

Assignment 4.

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- ① → SOAP fault is caused due to client or server failure : State T/F with justifies.
→ True.
- ② → Give the use of SOAP actor "attribute"?
SOAP actor element is specifically used to address the header element to a specific endpoint - this attribute is used to annotate an extension element.
- ③ → what do you mean by wire protocol & transport protocol.
→ It generally refers to communication protocol higher than the physical layer. In contrast to transport protocol at the protocol level (like TCP or UDP). the term wire protocol is used to describe a common way to exchange information at the application level.
- ④ → What is SOAP message path?
→ it is the set of SOAP nodes through which single SOAP message passes, including the initial SOAP sender zero, or more SOAP intermediaries and an ultimate SOAP receiver.

- ⑤ give the use of SOAP must understand attribute.
 → To indicate whether a header entry is mandatory or optional for the recipient to process)
- ⑥ Explain short Apache Axis environment.
 → ① Apache Axis is essentially a SOAP engine a framework for constructing SOAP processors such as clients, servers, gateways, etc.
- ② The current version of Axis is written in Java, but a C++ implementation of the client side of Axis is being developed.

- ⑦ What is SOAP message path?
 → ① SOAP message path is the set of SOAP nodes.
 ② In the SOAP node a single SOAP message passes, including the initial SOAP sender, zero or more SOAP intermediaries, and so ultimate SOAP receiver.

Give the use of soap must understand attribute.

① The soap must understand attribute can be used to indicate whether a header entry is mandatory or optional for the recipient to process.

② If you add mustunderstand = "1" to a child element of the header element it indicates that the receiver processing the header must recognize the element.

Q Write a example of document styled SOAP body.

→ A Soap body is the area of the soap message where the application-specific XML data being exchanged in the message is placed.

The <Body> element must be present and must be an immediate child of the envelope.

```
<env: Envelope  
    xmlns: soap = "http://www.w3.org/2003/05/  
    /soap-envelope">  
    <env: Header>  
        <fac: Transaction - id  
            xmlns: it = "http://www.transaction.com"
```

/ transactions"
env: mustUnderstand = "1"
S12.
</env: Header>
<env: Body>
<po: purchaseorder orderDate => 2004-12-
02">
xm:ns:m = "http://www.plastics-supply
.com/pos">
<po: from>
<po: accountName> Right plastics </po:
accountName>
<po: accountNumber> PSC-0343-02.
</po: accountNumber>
</po: from>
<po: to>
<po: supplierName> plastics supplies.
Inc. </po: supplierName>
<po: supplierAddress> Yarra Valley
Melbourne </po: supplierAddress>

</po: to>
<po: product>

<po: productName> injection molder
<po: product - name>
<po: product - model> G-100T </po:
product - model>
<po: quantity> 2 </po: quantity>
</po: product>

</po: purchaseOrder>
</env: Body>
</env: Envelope>

Q. Draw the structure of SOAP with attachments, give an example and explain it.

- ① SOAP is standard messaging protocol used by web services.
- ② SOAP's primary application in inter-application communication
- ③ SOAP codifies the use of XML as an encoding scheme for request & response parameters using HTTP. as a means for transport.

Service requestor
Application object
(client).

↓
SOAP based.
middleware.

Service provider
Application object
(Service provider)

↑
SOAP based.
middleware.

SOAP message
exchanged on
top of HTTP, SMTP
or other Transport
protocol.

A SOAP message in an ordinary XML document containing the following elements.

① Envelope : Defines the start & the end of the message. It is a mandatory element

② Header : contains any optional attribute of the message either at an intermediary point or at time ultimate end-point. It is an optional element.

③ Body : Contains the XML data comprising the message being sent. It is a mandatory element.

④ Fault : An optional fault element that provides information about error that occurs while.

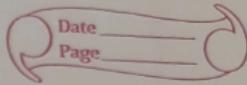
Processing the message.

SOAP Envelope

Header block

SOAP body

body block



Q. what are advantages and disadvantages of SOAP.

→ Advantage of SOAP.

- Simplicity.
- portability.
- firewall friendliness
- use of open standards

Disadvantages of SOAP.

- Too much reliance on HTTP.
- Statelessness
- serialization by value and not by references.