

**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»

Выполнил: ст. группы ПВ-223

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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).

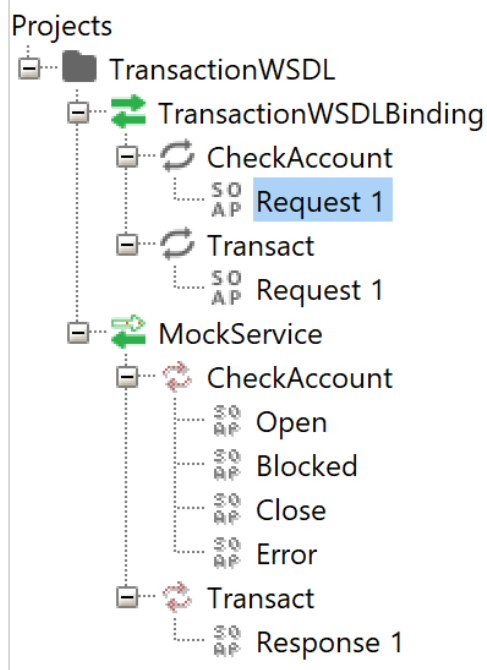
- Для остальных значений Account Number возвращать ошибочный ответ.

- 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/WSCCommonTypes">
  <soapenv:Header/>
  <soapenv:Body>
    <wsc:CheckAccountRequest>
      <wsc:AccountNumber>1000</wsc:AccountNumber>
      <wsc:Name>Артуп</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/WSCCommonTypes">
  <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/WSCCommonTypes">
  <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/WSCCommonTypes">
  <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/WSCCommonTypes">
  <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/WSCCommonTypes")

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 a web browser window with the URL `http://Entik-Notebook:8088/mockTransactionWSDLBinding`. The browser displays a SOAP request and response. The request is a `wsc:CheckAccountRequest` with the following XML structure:

```

<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:wsc="http://bank/schem">
  <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>

```

The response is a `wsc:CheckAccountResponse` with the following XML structure:

```

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

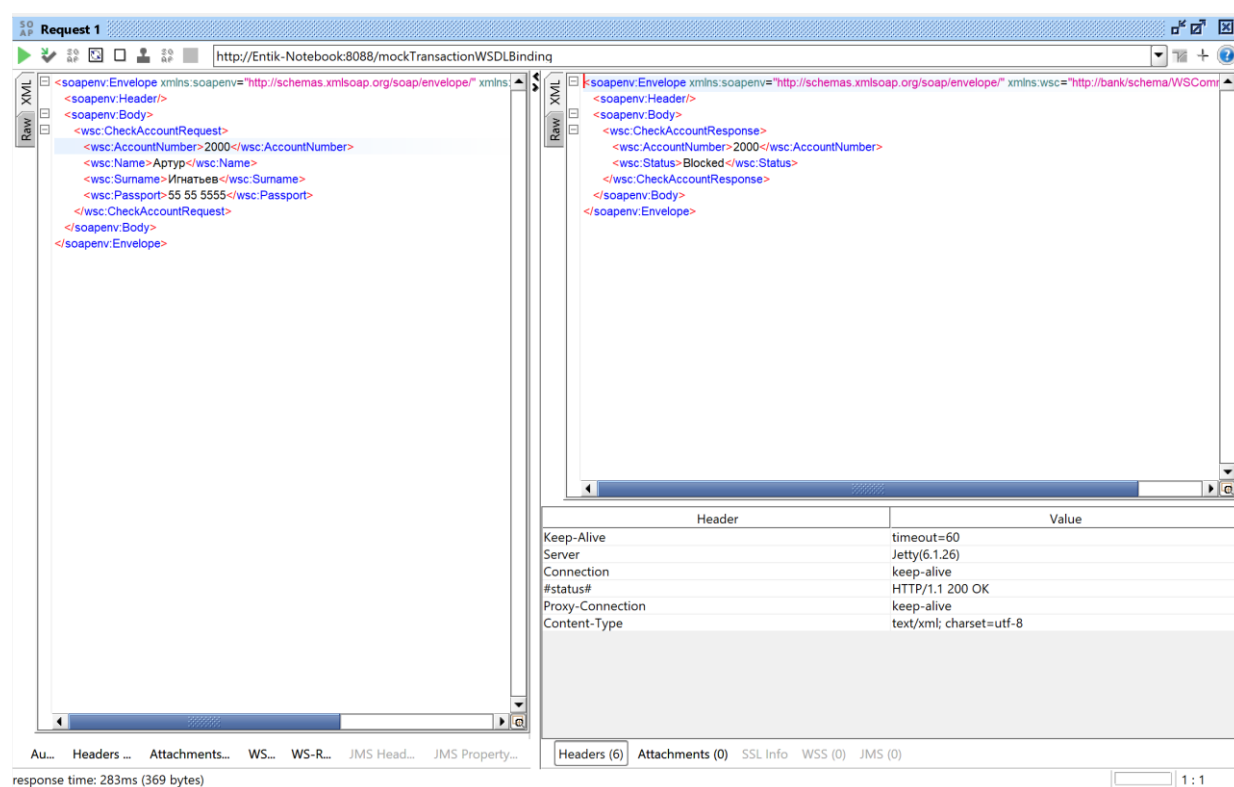
```

