established separately

4. Which URI structures are recommended? (Select 2 correct answers)
   a. http://foo.service.com/purchase_orders/{id}
   b. http://foo.service.com/purchase orders/{PO}
   c. http://foo.service.com/orders/{date}/{order-id}
   d. http://foo.service.com/POs/{items}

5. Which statement is INCORRECT about the resource representation?

a. Relationships between resources (objects) in the data model are represented when they are sent to the client.

b. A resource representation reflects the state of a resource at a particular time.

c. The resource representation is placed in the payload of the HTTP response returned to the client application.

d. The resource representation is solely determined by the server.

6. Literal name tokens defined in JSON are ... (Select 2 correct answers)

a. right

b. none

c. false

d. null

7. What are the benefits of statelessness in web services? (Select 2 correct answers)

a. It reduces the bandwidth required to serve the client.

b. It removes the need to synchronize session data with another application/service.

c. It supports scalability to handle increasing demands.

d. It encourages the client to involve in processing web services.

8. Which statement is INCORRECT about REST?

a. REST is rather resource-centric than message-centric.

b. REST defines a few procotols that run on top of HTTP.

c. REST was first introduced in Roy Fielding's dissertation.

d. REST is lighter and more concise than SOAP.

9. Which statements are CORRECT about a JSON array? (Select 2 correct answers)

a. It contains name/value pairs separated by commas.

b. It surrounds the values with a pair of curly brackets.

c. It contains values separated by commas.

d. It surrounds the values with a pair of square brackets.

10. Besides digits, what characters may be accepted in JSON numbers? (Select 2 correct answers)

a. Extra leading zeros
b. Decimal point
c. Minus sign
d. Infinity token

Quiz 6

[Louis - 7/10]

1. How can organizational alignment be achieved when the microservice architecture is adopted?
    a. The ownership of all microservices is shifted to a small team comprising people working co-located.
    b. The application is broken into microservices aligned to the organization.
    c. Smaller development teams, each works on particular microservices, are formed and composed of co-located people.
    d. The microservice architecture tries to find a balance between team size and productivity.

2. Advantages of autonomous services are ... (Select 2 correct answers)
    a. Isolated failure
    b. Increased collaboration
    c. More resilient to attack
    d. Easily replaceable

3. Which statements are CORRECT about bounded contexts? (Select 2 correct answers)
    a. Every bounded context exposes an interface connecting it with other bounded contexts.
    b. Each bounded context just focuses on things it must do internally.
    c. A given domain should have exactly one bounded context.
    d. Communication to any bounded context is conducted through models.

4. How does the deployment of a microservice-based application differ from that of a monolithic application? (Select 2 correct answers)
    a. Change to a line of code requires just the affected microservice to be deployed.

b. Change to a line of code requires just the affected part of the monolithic application to be deployed.

c. Change to a line of code requires the entire microservices to be deployed.

d. Change to a line of code requires the whole monolithic application to be deployed

5. What does SOA lack of? (Select 2 correct answers)

a. Many problems still linger on communication protocols, middleware, and the absence of clear guidance.

b. No agreement in the industry on how to implement it properly.

c. The idea is too complex to understand and to execute.

d. It is only a concept and no materialization whatsoever this far.

6. What are the guidelines to decompose a system's application into bounded contexts? (Select 2 correct answers)

a. In a nested fashion, separating it according to the organizational structure.

b. Making sure that the nested services are always visible to the consumers.

c. Splitting it sparingly, or else it breaks apart.

d. Breaking it all the way down as needed.

7. How is resilience provided by microservices?

a. Service boundaries are logical bulkheads to address the system's failure.

b. Every failed microservice has to be quickly and manually isolated from the rest of the system.

c. Redundancy and replication are the keys to a resilient system.

d. Multiple bulkheads need to be intentionally built in the microservice-based system.

8. What characterize an evolutionary architect? (Select 3 correct answers)

a. Balancing all the trade-offs in making decisions.

b. Conveying the system's technical vision.

c. Changing the system's technical vision continually.

d. Collaborating to carry out the system's technical vision.

9. What are some of the things that need more attention to leverage on the benefits of microservices? (Select 2 correct answers)

    a. Adopting microservices wholeheartedly by following the guidelines.

    b. Fast developing the microservices to avoid bottlenecks among teams.

    c. Better dealing with deployment, testing, and monitoring.

    d. Ensuring scalability and resilience of the system.

10. With microservices, is mixing in different technologies risky?

    a. Yes, mixing technologies brings complexity and overhead.

    b. No, it is irrelevant.

    c. Yes, it demands high investment.

    d. No, due to the microservice's size, the risk is much reduced.

Erick

Quiz 1

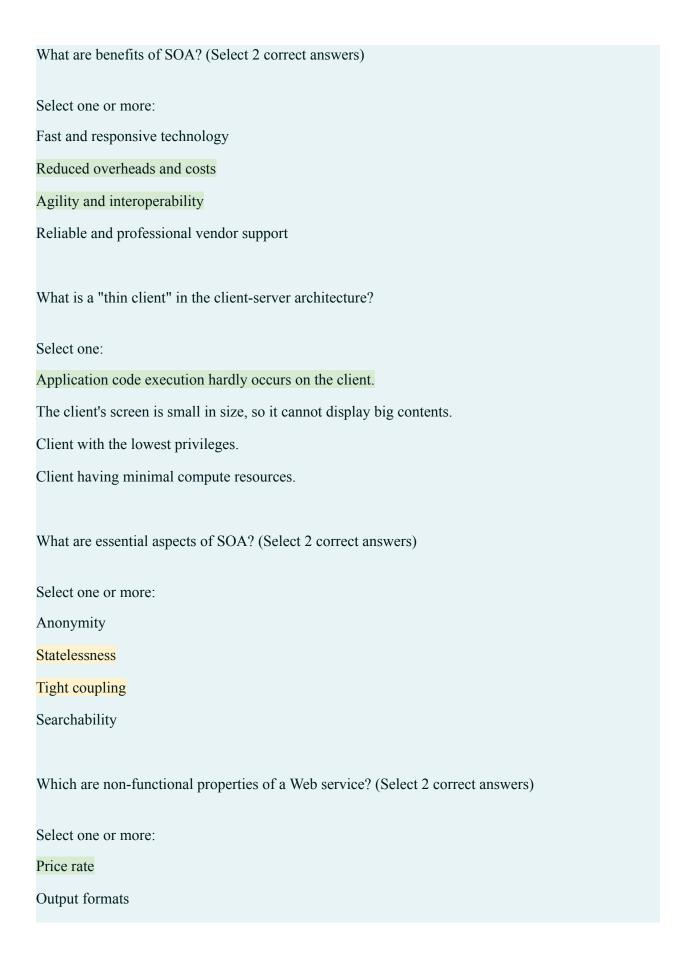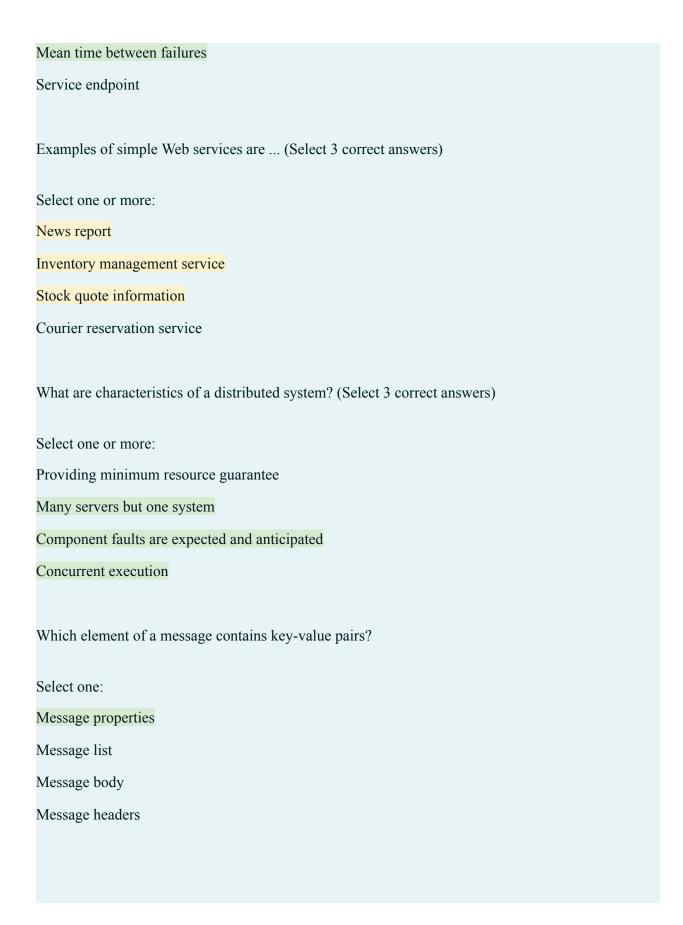What is "marshalling" in inter-process communication?

