

**МИНИСТЕРСТВО НАУКИ И ВЫСШЕГО ОБРАЗОВАНИЯ
РОССИЙСКОЙ ФЕДЕРАЦИИ**
ФЕДЕРАЛЬНОЕ ГОСУДАРСТВЕННОЕ БЮДЖЕТНОЕ ОБРАЗОВАТЕЛЬНОЕ
УЧРЕЖДЕНИЕ ВЫСШЕГО ОБРАЗОВАНИЯ
**«БЕЛГОРОДСКИЙ ГОСУДАРСТВЕННЫЙ
ТЕХНОЛОГИЧЕСКИЙ УНИВЕРСИТЕТ им. В. Г. ШУХОВА»**
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ИНСТИТУТ ИНФОРМАЦИОННЫХ ТЕХНОЛОГИЙ И УПРАВЛЯЮЩИХ СИСТЕМ

Лабораторная работа №2

по дисциплине: Тестирование программных систем
тема: «SoapUI как инструмент эмуляции сервисов»

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Лабораторная работа №2

SoapUI как инструмент эмуляции сервисов

Цель работы: изучить принципы работы со средством эмуляции работы веб сервисов.

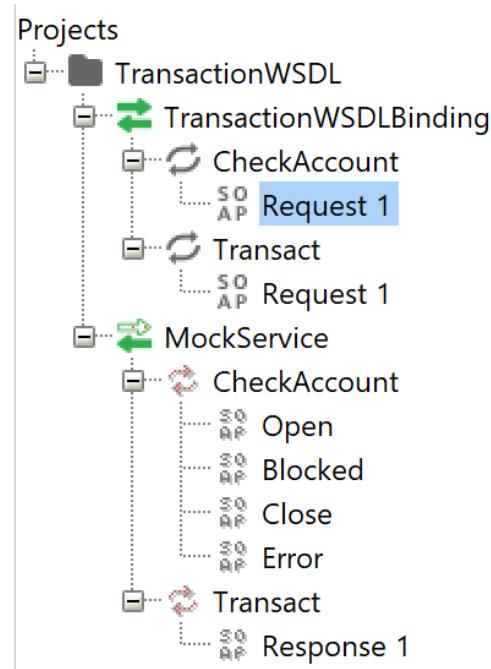
Для операции CheckAccount реализовать: - Возвращать Close, Blocked, Open при получении определенных значений

AccountNumber (значения выбрать самостоятельно).

- Для остальных значений Account Number возвращать ошибочный ответ.
- В AccountNumber всегда возвращать входное значение.
- Name и Surname в запросе указывать свое.

Ход выполнения работы

Дерево проекта:



Request 1:

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"  
xmlns:wsc="http://bank/schema/WSCommonTypes">  
  <soapenv:Header/>  
  <soapenv:Body>  
    <wsc:CheckAccountRequest>  
      <wsc:AccountNumber>1000</wsc:AccountNumber>  
      <wsc:Name>Артур</wsc:Name>  
      <wsc:Surname>Игнатьев</wsc:Surname>  
      <wsc:Passport>55 55 5555</wsc:Passport>  
    </wsc:CheckAccountRequest>  
  </soapenv:Body>  
</soapenv:Envelope>
```

Response Open:

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"  
xmlns:wsc="http://bank/schema/WSCommonTypes">  
  <soapenv:Header/>  
  <soapenv:Body>  
    <wsc:CheckAccountResponse>  
      <wsc:AccountNumber>$ {accountNumber}</wsc:AccountNumber>  
      <wsc>Status>Open</wsc>Status>  
    </wsc:CheckAccountResponse>  
  </soapenv:Body>  
</soapenv:Envelope>
```

Response Blocked:

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"  
xmlns:wsc="http://bank/schema/WSCommonTypes">  
  <soapenv:Header/>  
  <soapenv:Body>  
    <wsc:CheckAccountResponse>  
      <wsc:AccountNumber>$ {accountNumber}</wsc:AccountNumber>  
      <wsc>Status>Blocked</wsc>Status>  
    </wsc:CheckAccountResponse>  
  </soapenv:Body>  
</soapenv:Envelope>
```

Response Close:

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"  
xmlns:wsc="http://bank/schema/WSCommonTypes">  
  <soapenv:Header/>  
  <soapenv:Body>  
    <wsc:CheckAccountResponse>  
      <wsc:AccountNumber>$ {accountNumber}</wsc:AccountNumber>  
      <wsc>Status>Close</wsc>Status>  
    </wsc:CheckAccountResponse>  
  </soapenv:Body>  
</soapenv:Envelope>
```

Response Error:

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"  
xmlns:wsc="http://bank/schema/WSCommonTypes">  
  <soapenv:Header/>  
  <soapenv:Body>  
    <wsc:CheckAccountResponse>  
      <wsc:AccountNumber>$ {accountNumber}</wsc:AccountNumber>  
      <wsc>Status>Error</wsc>Status>  
    </wsc:CheckAccountResponse>  
  </soapenv:Body>  
</soapenv:Envelope>
```

SCRIPT для CheckAccount MockService:

```
def groovyUtils = new com.eviware.soapui.support.GroovyUtils(context)  
def holder = groovyUtils.getXmlHolder(mockRequest.requestContent)  
holder.declareNamespace("wsc", "http://bank/schema/WSCommonTypes")  
  
def accountNumber =  
holder.getNodeValue("//wsc:CheckAccountRequest/wsc:AccountNumber")  
  
log.info("Received AccountNumber: " + accountNumber)  
  
context.accountNumber = accountNumber  
  
if (accountNumber == "1000") {  
  log.info("Returning Open response")  
  return "Open"  
} else if (accountNumber == "2000") {  
  log.info("Returning Blocked response")  
  return "Blocked"  
} else if (accountNumber == "3000") {
```

```

log.info("Returning Close response")
return "Close"
} else {
    log.info("Returning Error response for account: " + accountNumber)
    return "Error"
}

```

Запрос с 1000(Open):

The screenshot shows the SoapUI interface with two panes. The left pane displays the XML structure of a SOAP request, and the right pane shows the XML structure of a SOAP response. Both requests and responses are for a 'CheckAccountRequest' with account number 1000.

Request XML:

```

<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:wsc="http://bank/schema">
  <soapenv:Header>
  <wsc:CheckAccountRequest>
    <wsc:AccountNumber>1000</wsc:AccountNumber>
    <wsc:Name>Артур</wsc:Name>
    <wsc:Surname>Инатьев</wsc:Surname>
    <wsc:Passport>55 55 5555</wsc:Passport>
  </wsc:CheckAccountRequest>
  </soapenv:Body>
</soapenv:Envelope>

```

Response XML:

```

<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:wsc="http://bank/schema">
  <soapenv:Header>
  <wsc:CheckAccountResponse>
    <wsc:AccountNumber>1000</wsc:AccountNumber>
    <wsc>Status>Open</wsc>Status>
  </wsc:CheckAccountResponse>
  </soapenv:Body>
</soapenv:Envelope>

```

Headers Table:

Header	Value
Keep-Alive	timeout=60
Server	Jetty(6.1.26)
Connection	keep-alive
#status#	HTTP/1.1 200 OK
Proxy-Connection	keep-alive
Content-Type	text/xml; charset=utf-8

Bottom navigation bar:

- Auth
- Headers (0)
- Attachments (0)
- WS-A
- WS-RM
- JMS Headers
- JMS Property (0)

Response time: 55ms (366 bytes)

Page footer: 11 : 20

Запрос с 2000(Blocked):

The screenshot shows a SOAP message exchange between two parties. The left pane displays the initial request from the client, which includes a 'CheckAccountRequest' with an account number of 2000. The right pane shows the response from the server, which includes a 'CheckAccountResponse' with a 'Status' of 'Blocked'. Below the message panes is a table of HTTP headers:

Header	Value
Keep-Alive	timeout=60
Server	Jetty(6.1.26)
Connection	keep-alive
#status#	HTTP/1.1 200 OK
Proxy-Connection	keep-alive
Content-Type	text/xml; charset=utf-8

At the bottom, there are tabs for Headers (6), Attachments (0), SSL Info, WSS (0), and JMS (0). The response time is listed as 283ms (369 bytes).

Запрос с 3000(Close):

The screenshot shows a similar SOAP message exchange. The request (left) and response (right) are identical to the previous one, with a 'CheckAccountRequest' for account 3000 and a 'CheckAccountResponse' with a 'Status' of 'Close'. The underlying HTTP headers remain the same:

Header	Value
Keep-Alive	timeout=60
Server	Jetty(6.1.26)
Connection	keep-alive
#status#	HTTP/1.1 200 OK
Proxy-Connection	keep-alive
Content-Type	text/xml; charset=utf-8

At the bottom, there are tabs for Headers (6), Attachments (0), SSL Info, WSS (0), and JMS (0). The response time is listed as 10ms (367 bytes).

Ошибочный запрос (Error):

The screenshot shows a SOAP Request tool interface with two panes. The left pane displays the XML request message, and the right pane displays the XML response message. Below the panes is a table of HTTP headers.

Request XML:

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:wsc="http://bank/schema/WSCOM">
<soapenv:Header>
<wsc:CheckAccountRequest>
<wsc:AccountNumber>4000</wsc:AccountNumber>
<wsc:Name>Артур</wsc:Name>
<wsc:Surname>Инатьев</wsc:Surname>
<wsc:Passport>55 55 5555</wsc:Passport>
<wsc:CheckAccountRequest>
</soapenv:Body>
</soapenv:Envelope>
```

Response XML:

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:wsc="http://bank/schema/WSCOM">
<soapenv:Header>
<wsc:CheckAccountResponse>
<wsc:AccountNumber>4000</wsc:AccountNumber>
<wsc>Status>Error</wsc>Status>
</wsc:CheckAccountResponse>
</soapenv:Body>
</soapenv:Envelope>
```

Headers:

Header	Value
Keep-Alive	timeout=60
Server	Jetty(6.1.26)
Connection	keep-alive
#status#	HTTP/1.1 200 OK
Proxy-Connection	keep-alive
Content-Type	text/xml; charset=utf-8

Вывод: в ходе лабораторной работы изучены принципы работы со средством эмуляции работы веб-сервисов.