Below the XML view, a table shows the HTTP headers and their values:

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 of the browser window, the status bar shows "response time: 55ms (366 bytes)" and the time "11:20".

Запрос с 2000(Blocked):



The screenshot displays a SOAP client interface with a request and response. The request is a `CheckAccountRequest` for account number 2000. The response is a `CheckAccountResponse` with status `Blocked`. The status bar at the bottom indicates a response time of 283ms and 369 bytes.

Request XML:

```
<?xml version='1.0' encoding='utf-8'?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:wsc="http://bank/schema/WSCOM" >
  <soap:Header/>
  <soap:Body>
    <wsc:CheckAccountRequest>
      <wsc:AccountNumber>2000</wsc:AccountNumber>
      <wsc:Name>Артур</wsc:Name>
      <wsc:Surname>Игнатьев</wsc:Surname>
      <wsc:Passport>55 55 5555</wsc:Passport>
    </wsc:CheckAccountRequest>
  </soap:Body>
</soap:Envelope>
```

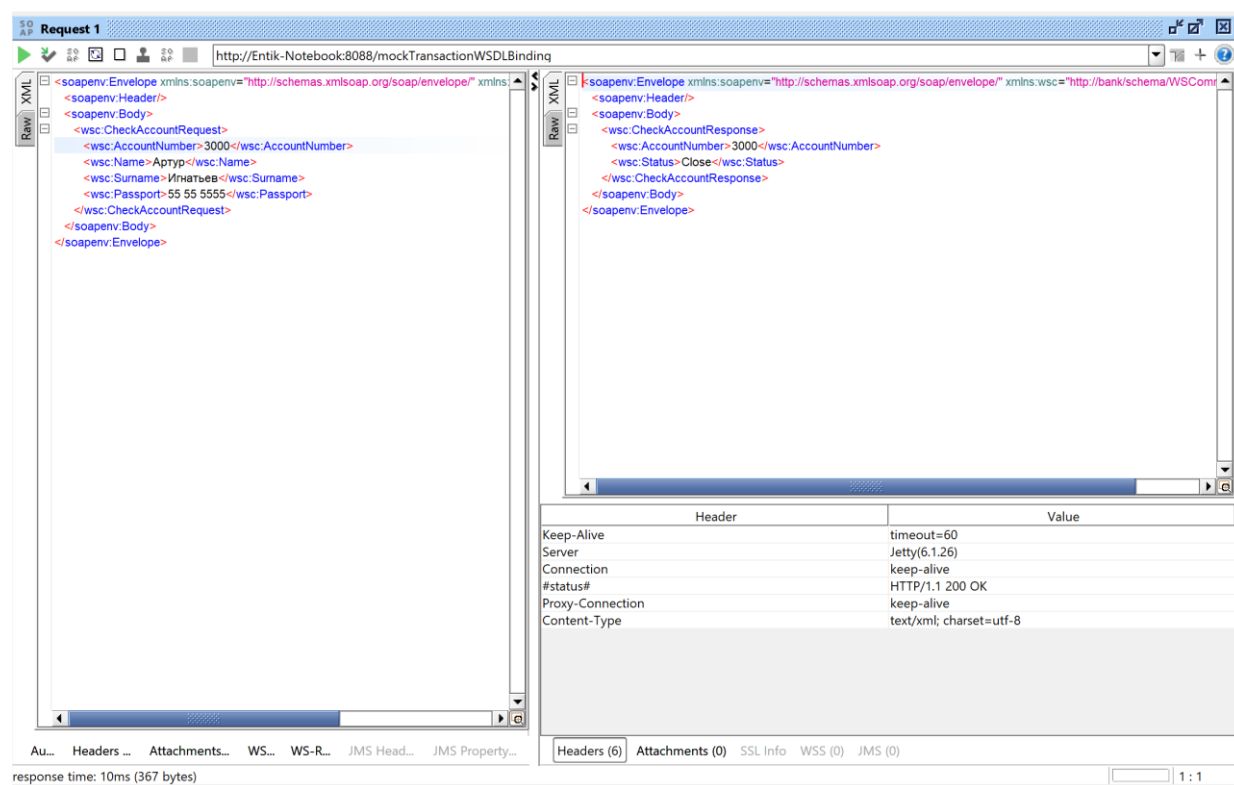
Response XML:

```
<?xml version='1.0' encoding='utf-8'?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:wsc="http://bank/schema/WSCOM" >
  <soap:Header/>
  <soap:Body>
    <wsc:CheckAccountResponse>
      <wsc:AccountNumber>2000</wsc:AccountNumber>
      <wsc>Status>Blocked</wsc>Status>
    </wsc:CheckAccountResponse>
  </soap:Body>
</soap:Envelope>
```