Select one:

Transforming an object to a data format suitable for transmission among heterogeneous hosts.

Protecting a server against malicious attacks.

Sending a warning to an unresponsive server.

Providing a queue where packets are placed while waiting to be served.

What are benefits of SOA? (Select 2 correct answers)

Select one or more:

Fast and responsive technology

Reduced overheads and costs

Agility and interoperability

Reliable and professional vendor support

What is a "thin client" in the client-server architecture?

Select one:

Application code execution hardly occurs on the client.

The client's screen is small in size, so it cannot display big contents.

Client with the lowest privileges.

Client having minimal compute resources.

What are essential aspects of SOA? (Select 2 correct answers)

Select one or more:

Anonymity

Statelessness

Tight coupling

Searchability

Which are non-functional properties of a Web service? (Select 2 correct answers)

Select one or more:

Price rate

Output formats

Mean time between failures

Service endpoint

Examples of simple Web services are ... (Select 3 correct answers)

Select one or more:

News report

Inventory management service

Stock quote information

Courier reservation service

What are characteristics of a distributed system? (Select 3 correct answers)

Select one or more:

Providing minimum resource guarantee

Many servers but one system

Component faults are expected and anticipated

Concurrent execution

Which element of a message contains key-value pairs?

Select one:

Message properties

Message list

Message body
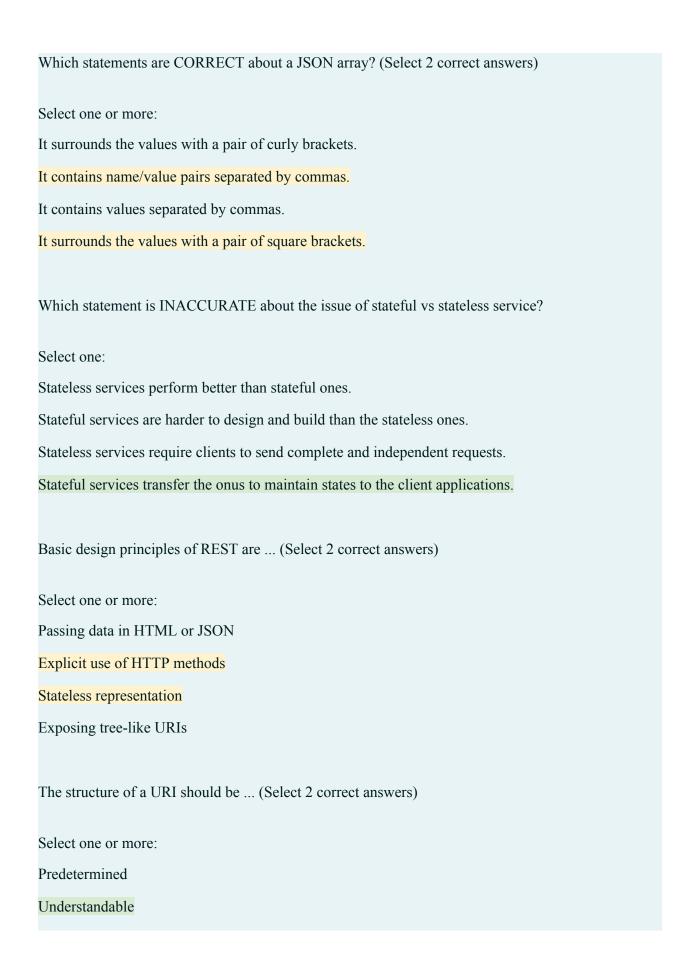
Message headers

Characteristics of Web services are ... (Select 2 correct answers)

Select one or more:

Detachable

Programmable

Platform-independent

Self-centered

Which statement is INCORRECT about SOA?

Select one:

It is implementation-agnostic.

It is a rebrand of Web services.

It supports fast and cheap development of applications.

It is well-suited to bolster business automation.

Quiz 3

Benefits of WSDL 2.0 over WSDL 1.1: (Select 2 correct answers)

Select one or more:

Simpler and easier to use

More clarity

Compatibility support

More firewall friendly

The patient wants to know his/her doctor's schedule from the hospital service. Which message exchange pattern is suitable for that service?

Select one:

Notification

One-way

Request/response

Solicit/response

Which element of WSDL contains the service endpoint(s)?

Select one:

binding

port

portType

Service

What is the *de facto* language for describing the contract that a service exposes to its clients?

Select one:

SOAP

WSDL

CDL

BPEL

Which communication style is used in this SOAP message?

```
<env:Body>

    <w:ShowTemperature>

        <location>Surabaya</location>

    </w:ShowTemperature>

</env:Body>
```

Select one:

Document

Publish/Subscribe

RPC

CORBA

Which component converts SOAP messages to programming language specific objects required by the Web service?

Select one:

Web browser

SOAP client

SOAP server

Web server

Downsides of SOAP: (Select 2 correct answers)

Select one or more:

Unscalable

Stateless

Not supporting serialization by reference
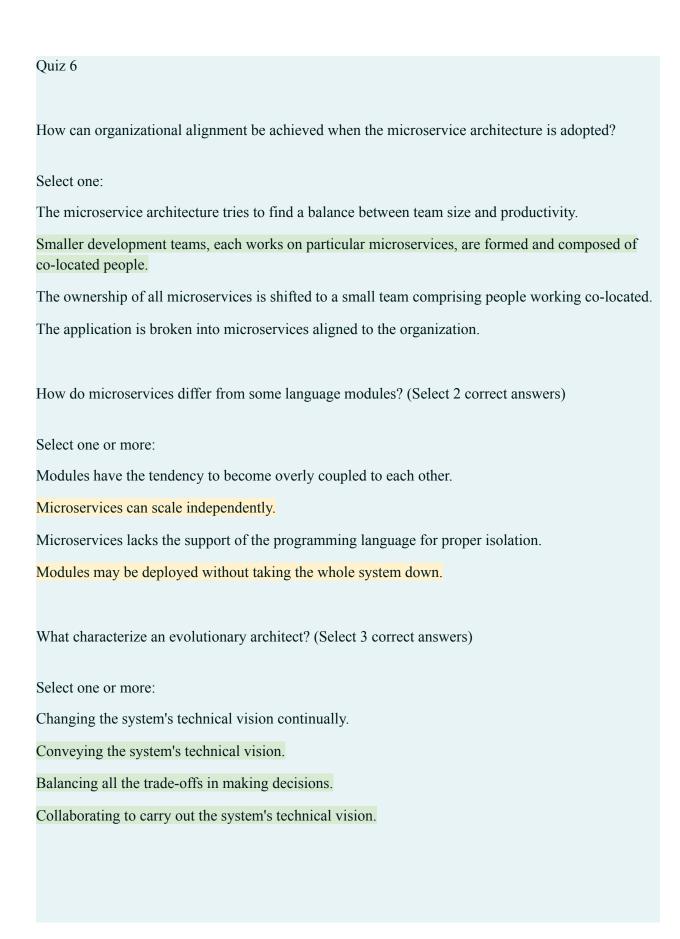
Closed standards

What are the contents of the SOAP Body element? (Select 2 correct answers)

Select one or more:

Fault message

Application-specific data

Key-value pairs of metadata

HTTP request or response

What does a WSDL document describe? (Select 2 correct answers)

Select one or more:

The location to get more details about the service

The list of operations of the service

Data formats and procotols to access the service

Terms and conditions that a user must agree upon before accesing the service

Elements in Abstract Service Description of WSDL: (Select 2 correct answers)

Select one or more:

definitions

service

message

portType

Quiz 4

What is content negotiation? (Select 2 correct answers)

Select one or more:

It is the mechanism to help the user agent specify the resource representation best suited for the user.

