

## Assignment 4

1 "SOAP" fault is caused due to client or server failure". State T/F with justification.  
→ SOAP faults are generated by receivers to report business logic errors or unexpected conditions.

- True.

2. Give the use of SOAP actor attribute.  
→ The SOAP actor global attribute can be used to indicate the recipient of a header element. The value of SOAP actor attribute is a URI. The special URI "<http://schemas.xmlsoap.org/soap/actor/0>" indicates that the header element is intended for the very first SOAP application that processes the message.

3. What do you mean by wire protocol and transport protocol?

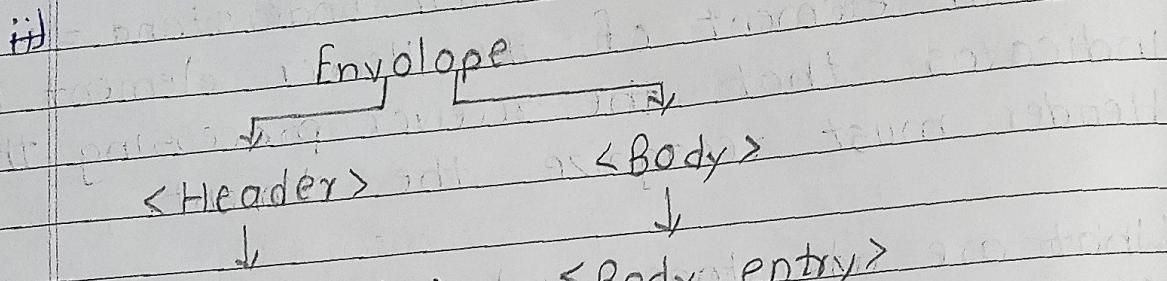
→ It generally refers to communication protocols higher than the physical layer. In contrast to transport protocols at the transport layer (TCP or UDP like), the term wire protocol is used to describe a common ways to exchange information at the application level.

4. What is SOAP message path?

→ The SOAP message path is the set of SOAP nodes through which a single SOAP message passes, including the initial SOAP sender, zero or more SOAP intermediaries, and an ultimate SOAP receiver.

Q.7 What is SOAP? Give the structure of SOAP message, explain it.

→ i) A SOAP message is encoded as an XML document, consisting of an `<Envelope>` element, which contains an optional `<Header>` element, and a mandatory `<Body>` element. The `<Fault>` element, contained in `<Body>`, is used for reporting errors. The SOAP envelope -



SOAP envelop

header  
block

body  
block

Q.8 Write in detail on SOAP with attachments.

- SWA (SOAP with Attachments also known as MIME for web services)
- MTOM Attachments
  - Set the enable MTOM request property to true

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- Add a file to the attachment tab as it was described above.
- In the part column, select the cid identifier that your request body specifies.

Q.9. Explain in short Apache Axis environment.

- i) Apache Axis is a SOAP toolkit that makes it easy to create, delay and consume web services, by using Axis, we will be able to quickly convert existing Java functionality into web services.
- ii) To study and explore the features of java based SOAP implementation we choose to use Apache Axis, a java based toolkit from Apache software foundation for developing SOAP based web services.

Q.10. Write an example of document styled SOAP body.

→ The SOAP body element is the element in the a SOAP message that contains the main part of the to be processed by either client or web service. while element in a SOAP message.

Here is a example of SOAP body element.

<?xml version = "1.0"?>

<env:Envelope xmlns:env = "http://www.w3.org/2001/12/soap-envelope">

<env:Header>

</env:Header>

<env:Body>

</env:Body>

</env:Envelope>

e.g. <env:Envelope>

  xmlns:SOAP = "http://www.w3.org/2003/05/soap-

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envelope">  
<env:Header>  
<tx:Transaction-id  
xmlns:t="http://www.transaction.com/transactions"  
env:mustunderstand="1">  
</env:Header>  
<env:Body>  
<po:purchaseOrder orderDate="2004-12-01  
xmlns:m="http://www.plastics-supply-  
com/pos">  
<po:from>  
<po:accountName>RightPlastics</po:account  
Name>  
<po:accountNumber>psc-0343-02  
</po:accountNumber>  
<po:from>  
<po:to>  
<po:supplierAddress>Yatra Valley Melbou  
ne</po:supplierAddress>  
<po:supplierName>Plastics Supplies In  
</po:supplierName>  
<po:supplierAddress>Yatra Valley Melbou  
ne</po:supplierAddress>  
</po:SupplierAddress>  
</po:to>  
<po:product>  
<po:product-name>injection molder  
</po:product-name>  
<po:product-mode>G-100T</po:prod  
-model>  
<po:quantity>2</po:quantity>

```
</po:product>
</po:PurchaseOrder>
<env:Body>
</env:Envelope>
```

Q.11. What is SOAP? Give the structure of SOAP message explain it.

→ \* SOAP:-

- i) SOAP stands for simple object Access Protocol.
- ii) SOAP is a lightweight XML based protocol.
- iii) SOAP is used for the exchange of information in decentralized, distributed application environments.
- iv) SOAP is built upon the XML specification and works with the HTTP protocol.

\* Structure of SOAP message:

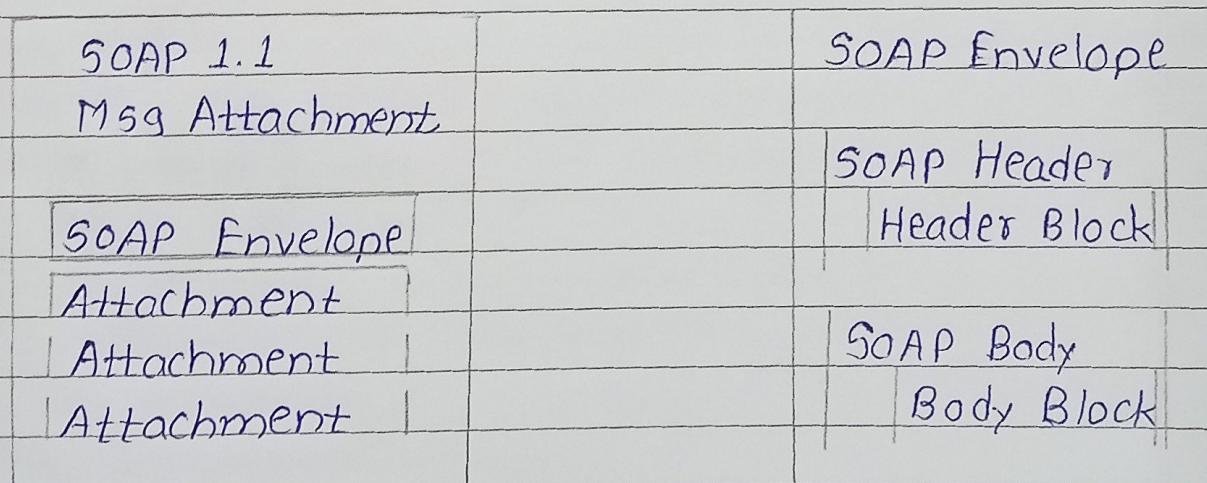


Fig. Structure of SOAP Message

The structure format of a SOAP message contains the following elements.