

Assignment

Page No.:

Date:

youva

- Q1 "SOAP Fault is caused due to client or Server Failure". State T/F with justification.

Ans

SOAP Fault - A Soap Fault is an error in a SOAP communication resulting from incorrect message format, header processing problem, or incompatibility of applications.

SOAP Fault are generated by receivers to report business logic error or unexpected condition.

The SOAP < Fault > element is used to transmit error & status information within a SOAP message.

The < Fault > element is a child of the body element.

SOAP < Fault > Element Content

- Client - Message was incorrectly formatted or is missing information

- Server - Problem with Server that prevented message from being processed.

2) Give the uses of SOAP actor attribute
Ans The SOAP actor attribute is used to address the Header element to a specific endpoint.

A SOAP message may travel from a Sender to a receiver by passing different endpoints along the message path. However, not all parts of a SOAP message may be intended for the ultimate endpoint; instead, it may be intended for one or more of the endpoints on the message path.

Syntax -

Soap:actor = "URI"

3) What do you mean by Wire protocol & transport protocol?

Ans.

- Wire protocol -
 - Wire protocol refers to a way of getting data from point to point. A wire protocol is needed if more than one application has to interoperate. It generally refers to communication protocol higher than the physical layer. In contrast to transport protocol at the transport level the term wire protocol is used to describe a common way to exchange information at application level.



It refers to an application layer protocol and defines all the required attribute for the data exchange.

Transport Protocol -

Transport protocol run over the best-effort IP layer to provide a mechanism for application to communicate with each other without directly interacting with the IP layer.

4] What is SOAP Message Path?

Ans A SOAP message is transmitted betn two nodes; that is from a SOAP Sender to a SOAP receiver. However, in more complex case, messages can be processed by SOAP message and then send it to the next node.

5) Give the uses of SOAP must understand attribute.

Ans The must understand attribute

The SOAP must understand attribute can be used to indicate whether a header entry is mandatory or optional for the recipient to process. If you add mustUnderstand = "1" to a child element of the Header element

It indicate that the receiver processing the header must recognize

the element.

- 6] Explain in short Apache Axis environment.

Ans There are two kinds of environment variable that affects the Apache HTTP Server.

First, there are the environment variable controlled by the underlying operating system.

Apache Axis is one of the best free tools available for implementing & deploying Web Services. It also for implementing then the Web Services clients. In this article we will create a simple, but complete Web Service & a client for this service step-by-step. Article will be explanatory as much as possible to succeed you in implementing it yourself alone after completing this tutorial.

- 7] How errors are handled using Soap Fault, give an example for adding fault in XML of SOAP message

SOAP errors are handled using a specialized envelope known as a Fault Envelope. If an error occurs while the server processes a SOAP message, it constructs a SOAP Fault envelope and sends it back to the client.



Here's a typical SOAP Fault

Public class StockQuantity {

 Public int getQty (String item)
 throws org.apache.soap.SOAPEx-

 int inStockQty = (int) (java.

 if (item.equalsIgnoreCase ("Fault"))

 throw new org.apache.soap.
 org.apache.)

 return inStockQty;

}

}

Q) advantages and disadvantage of
SOAP

Ans Advantage -

1) SOAP has its own Security known
 as WS Security

2) Language and Platform Independent

- Simplicity

- Portability

- Firewall Friendliness

- Use of open Standard

- Interoperability

DisAdvantages -

- Too much reliance on HTTP
- Statelessness
- Serialization by value & not by reference
- When used in hard Water, Soap can produced a Scum
- ⚡

q7) What is SOAP? Give the Structure of SOAP message, explain it.

Ans

SOAP -

SOAP is a lightWeight XML-base protocol that is used for the exchange of information in decentralized, distributed application environment. You can transmit SOAP message in any way that the application requires, as long as both the client & the Server use the same method.

Structure of SOAP message -

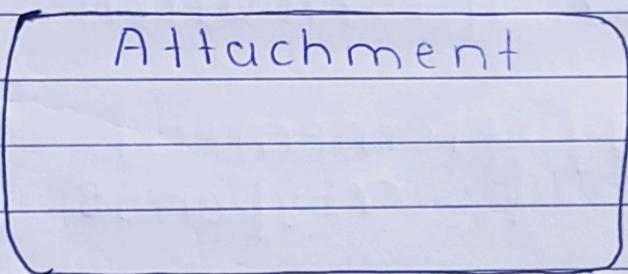
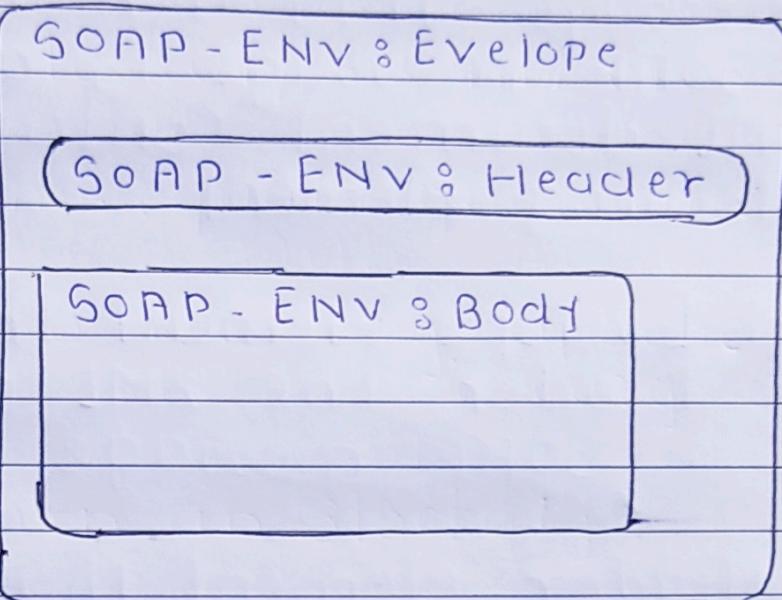
A SOAP message is encoded as an XML document consisting of an `<Envelope>` element, which contain an optional `<Header>` element, & a mandatory `<Body>` element.



10) Write detail on SOAP With attachment.

Ans

SOAP with Attachment (SwA) or MIME
For Web Services is the use of Web
Services to send and receive files
With a combination of SOAP & MIME,
Primarily over HTTP



Note that SwA is not a new specification, but rather a mechanism for using the existing SOAP and MIME facilities to perfect the transmission of files using Web Services invocation.

12) Write an example of document styled SOAP body

A document style SOAP message body contain an XML document that can be validated against a defined XML Schema. It is a more customizable & flexible approach as the protocol relies on the predefined Schema to define determine the structure of the SOAP message. That means we are free to customize the SOAP message as much as we want.

First create a Web Service endpoint Interface which will contain the declaration of all the method we want to include in the Web Service. Create a class which provide the implementation of Endpoint interface. Finally create an Endpoint publisher which deploy the Web Service & create & publishes the endpoint at the specified address.

Date: Yousuf
Q3) Write the anatomy of SOAP message and describe each element

Ans A SOAP message is an ordinary XML document containing the following elements: Envelope - Defines the start & the end of the message. It is a mandatory element.

A SOAP message is an ordinary XML document containing the following elements:

- An Envelope element that identifies header the XML document as a SOAP message
- A Header element that contains header information
- A Body element that contains call & response information
- A Fault element containing error and status information

