

Worksheet No. - 3

Student Name: Rahul Saxena

UID: 24MCI10204

Branch: MCA (AI-ML)

Section/Group: 3-B

Semester: II

Date of Performance: 18-03-2025

Subject Name: Software Testing

Subject Code: 24CAH-654

Aim/Overview of the practical:

Demonstrate the process of testing SOAP APIs using SoapUI, a widely used tool for functional, regression, and load testing of web services.

Objective:

The objective of this demonstration is to show how to test SOAP APIs using SoapUI, a popular tool for functional, regression, and load testing of web services. SoapUI allows you to create, execute, and automate tests for SOAP web services, making it easier to validate the correctness, performance, and security of SOAP APIs.

Input/Apparatus Used: SoapUI 5.8.0, WSDL_URL.

WSDL (Web Services Description Language) URL:

[“http://www.oorsprong.org/websamples.countryinfo/CountryInfoService.wso?wsdl”](http://www.oorsprong.org/websamples.countryinfo/CountryInfoService.wso?wsdl)

Procedure/Algorithm/Code:

Test Case 001: LanguageName

Status : Passed

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:web="http://www.oorsprong.org/websamples.countryinfo">
  <soapenv:Header/>
  <soapenv:Body>
    <web:LanguageName>
      <web:sISOCCode>fr</web:sISOCCode>
```

```
</web:LanguageName>  
</soapenv:Body>  
</soapenv:Envelope>
```

Test Case 002: List of continenetsBycode**Status : Passed**

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"  
  xmlns:web="http://www.oorsprong.org/websamples.countryinfo">  
  
  <soapenv:Header/>  
  
  <soapenv:Body>  
  
    <web:ListOfContinentsByCode/>  
  
  </soapenv:Body>  
  
</soapenv:Envelope>
```

Test Case 003: GetCountryFlag**Status : Passed**

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"  
  xmlns:web="http://www.oorsprong.org/websamples.countryinfo">  
  
  <soapenv:Header/>  
  
  <soapenv:Body>  
  
    <web:CountryFlag>  
  
      <web:sCountryISOCODE>IN</web:sCountryISOCODE>  
  
    </web:CountryFlag>  
  
  </soapenv:Body>  
  
</soapenv:Envelope>
```

Test Case 004: GetCurrencyInfo**Status : Passed**

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"  
  xmlns:web="http://www.oorsprong.org/websamples.countryinfo">
```