It determines how a specific representation is chosen when the resource is called.

It specifies how a resource representation should be presented in the client application.

It is a security mechanism to ensure that the resource representation is valid and not harmful to the client.

Which JSON strings are valid? (Select 2 correct answers)

Select one or more:

```
"\"Hello\""
```

```
"\\Hello\/"
```

```
'Hello'
```

```
"'"Hello"'"
```

Besides digits, what characters may be accepted in JSON numbers? (Select 2 correct answers)

Select one or more:

Extra leading zeros

Decimal point

Minus sign

Infinity token

Which statements are CORRECT about a JSON array? (Select 2 correct answers)

Select one or more:

It surrounds the values with a pair of curly brackets.

It contains name/value pairs separated by commas.

It contains values separated by commas.

It surrounds the values with a pair of square brackets.

Which statement is INACCURATE about the issue of stateful vs stateless service?

Select one:

Stateless services perform better than stateful ones.

Stateful services are harder to design and build than the stateless ones.

Stateless services require clients to send complete and independent requests.

Stateful services transfer the onus to maintain states to the client applications.

Basic design principles of REST are ... (Select 2 correct answers)

Select one or more:

Passing data in HTML or JSON

Explicit use of HTTP methods

Stateless representation

Exposing tree-like URIs

The structure of a URI should be ... (Select 2 correct answers)

Select one or more:

Predetermined

Understandable

Composable

Straightforward

Which HTTP header is used to negotiate the representation of a resource?

Select one:

application/*

Accept-*

Content-*

Negotiate-*

Which statements are CORRECT about JSON? (Select 2 correct answers)

Select one or more:

JSON is dependent on Java and its related technologies.

JSON represents numbers as sequences of digits.

JSON can be used for data interchange between different systems and platforms.

JSON can specify the meaning of data it contains.

Literal name tokens defined in JSON are ... (Select 2 correct answers)

Select one or more:

false

null

right

None

Quiz 6

How can organizational alignment be achieved when the microservice architecture is adopted?

Select one:

The microservice architecture tries to find a balance between team size and productivity.

Smaller development teams, each works on particular microservices, are formed and composed of co-located people.

The ownership of all microservices is shifted to a small team comprising people working co-located.

The application is broken into microservices aligned to the organization.

How do microservices differ from some language modules? (Select 2 correct answers)

Select one or more:

Modules have the tendency to become overly coupled to each other.

Microservices can scale independently.

Microservices lacks the support of the programming language for proper isolation.

Modules may be deployed without taking the whole system down.

What characterize an evolutionary architect? (Select 3 correct answers)

Select one or more:

Changing the system's technical vision continually.

Conveying the system's technical vision.

Balancing all the trade-offs in making decisions.

Collaborating to carry out the system's technical vision.

How do we align the bounded contexts with the organization?

Select one:

Creating the bounded contexts along business processes.

Modeling the bounded contexts as collaborating business parties.

Splitting the bounded contexts according to business functions or capabilities.

Decomposing the organization into bounded contexts based on the shared data.

In terms of composability, what benefits may microservices give? (Select 2 correct answers)

Select one or more:

Microservices may be functionally reused for other purposes and applications.

Microservices may be replicated in another platform and consumed in different ways.

Microservices may be bonded together to strengthen the application's robustness.

Microservices may be opened up for access by external partners or customers.

Main benefits of microservices are ... (Select 3 correct answers)

Select one or more:

Reusable

Technology-agnostic

Decomposable

Scalable

What are the guidelines to decompose a system's application into bounded contexts? (Select 2 correct answers)

Select one or more:

Making sure that the nested services are always visible to the consumers.

Splitting it sparingly, or else it breaks apart.

In a nested fashion, separating it according to the organizational structure.

Breaking it all the way down as needed.

Why is replaceability easy to accomplish with microservices? (Select 2 correct answers)

Select one or more:

The developers would not be emotionally attached to a microservice or mindful of rewriting it, with just a few hundred lines long.

The cost to replace small-sized microservices is relatively easy to deal with.

The risk of replacing one microservice or multiple microservices is equally the same.

Microservices can smoothly replace a legacy system without anyone realizes it.

How is the microservice approach related to SOA?

Select one:

The microservice approach is the direct competitor of the SOA approach.

They are unrelated to each other.

The microservice approach is the required foundation to realize SOA.

The microservice approach is a real-world implementation of SOA.

Advantages of autonomous services are ... (Select 2 correct answers)

Select one or more:

Easily replaceable

Increased collaboration

More resilient to attack

Isolated failure

Aris

Quiz 1

[LO-1.1] Which are non-functional properties of a Web service? (Select 2 correct answers)

Question 1

Select one or more:

Mean time between failures v

Price rate v

Output formats

Service endpoint

[LO-1.1] What is a "thin client" in the client-server architecture?

Question 2

Select one:

The client's screen is small in size, so it cannot display big contents.

Client with the lowest privileges.

Application code execution hardly occurs on the client. v

Client having minimal compute resources.

[LO-1.1] What are the data encoding standards commonly used in Web services? (Select 2 correct answers)

Question 3

Select one or more:

HTTP

JSON v

XML v

SQL

[LO-1.1] Which communication style supports many-to-many?

Question 4

Select one:

Store and Forward

Publish/Subscribe v

Synchronous Messaging

Remote Procedure Call (RPC)

Question text

[LO-1.1] What is a service? (Select 2 correct answers)

Question 5

Select one or more:

A component v

A module v

An identity

A port

Question 6

Complete

Mark 1.00 out of 1.00

Question text

[LO-1.1] Which statement is CORRECT about SOA?

Question 6

Select one:

It is a programmable library.

It is a design philosophy. v

It is synonymous with Web service.

It is built on top of HTTP/Web.

Question 7

Complete

Mark 1.00 out of 1.00

Question text

[LO-1.1] What are characteristics of a distributed system? (Select 3 correct answers)

Question 7

Select one or more:

Providing minimum resource guarantee

Many servers but one system v

Concurrent execution v

Component faults are expected and anticipated v

Question 8

Complete

Mark 1.00 out of 1.00

Question text

[LO-1.1] Which element of a message contains key-value pairs?

Question 8

Select one:

Message body

Message properties v

Message headers

Message list

Question 9

Complete

Mark 0.00 out of 1.00

Question text

[LO-1.1] What are essential aspects of SOA? (Select 2 correct answers)

Question 9

Select one or more:

Anonymity

Statelessness x

Tight coupling x

Searchability

Question 10

Complete

Mark 1.00 out of 1.00

Question text

[LO-1.1] Characteristics of Web services are ... (Select 2 correct answers)

Question 10

Select one or more:

Detachable

Programmable v

Self-centered

Platform-independent v

Question 1

Complete

Mark 1.00 out of 1.00

Flag question

Question text

[LO-1.2] Two parts of a WSDL document that can be defined separately but complement each other are ... (Select 2 correct answers)

Question 1

Select one or more:

Detailed prescription

Concrete implementation v

Abstract description v

Logical design

Question 2

Complete

Mark 1.00 out of 1.00

Flag question

Question text

[LO-1.2] Benefits of WSDL 2.0 over WSDL 1.1: (Select 2 correct answers)

Question 2

Select one or more:

More firewall friendly

Compatibility support

More clarity v

Simpler and easier to use v

Question 3

Complete

Mark 1.00 out of 1.00

Flag question

Question text

[LO-1.2] What are the roles of the Header element in a SOAP message? (Select 2 correct answers)

Question 3

Select one or more:

Specifying a set of encoding rules to serialize data over the network.

Containing information on how to process the message. v

Storing the source and destination hosts of the message.

Supporting value-added extensions to the message. v

Question 4

Complete

Mark 0.00 out of 1.00

Question text

[LO-1.2] Through the online interactive service, the teacher sends a poll to the students. Which message exchange pattern is suitable for that service?

