Assignment No:-5

Q.1) 2 Marks each questions:

1) "SOAP fault is caused due to client or server failure" state T/F with justification.

→
- SOAP provides a model for handling
- Fault arise.
- It distingiushes between the conditions that result in a Fault and ability to signal that fault to the originator of the faulty message or another node. The SOAP.<Body> is the place where Fault information is placed.
- A SOAP message can carry only one faults block.
- Fault is an optional part of SOAP.
- For HTTP binding a sucessful responce is linked to the 200 to 299 range of status code.
- SOAP Fault is linked to the 500 to 599 range of status code.

2) Give the use of SOAP actor attribute.

→ The actor attribute is optional, but if it is used, it must appear in a SOAP HeaderElement object. Its purpose is to indicate the recipient of a header element. The default actors is the message's ultimate recipient that is, if no actor attribute is supplied the message goes directly to the ultimate recipient.

An actor is an application that can both receive SOAP message and forward them to the next actors. the ability to specify one or more actors as intermediatate recipients makes it possible to route a message to multiple.

recipients and to supply header information that applies specifically to each of the recipients.

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

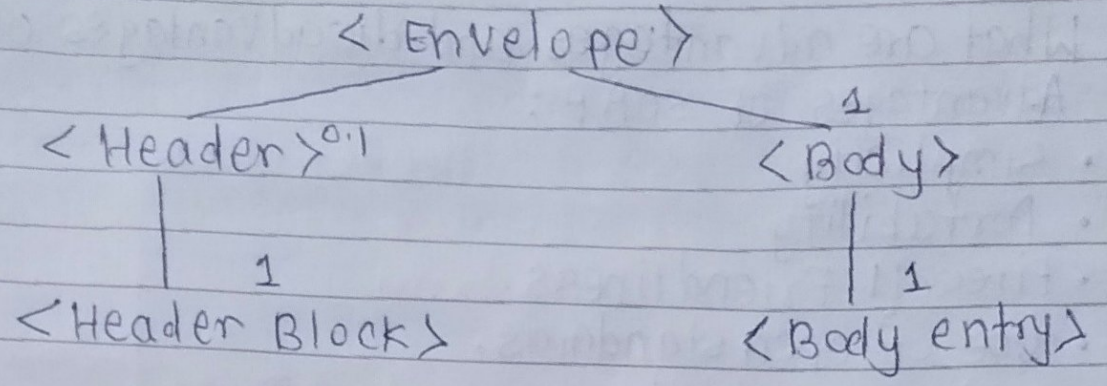
→ 1) In computer networking, a wire protocol refers to a way of getting data from point to point. A wire protocol is needed if more than one application has to interoperate. It generally refers to communication protocols higher than the physical layer.

2) Transport protocols run over the best effort IP layer to provide a mechanism for applications to communicate with each other without directly interacting with IP layer. In the IP Protocol stack the most widely used two transport protocols are user Datagram protocol & the transport Control protocol.

Q.4) What is SOAP message path?

→
- SOAP is based on message exchanges
- message are seen as envolep where the application enclosed the data to be sent.
- A SOAP message consist of an <Envelope> element containg an optional <Header> and <Body> element.
- The Content of these are application defined and not a part of SOAP specification.
- A SOAP <Header> contains block of information how to message is to be processed
- The SOAP <Body> is where the main end-to-end information conveyed in a SOAP

message must be carried.



Q.5) Give the use of SOAP must understand attribute?

→ The SOAP must understand attribute can be used to indicate where a header entry is mddatory or optional for the recipient to process.

If you add must understand = 1 to a child element of the header element it indicates that the reciever processing the header must reconize the element. If the resiver does not recognize the element it will fail when processing header.

syntax:

soap: must understand = "0/1".

Q.6) Explain in short Apache Axis environment.

→ Apache Axis is a SOAP toolkit that makes it easy to create, deploy, & consume web services. By using Axis, we will be able to quickly convert existing Java functionality into web services.

To study & 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.2) 4 Marks each questions:

1) What are advantages and disadvantages of SOAP.

→ Advantages OF SOAP:
- Simplicity.
- Portability
- Firewall Friendliness.
- Use of open standards.
- Interoperability
- Universal acceptances.

Disadvantages of SOAP:
- Too much reliance on HTTP.
- statelessness.
- serialization by value and not by references.

4) Write in detail on SOAP with attachments.

