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The Java EE 5 Tutorial

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SOAP Fault Example

The example `SOAPFaultTest.java` , based on the code fragments in the sections <u>Creating and Populating a `SOAPFault` Object</u> and <u>Retrieving Fault Information</u>, creates a message that has a `SOAPFault` object. It then retrieves the contents of the `SOAPFault` object and prints them. You will find the code for `SOAPFaultTest` in the following directory:

  tut-install/javaeetutorial5/examples/saaj/fault/src/

Like `HeaderExample` , the `SOAPFaultTest` class contains code that allows you to generate either a SOAP 1.1 or a SOAP 1.2 message.

Building and Running the SOAP Fault Example

 To build the program using NetBeans IDE, follow these steps:

1. In NetBeans IDE, choose Open Project from the File menu.

2. In the Open Project dialog, navigate to *tut-install*/javaeetutorial5/examples/saaj/ .

3. Select the `fault` folder.

4. Select the Open as Main Project check box.

5. Click Open Project.

   A Reference Problems dialog appears. Click Close.

6. Right-click the `fault` project and choose Resolve Reference Problems.

7. In the Resolve Reference Problems dialog, select the first of the missing JAR files and click Resolve.

   The missing files are `activation.jar` , `javaee.jar` , and `appserv-ws.jar` .

8. Navigate to the *as-install*/lib/ directory.

9. Select the missing JAR file (`activation.jar` , for example) and click Open.

   In the Resolve Reference Problems dialog, all the files have green check marks to the left of their names.

10. Click Close.

11. Right-click the project and choose Build.

 To run the program using NetBeans IDE, follow these steps:

1. Right-click the `fault` project and choose Properties.

2. Select Run from the Categories tree.

3. In the Arguments field, type the following:

```
1.1
```

   This argument specifies the version of SOAP to be used in generating the message.

4. Click OK.

5. Right-click the project and choose Run.

6. Right-click the project and choose Properties.

7. Select Run from the Categories tree.

8. In the Arguments field, type the following:

```
1.2
```

9. Click OK.

10. Right-click the project and choose Run.

To build and run `SOAPFaultTest` using Ant, go to the directory *tut-install*/javaeetutorial5/examples/saaj/fault/ . Use one of the following commands:

```
ant run-fault -Dsoap=1.1
```

```
ant run-fault -Dsoap=1.2
```

When you run `SOAPFaultTest` to generate a SOAP 1.1 message, you will see output like the following (line breaks have been inserted in the message for readability):

```
Here is what the XML message looks like:

<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
<SOAP-ENV:Header/><SOAP-ENV:Body>
<SOAP-ENV:Fault><faultcode>SOAP-ENV:Client</faultcode>
<faultstring>Message does not have necessary info</faultstring>
<faultactor>http://gizmos.com/order</faultactor>
<detail>
<PO:order xmlns:PO="http://gizmos.com/orders/">
Quantity element does not have a value</PO:order>
<PO:confirmation xmlns:PO="http://gizmos.com/confirm">
Incomplete address: no zip code</PO:confirmation>
</detail></SOAP-ENV:Fault>
</SOAP-ENV:Body></SOAP-ENV:Envelope>

SOAP fault contains:
 Fault code = {http://schemas.xmlsoap.org/soap/envelope/}Client
 Local name = Client
 Namespace prefix = SOAP-ENV, bound to http://schemas.xmlsoap.org/soap/envelope/
 Fault string = Message does not have necessary info
 Fault actor = http://gizmos.com/order
 Detail entry = Quantity element does not have a value
 Detail entry = Incomplete address: no zip code
```

When you run SOAPFaultTest to generate a SOAP 1.2 message, the output looks like this:

```
Here is what the XML message looks like:

<env:Envelope xmlns:env="http://www.w3.org/2003/05/soap-envelope">
<env:Header/><env:Body>
<env:Fault>
<env:Code><env:Value>env:Sender</env:Value></env:Code>
<env:Reason><env:Text xml:lang="en-US">
Message does not have necessary info
</env:Text></env:Reason>
<env:Role>http://gizmos.com/order</env:Role>
<env:Detail>
<PO:order xmlns:PO="http://gizmos.com/orders/">
Quantity element does not have a value</PO:order>
<PO:confirmation xmlns:PO="http://gizmos.com/confirm">
Incomplete address: no zip code</PO:confirmation>
</env:Detail></env:Fault>
</env:Body></env:Envelope>

SOAP fault contains:
 Fault code = {http://www.w3.org/2003/05/soap-envelope}Sender
 Local name = Sender
 Namespace prefix = env, bound to http://www.w3.org/2003/05/soap-envelope
 Fault reason text = Message does not have necessary info
 Fault role = http://gizmos.com/order
 Detail entry = Quantity element does not have a value
```

```
Detail entry = Incomplete address: no zip code
```

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