Question 4

Select one:

Notification

Request/response x

One-way

Solicit/response

Question 5

Complete

Mark 1.00 out of 1.00

Question text

[LO-1.2] SOAP communication styles: (Select 2 correct answers)

Question 5

Select one or more:

Document v

CORBA

Publish/Subscribe

RPC v

Question 6

Complete

Mark 0.00 out of 1.00

Remove flag

[LO-1.2] Downsides of SOAP: (Select 2 correct answers)

Question 6

Select one or more:

Closed standards x

Stateless

Not supporting serialization by reference x

Unscalable

Question 7

Complete

Question text

[LO-1.2] The patient wants to know his/her doctor's schedule from the hospital service. Which message exchange pattern is suitable for that service?

Question 7

Select one:

Solicit/response

One-way

Notification

Request/response v

Question 8

Complete

Mark 1.00 out of 1.00

Question text

[LO-1.2] Which statements are CORRECT about WSDL? (Select 2 correct answers)

Question 8

Select one or more:

The message elements are nested in the operation element.

The operation elements are nested in the portType element. v

The message elements are nested in the types element.

The part elements are nested in the message element. v

Question 9

Complete

Mark 1.00 out of 1.00

Question text

[LO-1.2] What are described in the service implementation? (Select 2 correct answers)

Question 9

Select one or more:

Incoming and/or outgoing parameter data

Location of the service v

Concrete protocol and data format v

Data types used by the service

Question 10

Complete

Mark 1.00 out of 1.00

Flag question

Question text

[LO-1.2] Elements in a WSDL document: (Select 3 correct answers)

Question 10

Select one or more:

portType v

Types v

body

Port v

Question 1

Complete

Mark 1.00 out of 1.00

Flag question

Question text

[LO-1.2] Beneficial features of JSON: (Select 3 correct answers)

Question 1

Select one or more:

Support for cylic graphs

Support for lists of values v

Support for expressing objects v

The grammar may never change v

Question 2

Complete

Mark 1.00 out of 1.00

Flag question

Question text

[LO-1.2] Whitespace characters in JSON are ... (Select 3 correct answers)

Question 2

Select one or more:

Vertical tabulation

Carriage return v

Space v

Line feed v

Question **3**

Complete

Mark 1.00 out of 1.00

Question text

[LO-1.2] Which HTTP methods should NOT include a payload? (Select 2 correct answers)

Question 3

Select one or more:

GET v

PUT

DELETE v

```
POST
```

Question 4

Complete

Mark 1.00 out of 1.00

Question text

[LO-1.2] Besides digits, what characters may be accepted in JSON numbers? (Select 2 correct answers)

Question 4

Select one or more:

Infinity token

Extra leading zeros

Decimal point v

Minus sign v

Question 5

Complete

Mark 0.00 out of 1.00

Question text

[LO-1.2] Basic design principles of REST are ... (Select 2 correct answers)

Question 5

Select one or more:

Explicit use of HTTP methods x

Stateless representation x

Passing data in HTML or JSON

Exposing tree-like URIs

Question 6

Complete

Mark 1.00 out of 1.00

Question text

[LO-1.2] Which URI structures are recommended? (Select 2 correct answers)

Question 6

Select one or more:

http://foo.service.com/POs/{items}

http://foo.service.com/purchase orders/{PO}

http://foo.service.com/purchase_orders/{id}v

http://foo.service.com/orders/{date}/{order-id} v

Question 7

Complete

Mark 1.00 out of 1.00

Flag question

Question text

[LO-1.2] Which statements are CORRECT about a JSON object? (Select 2 correct answers)

Select one or more:

It surrounds the values with a pair of square brackets.

It surrounds the values with a pair of curly brackets. v

It contains name/value pairs separated by commas. v

It contains values separated by commas.

Question 8

Complete

Mark 0.00 out of 1.00

Flag question

Question text

[LO-1.2] Which JSON strings are valid? (Select 2 correct answers)

Question 8

Select one or more:

```
"\\Hello\/"

"\"Hello\""

"'"Hello"'" x

'Hello' x
```

Question **9**

Complete

Mark 1.00 out of 1.00

Flag question

Question text

[LO-1.2] Which statement is INACCURATE about the issue of stateful vs stateless service?

Question 9

Select one:

Stateful services transfer the onus to maintain states to the client applications. v

Stateless services perform better than stateful ones.

Stateless services require clients to send complete and independent requests.

Stateful services are harder to design and build than the stateless ones.

Question **10**

Complete

Mark 1.00 out of 1.00

Question text

[LO-1.2] Which statement is INCORRECT about the resource representation?

Question 10

Select one:

The resource representation is placed in the payload of the HTTP response returned to the client application.

Relationships between resources (objects) in the data model are represented when they are sent to the client. v

A resource representation reflects the state of a resource at a particular time.

The resource representation is solely determined by the server.

Question 1

Complete

Mark 1.00 out of 1.00

Flag question

Question text

[LO-2.1] What characterize an evolutionary architect? (Select 3 correct answers)

Question 1

Select one or more:

Conveying the system's technical vision.v

Balancing all the trade-offs in making decisions. v

Collaborating to carry out the system's technical vision. v

Changing the system's technical vision continually.

Question 2

Complete

Mark 1.00 out of 1.00

Question text

[LO-2.1] How is the microservice approach related to SOA?

Question 2

Select one:

The microservice approach is the required foundation to realize SOA.

The microservice approach is the direct competitor of the SOA approach.

They are unrelated to each other.

The microservice approach is a real-world implementation of SOA.v

Question 3

Complete

Mark 1.00 out of 1.00

Flag question

Question text

[LO-2.1] Is it alright to create the bounded contexts along technical boundary?

Question 3

Select one:

Yes, it perfectly makes sense.

No, it does not make sense.

No, it would be problematic.

Yes, but it should not be the main determinant. v

Question 4

Complete

Mark 0.00 out of 1.00

Flag question

[LO-2.1] How does the deployment of a microservice-based application differ from that of a monolithic application? (Select 2 correct answers)

Question 4

Select one or more:

Change to a line of code requires the whole monolithic application to be deployed. x

Change to a line of code requires the entire microservices to be deployed.

Change to a line of code requires just the affected part of the monolithic application to be deployed. x

Change to a line of code requires just the affected microservice to be deployed.

Question 5

Complete

Mark 1.00 out of 1.00

Flag question

Question text

[LO-2.1] How can communications between microservices be seen in parallel with business concepts?

Select one:

New business ideas should be advanced beyond what the microservices can offer.

To avoid chatty interfaces, communications between microservices must be limited to only passing important business ideas.

The interfaces of microservices should drive how the organization's business is developed.

The same business terms and forms, sent around the organization, should be reflected in the microservices' interfaces. v

Question 6

Complete

Mark 0.00 out of 1.00

Flag question

Question text

[LO-2.1] Main benefits of microservices are ... (Select 3 correct answers)

Question 6

Select one or more:

Decomposable x

Reusable

Scalable x

Technology-agnostic x

Question 7

Complete

Mark 0.00 out of 1.00

Flag question

Question text

[LO-2.1] Why is heterogeneity in technology useful?

Question 7

Select one:

Avoiding vendor lock-in.

Enabling diverse collaboration. v

Getting the right technology for every task.

Understanding the technology trends.

Question 8

Complete

Mark 1.00 out of 1.00

Flag question

Question text

[LO-2.1] What are characteristics of microservices? (Select 2 correct answers)

Question 8

Select one or more:

High cohesion x

Modular monolith

Loose coupling x

Isolated environment

Question 9

Complete

Mark 0.00 out of 1.00

Flag question

Question text

[LO-2.1] How do microservices differ from some language modules? (Select 2 correct answers)

Question 9

Select one or more:

Modules have the tendency to become overly coupled to each other.

Microservices can scale independently. x

Microservices lacks the support of the programming language for proper isolation.