→ SWA (SOAP with Attachements also known as MIME For web services)
- MTOM Attachments.
- set the enable MTOM request property to true.
- Add a file to the attachement tab as it was described above.
- In the part Coloumn, select the Cid identifier that your request body specifies.

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

9) Write the anatomy of SOAP message and describe each element

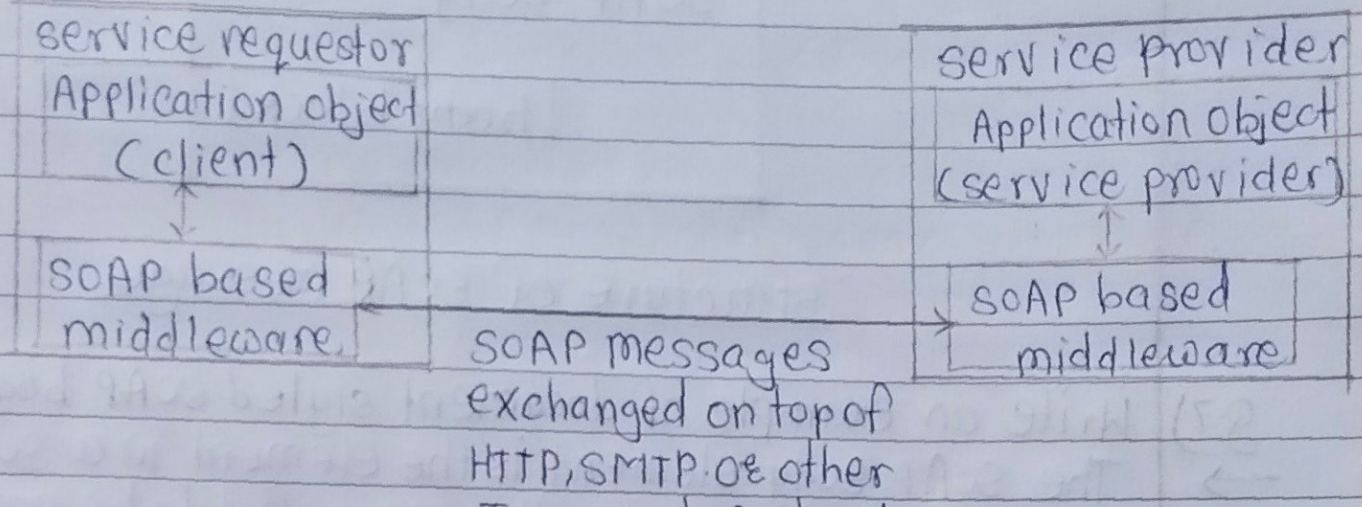
8) What is SOAP? Give the structure of SOAP message, explain it.

→ 1) "SOAP is the standard messaging protocol

used by web services.

ii) SOAP's Primary application in inter application communication.

iii) SOAP codifies the use of XML as an encoding scheme for request & response parameters using HTTP as a means for transport.



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

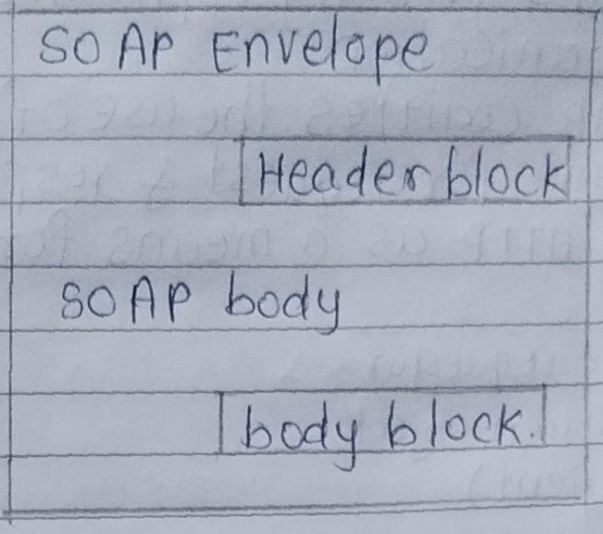
i) Envelope = Defines the start & the end of the message. It is a mandatory element.

ii) Header = Contains any optional attributes of the message used in processing the message, either at an intermediary point or at the ultimate end-point. It is an optional element.

iii) Body = Contains the XML data comprising the message being sent. It is a mandatory element.

iv) Fault = An optional Fault element that provides information about error that occurs while

processing the message.



Structure of SOAP message.

Q.7) Write an example of document styled SOAP body.

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

Here is a example of SOAP Body element.

```
<ixml 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>
```