SOAP - FAULT ELEMENT

If an error occurs during processing, the response to a SOAP message is a SOAP fault element in the body of the message, and the fault is returned to the sender of the SOAP message.

The SOAP fault mechanism returns specific information about the error, including a predefined code, a description, and the address of the SOAP processor that generated the fault.

Points to Note

Below mentioned are few important points about SOAP fault element to take note of −

- A SOAP message can carry only one fault block.
- Fault is an optional part of a SOAP message.
- For HTTP binding, a successful response is linked to the 200 to 299 range of status codes.
- SOAP Fault is linked to the 500 to 599 range of status codes.

Sub-elements of Fault

The SOAP Fault has the following sub elements −

Sub-element	Description
<faultCode>	It is a text code used to indicate a class of errors. See the next Table for a listing of predefined fault codes.
<faultString>	It is a text message explaining the error.
<faultActor>	It is a text string indicating who caused the fault. It is useful if the SOAP message travels through several nodes in the SOAP message path, and the client needs to know which node caused the error. A node that does not act as the ultimate destination must include a *faultActor* element.
<detail>	It is an element used to carry application-specific error messages. The detail element can contain child elements called detail entries.

SOAP Fault Codes

The faultCode values defined below must be used in the *faultcode* element while describing faults.

Error	Description
SOAP-ENV:VersionMismatch	Found an invalid namespace for the SOAP Envelope element.
SOAP-ENV:MustUnderstand	An immediate child element of the Header element, with the mustUnderstand attribute set to "1", was not understood.
SOAP-ENV:Client	The message was incorrectly formed or contained incorrect information.
SOAP-ENV:Server	There was a problem with the server, so the message could not proceed.

SOAP Fault Example

The following code is a sample Fault. The client has requested a method named

ValidateCreditCard, but the service does not support such a method. This represents a client request error, and the server returns the following SOAP response −

```xml
<?xml version='1.0' encoding='UTF-8'?>

<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/1999/XMLSchema">

    <SOAP-ENV:Body>

        <SOAP-ENV:Fault>
            <faultcode xsi:type="xsd:string">SOAP-ENV:Client</faultcode>

            <faultstring xsi:type="xsd:string">
                Failed to locate method (ValidateCreditCard) in class (examplesCreditCard)
at /usr/local/ActivePerl-5.6/lib/site_perl/5.6.0/SOAP/Lite.pm line 1555.
            </faultstring>

        </SOAP-ENV:Fault>
    </SOAP-ENV:Body>

</SOAP-ENV:Envelope>
```