Modules may be deployed without taking the whole system down. x

Question 10

Complete

Mark 0.00 out of 1.00

Flag question

Question text

[LO-2.1] Why is replaceability easy to accomplish with microservices? (Select 2 correct answers)

Question 10

Select one or more:

The risk of replacing one microservice or multiple microservices is equally the same.

Microservices can smoothly replace a legacy system without anyone realizes it. x

The developers would not be emotionally attached to a microservice or mindful of rewriting it, with just a few hundred lines long.

The cost to replace small-sized microservices is relatively easy to deal with. x

Tomi :D

1. Characteristics of Web services are ... (Select 2 correct answers) Select one or more:
   a. Self-centered
   b. Platform-independent
   c. Programmable
   d. Detachable
2. What are essential aspects of SOA? (Select 2 correct answers) Select one or more:
   a. Statelessness
   b. Searchability
   c. Tight coupling
   d. Anonymity
3. On which layer does Web service run? Select one:
   a. Application layer (HTTP)
   b. Transport layer (UDP)
   c. Network layer (IP)
   d. Transport layer (TCP)
4. What is "marshalling" in inter-process communication? Select one:
   a. Sending a warning to an unresponsive server.
   b. Transforming an object to a data format suitable for transmission among heterogeneous hosts.
   c. Protecting a server against malicious attacks.
   d. Providing a queue where packets are placed while waiting to be served
5. Which messaging modes are asynchronous? (Select 2 correct answers)
   a. Store and Forward
   b. Publish/Subscribe
   c. Instant Messaging
   d. Remote Procedure Call (RPC)
6. What are benefits of SOA? (Select 2 correct answers)
   a. Fast and responsive technology
   b. Reliable and professional vendor support
   c. Agility and interoperability
   d. Reduced overheads and costs
7. What are the data encoding standards commonly used in Web services? (Select 2 correct answers)
   a. SQL
   b. XML
   c. HTTP
   d. JSON

8. What is a service? (Select 2 correct answers)
    a. A component
    b. A module
    c. An identity
    d. A port
9. Which element of a message contains key-value pairs?
    a. Message list
    b. Message body
    c. Message properties
    d. Message headers
10. Which communication style supports many-to-many?
    a. Store and Forward
    b. Synchronous Messaging
    c. Publish/Subscribe
    d. Remote Procedure Call (RPC)

Quiz 3

1. Which communication style is used in this SOAP message?
    i.   `<env:Body>`
    ii.   `<w:ShowTemperature>`
    iii.   `<location>Surabaya</location>`
    iv.   `</w:ShowTemperature>`
    v.   `</env:Body>`
    vi.
    b. CORBA
    c. RPC
    d. Document
    e. Publish/Subscribe
2. What advantages are offered by SOAP? (Select 3 correct answers)
    a. Adaptable
    b. Secured and fault tolerant
    c. Able to get past firewalls
    d. Easy to parse
3. Elements in a WSDL document: (Select 3 correct answers)
    a. body
    b. port
    c. types
    d. portType

4. What are described in the service implementation? (Select 2 correct answers)
   a. Data types used by the service
   b. Incoming and/or outgoing parameter data
   c. Concrete protocol and data format
   d. Location of the service
5. Which characteristics of a messaging protocol are satisfied by SOAP? (Select 2 correct answers)
   a. Efficient
   b. Compact
   c. Loose coupling
   d. Scalable
6. Which element of WSDL contains the service interface?
   a. portType
   b. message
   c. part
   d. Types
7. What is the *de facto* language for describing the contract that a service exposes to its clients?
   a. SOAP
   b. BPEL
   c. CDL
   d. WSDL
8. In comparison with WSDL 1.1, which element is removed in WSDL 2.0?
   a. message
   b. binding
   c. types
   d. Operation
9. Every minute a sensor sends its environment's temperature to a controller Web service. Which message exchange pattern is suitable for that service?
   a. Notification
   b. Request/response
   c. One-way
   d. Solicit/response
10. Roles of SOAP intermediaries: (Select 2 correct answers)
    a. Processing the header blocks of a SOAP message.
    b. Intercepting SOAP messages and converting them to locally defined objects.
    c. Routing the SOAP messsages to the right destination host.
    d. Helping the SOAP server to attain scalability.

Quiz 4

1. Referring to the following snippet: What does it contain?

```
[
  {
    "nrp": "c14200001",
    "name": "Sarah Summers"
  },
  {
    "nrp": "c14200002",
    "name": "Bill Winters"
  }
]
```

    a. Two objects with two name/value pairs
    b. An array of objects
    c. A dictionary of two objects
    d. A list of strings

2. Literal name tokens defined in JSON are ... (Select 2 correct answers)
    a. none
    b. right
    c. null
    d. False

3. The structure of a URI should be ... (Select 2 correct answers)
    a. Straightforward
    b. Understandable
    c. Predetermined
    d. Composable

4. What is content negotiation? (Select 2 correct answers)
    a. It specifies how a resource representation should be presented in the client application.
    b. It is the mechanism to help the user agent specify the resource representation best suited for the user.
    c. It is a security mechanism to ensure that the resource representation is valid and not harmful to the client.
    d. It determines how a specific representation is chosen when the resource is called.

5. What are characteristics of a JSON String? (Select 2 correct answers)
    a. May contain two-character escape sequences
    b. May contain multiple values separated by commas
    c. A sequence of ASCII characters
    d. Enclosed by quotation marks
6. Which ones are valid JSON Numbers? (Select 2 correct answers)
    a. `07.5`
    b. `.75`
    c. `75.0E+0`
    d. `-0.7500`
7. Which HTTP method is used to modify a resource (in a RESTful web service)?
    a. `DELETE`
    b. `GET`
    c. `POST`
    d. `PUT`
8. Which statement is INCORRECT about REST?
    a. REST is rather resource-centric than message-centric.
    b. REST is lighter and more concise than SOAP.
    c. REST was first introduced in Roy Fielding's dissertation.
    d. REST defines a few procotols that run on top of HTTP.
9. What are the benefits of statelessness in web services? (Select 2 correct answers)
    a. It reduces the bandwidth required to serve the client.
    b. It removes the need to synchronize session data with another application/service.
    c. It encourages the client to involve in processing web services.
    d. It supports scalability to handle increasing demands.
10. Drawbacks of JSON: (Select 2 correct answers)
    a. Semantics must be established separately
    b. No support for Unicode characters
    c. No support for binary data
    d. No support for real numbers

Quiz 6

1. How is resilience provided by microservices?
    a. Redundancy and replication are the keys to a resilient system.
    b. Service boundaries are logical bulkheads to address the system's failure.
    c. Multiple bulkheads need to be intentionally built in the microservice-based system.
    d. Every failed microservice has to be quickly and manually isolated from the rest of the system.
2. How does the deployment of a microservice-based application differ from that of a monolithic application? (Select 2 correct answers)
    a. Change to a line of code requires the whole monolithic application to be deployed.

b. Change to a line of code requires just the affected microservice to be deployed.
c. Change to a line of code requires just the affected part of the monolithic application to be deployed.
d. Change to a line of code requires the entire microservices to be deployed.

3. Main benefits of microservices are ... (Select 3 correct answers)
   a. Decomposable
   b. Technology-agnostic
   c. Reusable
   d. Scalable

4. Which statements are CORRECT about bounded contexts? (Select 2 correct answers)
   a. A given domain should have exactly one bounded context.
   b. Communication to any bounded context is conducted through models.
   c. Every bounded context exposes an interface connecting it with other bounded contexts.
   d. Each bounded context just focuses on things it must do internally.

5. How do we align the bounded contexts with the organization?
   a. Modeling the bounded contexts as collaborating business parties.
   b. Splitting the bounded contexts according to business functions or capabilities.
   c. Creating the bounded contexts along business processes.
   d. Decomposing the organization into bounded contexts based on the shared data.

6. What characterize an evolutionary architect? (Select 3 correct answers)
   a. Conveying the system's technical vision.
   b. Changing the system's technical vision continually.
   c. Collaborating to carry out the system's technical vision.
   d. Balancing all the trade-offs in making decisions.