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

response time: 283ms (369 bytes)

Запрос с 3000(Close):



The screenshot displays a SOAP client interface with a request and response. The request is a `CheckAccountRequest` for account number 3000. The response is a `CheckAccountResponse` with status `Close`. The status bar at the bottom indicates a response time of 10ms and 367 bytes.

Request XML:

```
<?xml version='1.0' encoding='utf-8'?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:wsc="http://bank/schema/WSCOM" >
  <soap:Header/>
  <soap:Body>
    <wsc:CheckAccountRequest>
      <wsc:AccountNumber>3000</wsc:AccountNumber>
      <wsc:Name>Артур</wsc:Name>
      <wsc:Surname>Игнатьев</wsc:Surname>
      <wsc:Passport>55 55 5555</wsc:Passport>
    </wsc:CheckAccountRequest>
  </soap:Body>
</soap:Envelope>
```

Response XML:

```
<?xml version='1.0' encoding='utf-8'?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:wsc="http://bank/schema/WSCOM" >
  <soap:Header/>
  <soap:Body>
    <wsc:CheckAccountResponse>
      <wsc:AccountNumber>3000</wsc:AccountNumber>
      <wsc>Status>Close</wsc>Status>
    </wsc:CheckAccountResponse>
  </soap:Body>
</soap:Envelope>
```

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

response time: 10ms (367 bytes)

Ошибочный запрос (Error):

Request 1
http://Entik-Notebook:8088/mockTransactionWSDLBinding

Raw XML

```
<?xml version='1.0' encoding='utf-8'?>
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:wsc="http://bank/schema/WSCommon">
  <soapenv:Header/>
  <soapenv:Body>
    <wsc:CheckAccountRequest>
      <wsc:AccountNumber>4000</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>
```

Raw XML

```
<?xml version='1.0' encoding='utf-8'?>
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:wsc="http://bank/schema/WSCommon">
  <soapenv:Header/>
  <soapenv:Body>
    <wsc:CheckAccountResponse>
      <wsc:AccountNumber>4000</wsc:AccountNumber>
      <wsc:Status>Error</wsc:Status>
    </wsc:CheckAccountResponse>
  </soapenv:Body>
</soapenv:Envelope>
```

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

response time: 12ms (367 bytes)

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