7. In terms of composability, what benefits may microservices give? (Select 2 correct answers)
   a. Microservices may be opened up for access by external partners or customers.
   b. Microservices may be bonded together to strengthen the application's robustness.
   c. Microservices may be functionally reused for other purposes and applications.
   d. Microservices may be replicated in another platform and consumed in different ways.

8. What are the advantages of small services? (Select 2 correct answers)
   a. Cheap to build
   b. Easy to debug
   c. Highly portable
   d. Well defined

9. How is the microservice approach related to SOA?
   a. The microservice approach is the required foundation to realize SOA.
   b. The microservice approach is a real-world implementation of SOA.
   c. The microservice approach is the direct competitor of the SOA approach.
   d. They are unrelated to each other.

10. What does SOA lack of? (Select 2 correct answers)
    a. It is only a concept and no materialization whatsoever this far.
    b. The idea is too complex to understand and to execute.
    c. No agreement in the industry on how to implement it properly.
    d. Many problems still linger on communication protocols, middleware, and the absence of clear guidance.

Quiz 1 (yul)

(8/10)

1. What are characteristics of SOA? (Select 2 correct answers)
    a. Fault-tolerant
    b. Composable
    c. Secure
    d. Reusable
2. Which element of a message contains key-value pairs?
    a. Message headers
    b. Message list
    c. Message properties
    d. Message body
3. What are benefits of SOA? (Select 2 correct answers)
    a. Agility and interoperability
    b. Reduced overheads and costs
    c. Fast and responsive technology
    d. Reliable and professional vendor support
4. What is a "thin client" in the client-server architecture?
    a. The client's screen is small in size, so it cannot display big contents.
    b. Client having minimal compute resources.
    c. Client with the lowest privileges.
    d. Application code execution hardly occurs on the client.
5. What are essential aspects of SOA? (Select 2 correct answers)
    a. Anonymity
    b. Searchability
    c. Tight coupling
    d. Statelessness
6. What are characteristics of a distributed system? (Select 3 correct answers)
    a. Concurrent execution
    b. Providing minimum resource guarantee
    c. Many servers but one system
    d. Component faults are expected and anticipated
7. Characteristics of Web services are ... (Select 2 correct answers)
    a. Platform-independent

    b.   Self-centered
    c.   Programmable
    d.   Detachable

8. Examples of simple Web services are ... (Select 3 correct answers)
    a.   Stock quote information
    b.   Courier reservation service
    c.   News report
    d.   Inventory management service

9. Which are non-functional properties of a Web service? (Select 2 correct answers)
    a.   Price rate
    b.   Output formats
    c.   Mean time between failures
    d.   Service endpoint

10. Benefits of middleware are ... (Select 2 correct answers)
    a.   Bridging differences among servers
    b.   Delivering messages to multiple users
    c.   Abstracting the hardware layer for the software layer
    d.   Simplifying the software developer's tasks

Quiz 3

(9/10)

1. Elements in a WSDL document: (Select 3 correct answers)
    a.   portType
    b.   port
    c.   body
    d.   Types

2. Characteristics of SOAP header: (Select 2 correct answers)
    a.   Durability
    b.   Security
    c.   Extensibility
    d.   Modularity

3. Which element of WSDL contains XML schema?
    a.   types
    b.   message
    c.   part
    d.   definitions

4. Which component converts SOAP messages to programming language specific objects required by the Web service?
    a.   Web browser
    b.   SOAP client
    c.   Web server

    d.   SOAP server
5. SOAP communication styles: (Select 2 correct answers)
    a.   RPC
    b.   Document
    c.   Publish/Subscribe
    d.   CORBA
6. Which statement about WSDL is INACCURATE?
    a.   The service element may contain multiple port elements.
    b.   Use of SOAP is specified in the binding element.
    c.   Every port element is associated with a portType element.
    d.   The binding element needs to specify the portType element.
7. The patient wants to know his/her doctor's schedule from the hospital service. Which message exchange pattern is suitable for that service?
    a.   Notification
    b.   Request/response
    c.   One-way
    d.   Solicit/response
8. Two parts of a WSDL document that can be defined separately but complement each other are ... (Select 2 correct answers)
    a.   Abstract description
    b.   Detailed prescription
    c.   Logical design
    d.   Concrete implementation
9. In comparison with WSDL 1.1, which element is removed in WSDL 2.0?
    a.   types
    b.   binding
    c.   operation
    d.   message
10. Which protocol can be used as the transport protocol for SOAP? (Select 2 correct answers)
    a.   TCP
    b.   SMTP
    c.   UDP
    d.   HTTP

Quiz 4

(8/10)

1. Which HTTP method is NOT idempotent?
    a.   Select one:
    b.   `DELETE`
    c.   `PUT`
    d.   `POST`

  e.   `GET`

2.   Referring to the following snippet:

```
[
  {
    "nrp": "c14200001",
    "name": "Sarah Summers"
  },
  {
    "nrp": "c14200002",
    "name": "Bill Winters"
  }
]
```

   What does it contain?

  a.   A list of strings
  b.   An array of objects
  c.   A dictionary of two objects
  d.   Two objects with two name/value pairs

3.   Whitespace characters in JSON are ... (Select 3 correct answers)
  a.   Carriage return
  b.   Vertical tabulation
  c.   Line feed
  d.   Space

4.   Besides digits, what characters may be accepted in JSON numbers? (Select 2 correct answers)
  a.   Minus sign
  b.   Decimal point
  c.   Extra leading zeros
  d.   Infinity token

5.   Which statement is INCORRECT about the resource representation?
  a.   The resource representation is placed in the payload of the HTTP response returned to the client application.
  b.   A resource representation reflects the state of a resource at a particular time.
  c.   The resource representation is solely determined by the server.
  d.   Relationships between resources (objects) in the data model are represented when they are sent to the client.

6.   Beneficial features of JSON: (Select 3 correct answers)
  a.   Support for lists of values

  b. The grammar may never change
  c. Support for cylic graphs
  d. Support for expressing objects

7. Basic design principles of REST are ... (Select 2 correct answers)
  a. Explicit use of HTTP methods
  b. Stateless representation
  c. Passing data in HTML or JSON
  d. Exposing tree-like URIs

8. Which statement is INACCURATE about the issue of stateful vs stateless service?
  a. Stateful services transfer the onus to maintain states to the client applications.
  b. Stateful services are harder to design and build than the stateless ones.
  c. Stateless services perform better than stateful ones.
  d. Stateless services require clients to send complete and independent requests.

9. In JSON strings, how many characters are required to represent a Unicode code point? (Select 2 correct answers)
  a. Eight
  b. Six
  c. Twelve
  d. Four

10. The structure of a URI should be ... (Select 2 correct answers)
  a. Straightforward
  b. Understandable
  c. Composable
  d. Predetermined

Quiz 6

(8/10)

1. How do we align the bounded contexts with the organization?
  a. Splitting the bounded contexts according to business functions or capabilities.
  b. Modeling the bounded contexts as collaborating business parties.
  c. Creating the bounded contexts along business processes.
  d. Decomposing the organization into bounded contexts based on the shared data.

2. How can communications between microservices be seen in parallel with business concepts?
  a. The interfaces of microservices should drive how the organization's business is developed.
  b. To avoid chatty interfaces, communications between microservices must be limited to only passing important business ideas.
  c. The same business terms and forms, sent around the organization, should be reflected in the microservices' interfaces.
  d. New business ideas should be advanced beyond what the microservices can offer.

3. How is resilience provided by microservices?

    a. Every failed microservice has to be quickly and manually isolated from the rest of the system.

    b. Redundancy and replication are the keys to a resilient system.

    c. Multiple bulkheads need to be intentionally built in the microservice-based system.

    d. Service boundaries are logical bulkheads to address the system's failure.

4. With microservices, is mixing in different technologies risky?

    a.

    b. Yes, it demands high investment.

    c. No, due to the microservice's size, the risk is much reduced.

    d. No, it is irrelevant.

    e. Yes, mixing technologies brings complexity and overhead.

5. How do microservices differ from shared libraries? (Select 2 correct answers)

    a. Technology heterogeneity is preserved in microservices.

    b. The shared libraries may become a point of coupling.

    c. The shared libraries naturally support system resiliency.

    d. In microservices, the system's application can be decomposed into smaller components.

6. How do microservices differ from some language modules? (Select 2 correct answers)

    a. Microservices can scale independently.

    b. Microservices lacks the support of the programming language for proper isolation.

    c. Modules have the tendency to become overly coupled to each other.

    d. Modules may be deployed without taking the whole system down.

7. What are the advantages of small services? (Select 2 correct answers)

    a. Easy to debug

    b. Well defined

    c. Highly portable

    d. Cheap to build

8. Why is replaceability easy to accomplish with microservices? (Select 2 correct answers)

    a. The cost to replace small-sized microservices is relatively easy to deal with.

    b. The developers would not be emotionally attached to a microservice or mindful of rewriting it, with just a few hundred lines long.

    c. The risk of replacing one microservice or multiple microservices is equally the same.

    d. Microservices can smoothly replace a legacy system without anyone realizes it.

9. Why is heterogeneity in technology useful?

    a. Getting the right technology for every task.

    b. Avoiding vendor lock-in.

    c. Understanding the technology trends.

    d. Enabling diverse collaboration.

10. Advantages of autonomous services are ... (Select 2 correct answers)

    a. Easily replaceable

    b. Isolated failure

    c. Increased collaboration

    d.   More resilient to attack

RAF

Quiz 1 (90/100)

1. What are characteristics of SOA? (Select 2 correct answers)
    a. Select one or more:
    b. Fault-tolerant
    c. Composable
    d. Secure
    e. Reusable
2. What is a "thin client" in the client-server architecture?
    a. Client with the lowest privileges.
    b. Client having minimal compute resources.
    c. Application code execution hardly occurs on the client.
    d. The client's screen is small in size, so it cannot display big contents.

3. Which element of a message contains key-value pairs?
    a. Message headers
    b. Message body
    c. Message list
    d. Message properties
4. What are the data encoding standards commonly used in Web services? (Select 2 correct answers)
    a. SQL
    b. HTTP
    c. XML
    d. JSON
5. Characteristics of Web services are ... (Select 2 correct answers)
    a. Detachable
    b. Programmable
    c. Self-centered
    d. Platform-independent
6. What are characteristics of a distributed system? (Select 3 correct answers)
    a. Component faults are expected and anticipated
    b. Many servers but one system
    c. Concurrent execution
    d. Providing minimum resource guarantee
7. What is a service? (Select 2 correct answers)
    a. A module
    b. An identity
    c. A component
    d. A port
8. Examples of simple Web services are ... (Select 3 correct answers)
    a. Courier reservation service
    b. News report
    c. Inventory management service
    d. Stock quote information
9. What is "marshalling" in inter-process communication?
    a. Protecting a server against malicious attacks.
    b. Sending a warning to an unresponsive server.
    c. Providing a queue where packets are placed while waiting to be served.
    d. Transforming an object to a data format suitable for transmission among heterogeneous hosts.
10. Which statement is INCORRECT about SOA?
    a. It supports fast and cheap development of applications.
    b. It is a rebrand of Web services.
    c. It is implementation-agnostic.
    d. It is well-suited to bolster business automation.

1. Which communication style is used in this SOAP message?
   a. Document
   b. Publish/Subscribe
   c. RPC
   d. CORBA
2. Which element of WSDL contains the service endpoint(s)?
   a. portType
   b. service
   c. port
   d. Binding
3. Which element renamings occur in WSDL 2.0? (Select 2 correct answers)
   a. The binding element to extends
   b. The description element to definitions
   c. The portType element to interface
   d. The port element to endpoint
4. Which characteristics of a messaging protocol are satisfied by SOAP? (Select 2 correct answers)
   a. Scalable
   b. Compact
   c. Loose coupling
   d. Efficient
5. What does a WSDL document describe? (Select 2 correct answers)
   a. The list of operations of the service
   b. Data formats and procotols to access the service
   c. The location to get more details about the service
   d. Terms and conditions that a user must agree upon before accesing the service
6. What is the *de facto* language for describing the contract that a service exposes to its clients?
   a. BPEL
   b. CDL
   c. WSDL
   d. SOAP
7. Which characteristics are expected of a messaging protocol? (Select 3 correct answers)
   a. Concise
   b. Scalable
   c. Effective
   d. Portable
8. What advantages are offered by SOAP? (Select 3 correct answers)
   a. Secured and fault tolerant
   b. Adaptable
   c. Easy to parse
   d. Able to get past firewalls
9. Characteristics of SOAP header: (Select 2 correct answers)

      a.   Security
      b.   Durability
      c.   Modularity
      d.   Extensibility

10. Which statements are CORRECT about WSDL? (Select 2 correct answers)
      a.   The message elements are nested in the types element.
      b.   The part elements are nested in the message element.
      c.   The message elements are nested in the operation element.
      d.   The operation elements are nested in the portType element.

Quiz 4 (80/100)

1. Which statements are CORRECT about a JSON array? (Select 2 correct answers)
      a.   It surrounds the values with a pair of curly brackets.
      b.   It contains values separated by commas.
      c.   It surrounds the values with a pair of square brackets.
      d.   It contains name/value pairs separated by commas.

2. Which statement is INCORRECT about REST?
      a.   REST is lighter and more concise than SOAP.
      b.   REST defines a few procotols that run on top of HTTP.
      c.   REST is rather resource-centric than message-centric.
      d.   REST was first introduced in Roy Fielding's dissertation.

3. In JSON strings, how many characters are required to represent a Unicode code point? (Select 2 correct answers)
      a.   Twelve
      b.   Eight
      c.   Four
      d.   Six

4. Which statements are CORRECT about JSON? (Select 2 correct answers)
      a.   JSON can specify the meaning of data it contains.
      b.   JSON can be used for data interchange between different systems and platforms.
      c.   JSON is dependent on Java and its related technologies.
      d.   JSON represents numbers as sequences of digits.

5. The structure of a URI should be ... (Select 2 correct answers)
      a.   Straightforward
      b.   Composable
      c.   Predetermined
      d.   Understandable

6. Literal name tokens defined in JSON are ... (Select 2 correct answers)
      a.   none
      b.   false
      c.   null
      d.   Right

7. Which HTTP header is used to negotiate the representation of a resource?
      a.   `application/*`

    b. `Negotiate-*`

    c. `Accept-*`

    d. `Content-*`

8. Standard HTTP headers for content negotiation: (Select 3 correct answers)

    a. `Accept-MIME`

    b. `Accept`

    c. `Accept-Language`

    d. `Accept-Encoding`

9. What are the benefits of statelessness in web services? (Select 2 correct answers)

    a. It reduces the bandwidth required to serve the client.

    b. It encourages the client to involve in processing web services.

    c. It supports scalability to handle increasing demands.

    d. It removes the need to synchronize session data with another application/service.

10. Which ones are valid JSON Numbers? (Select 2 correct answers)

    a. `75.0E+0`

    b. `-0.7500`

    c. `.75`

    d. `07.5`

Quiz 6 mana raff :D

Yan

Quiz 01

1. Examples of simple Web services are … (Select 3 correct answers) Select one or more:
   a. <mark>Inventory management service</mark>
   b. <mark>News report</mark>
   c. <mark>Stock quote information</mark>
   d. <mark>Courier reservation service</mark>
2. Which element of a message contains key-value pairs? Select one:
   a. Message body
   b. Message headers
   c. <mark>Message properties</mark>
   d. Message list
3. What are essential aspects of SOA? (Select 2 correct answers) Select one or more:
   a. <mark>Statelessness</mark>
   b. Anonymity
   c. <mark>Searchability</mark>
   d. Tight coupling
4. Which communication style supports many-to-many?Select one:
   a. <mark>Publish/Subscribe</mark>
   b. Store and Forward
   c. Synchronous Messaging
   d. Remote Procedure Call (RPC)
5. Characteristics of Web services are … (Select 2 correct answers)Select one or more:
   a. <mark>Programmable</mark>
   b. Self-centered
   c. Detachable
   d. <mark>Platform-independent</mark>
6. What are characteristics of SOA? (Select 2 correct answers)Select one or more:
   a. <mark>Reusable</mark>
   b. <mark>Composable</mark>
   c. Fault-tolerant
   d. Secure
7. What are characteristics of a distributed system? (Select 3 correct answers) Select one or more:
   a. <mark>Component faults are expected and anticipated</mark>
   b. <mark>Concurrent execution</mark>

c. Many servers but one system
d. Providing minimum resource guarantee
8. What is a "thin client" in the client-server architecture? Select one:
a. Client with the lowest privileges.
b. Client having minimal compute resources.
c. Application code execution hardly occurs on the client.
d. The client's screen is small in size, so it cannot display big contents.
9. Which statement is INCORRECT about SOA?Select one:
a. It is a rebrand of Web services.
b. It is well-suited to bolster business automation.
c. It supports fast and cheap development of applications.
d. It is implementation-agnostic.
10. On which layer does Web service run? Select one:
a. Transport layer (TCP)
b. Network layer (IP)
c. Application layer (HTTP)
d. Transport layer (UDP)

Quiz 03

1. What is the *de facto* language for describing the contract that a service exposes to its clients?Select one:
a. CDL
b. SOAP
c. WSDL
d. BPEL
2. What are the contents of the SOAP Body element? (Select 2 correct answers)Select one or more:
a. Application-specific data
b. Key-value pairs of metadata
c. Fault message
d. HTTP request or response
3. What advantages are offered by SOAP? (Select 3 correct answers)Select one or more:
a. Easy to parse
b. Able to get past firewalls
c. Secured and fault tolerant
d. Adaptable
4. Which communication style is used in this SOAP message?Select one:
```
<env:Body>
  <w:Report>
    <timestamp>1709250000</timestamp>
    <location>
```

```
        <city>Surabaya</city>
        <state>East Java</state>
        <country>Indonesia</city>
      </location>
      <temperature>31</temperature>
      <humidity>60</humidity>
    </w:Report>
</env:Body>
```

  a. RPC
  b. Document
  c. CORBA
  d. Publish/Subscribe

5. Which characteristics are expected of a messaging protocol? (Select 3 correct answers) Select one or more:
  a. Concise
  b. Effective
  c. Portable
  d. Scalable

6. Two parts of a WSDL document that can be defined separately but complement each other are ... (Select 2 correct answers)Select one or more:
  a. Logical design
  b. Concrete implementation
  c. Abstract description
  d. Detailed prescription

7. Which element renamings occur in WSDL 2.0? (Select 2 correct answers)Select one or more:
  a. The port element to endpoint
  b. The portType element to interface
  c. The binding element to extends
  d. The description element to definitions

8. Elements in Service Implementation of WSDL: (Select 2 correct answers) Select one or more:
  a. transport
  b. binding
  c. port
  d. Types

9. Which element of WSDL contains the service interface? Select one:
  a. types
  b. portType
  c. message
  d. Part

10. Which characteristics of a messaging protocol are satisfied by SOAP? (Select 2 correct answers) Select one or more:
    a. Compact
    b. Loose coupling
    c. Efficient
    d. Scalable

Quiz 04
1. What is content negotiation? (Select 2 correct answers)Select one or more:
    a. It determines how a specific representation is chosen when the resource is called.
    b. It specifies how a resource representation should be presented in the client application.
    c. It is a security mechanism to ensure that the resource representation is valid and not harmful to the client.
    d. It is the mechanism to help the user agent specify the resource representation best suited for the user.
2. Which statement is INACCURATE about the issue of stateful vs stateless service?Select one:
    a. Stateless services require clients to send complete and independent requests.
    b. Stateless services perform better than stateful ones.
    c. Stateful services transfer the onus to maintain states to the client applications.
    d. Stateful services are harder to design and build than the stateless ones.
3. Besides digits, what characters may be accepted in JSON numbers? (Select 2 correct answers)Select one or more:
    a. Decimal point
    b. Infinity token
    c. Minus sign
    d. Extra leading zeros
4. Code points that must be escaped in JSON strings are … (Select 3 correct answers)   Select one or more:
    a. solidus
    b. hex digits representing any Unicode code point
    c. Delete
    d. quotation mark
5. With regards to objects, which aspects are NOT specified by JSON syntax? (Select 2 correct answers)Select one or more:
    a. Separator of name and value
    b. Uniqueness of names

   c. Order of values

   d. Data type of names

6. Basic design principles of REST are … (Select 2 correct answers)Select one or more:

   a. Explicit use of HTTP methods

   b. Passing data in HTML or JSON

   c. Exposing tree-like URIs

   d. Stateless representation

7. Which HTTP methods should NOT include a payload? (Select 2 correct answers)Select one or more:

   a. PUT

   b. GET

   c. DELETE

   d. POST

8. Which ones are structural characters in JSON? (Select 3 correct answers)Select one or more:

   a. , (comma)

   b. [] (brackets)

   c. {} (braces)

   d. ; (semicolon)

9. Proper URI structure: (Select 2 correct answers)Select one or more:

   a. No query strings

   b. No numeric digit

   c. No script file extensions

   d. No hyphens or underscores

10. Drawbacks of JSON: (Select 2 correct answers)Select one or more:

   a. Semantics must be established separately

   b. No support for Unicode characters

   c. No support for real numbers

   d. No support for binary data

Quiz 06

1. With microservices, is mixing in different technologies risky?Select one:

   a. Yes, it demands high investment.

   b. Yes, mixing technologies brings complexity and overhead.

   c. No, it is irrelevant.

   d. No, due to the microservice's size, the risk is much reduced.

2. What are some of the things that need more attention to leverage on the benefits of microservices? (Select 2 correct answers)Select one or more:

   a. Adopting microservices wholeheartedly by following the guidelines.

   b. Ensuring scalability and resilience of the system.

    c. Fast developing the microservices to avoid bottlenecks among teams.

    d. Better dealing with deployment, testing, and monitoring.

3. What are characteristics of microservices? (Select 2 correct answers)Select one or more:

    a. Isolated environment

    b. Loose coupling

    c. High cohesion

    d. Modular monolith

4. How can communications between microservices be seen in parallel with business concepts?Select one:

    a. The same business terms and forms, sent around the organization, should be reflected in the microservices' interfaces.

    b. To avoid chatty interfaces, communications between microservices must be limited to only passing important business ideas.

    c. The interfaces of microservices should drive how the organization's business is developed.

    d. New business ideas should be advanced beyond what the microservices can offer.

5. How do microservices differ from some language modules? (Select 2 correct answers) Select one or more:

    a. Modules have the tendency to become overly coupled to each other.

    b. Microservices can scale independently.

    c. Modules may be deployed without taking the whole system down.

    d. Microservices lacks the support of the programming language for proper isolation.

6. What are the advantages of small services? (Select 2 correct answers)Select one or more:

    a. Easy to debug

    b. Well defined

    c. Cheap to build

    d. Highly portable

7. How should scaling be carried out with microservices?Select one:

    a. Replicate only the required microservices.

    b. Run parts of every microservice on smaller, less powerful hardware.

    c. Scale the entire microservices as a whole.

    d. Burst the on-demand microservices in cloud.

8. How can organizational alignment be achieved when the microservice architecture is adopted?Select one:

    a. Smaller development teams, each works on particular microservices, are formed and composed of co-located people.

b. The ownership of all microservices is shifted to a small team comprising people working co-located.
c. The application is broken into microservices aligned to the organization.
d. The microservice architecture tries to find a balance between team size and productivity.

9. What are the guidelines to decompose a system's application into bounded contexts? (Select 2 correct answers)Select one or more:
    a. In a nested fashion, separating it according to the organizational structure.
    b. Making sure that the nested services are always visible to the consumers.
    c. Breaking it all the way down as needed.
    d. Splitting it sparingly, or else it breaks apart.

10. How does the deployment of a microservice-based application differ from that of a monolithic application? (Select 2 correct answers)Select one or more:
    a. Change to a line of code requires the whole monolithic application to be deployed.
    b. Change to a line of code requires the entire microservices to be deployed.
    c. Change to a line of code requires just the affected microservice to be deployed.
    d. Change to a line of code requires just the affected part of the monolithic application to be deployed.