<soapenv:Header/>

<soapenv:Body>

<web:CurrencyName>

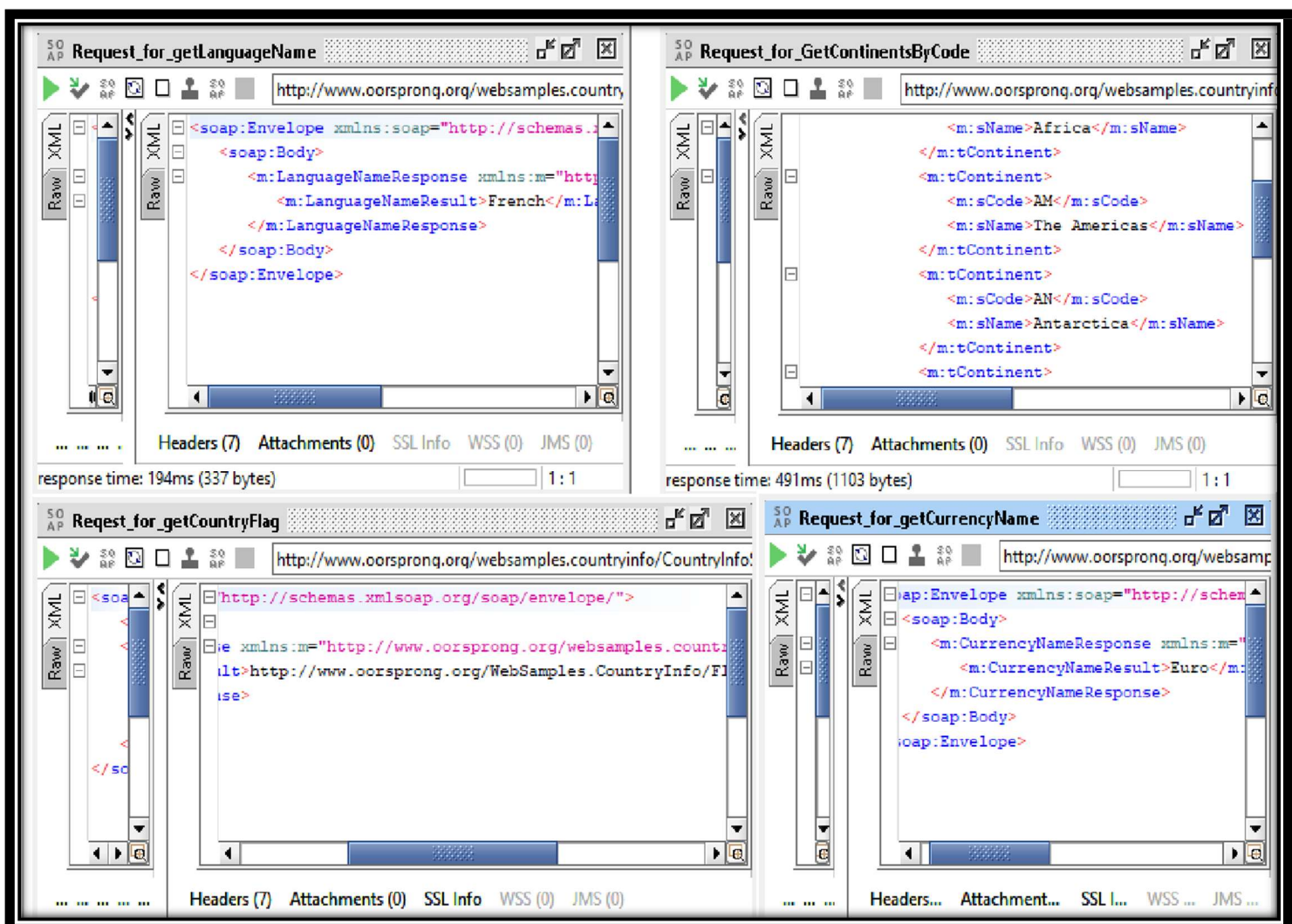
<web:sCurrencyISOCODE>EUR</web:sCurrencyISOCODE>

</web:CurrencyName>

</soapenv:Body>

</soapenv:Envelope>

Output:



The image displays four screenshots of SOAP messages, likely captured using a tool like SoapUI. Each screenshot shows the raw XML of a request or response.

- Top Left: Request_for_getLanguageName**
URL: <http://www.oorsprong.org/websamples.countryinfo>
Response XML:

```
<?xml version='1.0' encoding='UTF-8'>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <m:LanguageNameResponse xmlns:m="http://www.oorsprong.org/websamples.countryinfo">
      <m:LanguageNameResult>French</m:LanguageNameResult>
    </m:LanguageNameResponse>
  </soap:Body>
</soap:Envelope>
```

response time: 194ms (337 bytes)
- Top Right: Request_for_GetContinentsByCode**
URL: <http://www.oorsprong.org/websamples.countryinfo>
Response XML:

```
<?xml version='1.0' encoding='UTF-8'>
<m:tContinent>
  <m:sName>Africa</m:sName>
</m:tContinent>
<m:tContinent>
  <m:sCode>AM</m:sCode>
  <m:sName>The Americas</m:sName>
</m:tContinent>
<m:tContinent>
  <m:sCode>AN</m:sCode>
  <m:sName>Antarctica</m:sName>
</m:tContinent>
<m:tContinent>
```

response time: 491ms (1103 bytes)
- Bottom Left: Request_for_getCountryFlag**
URL: <http://www.oorsprong.org/websamples.countryinfo/CountryInfo/Flag>
Response XML:

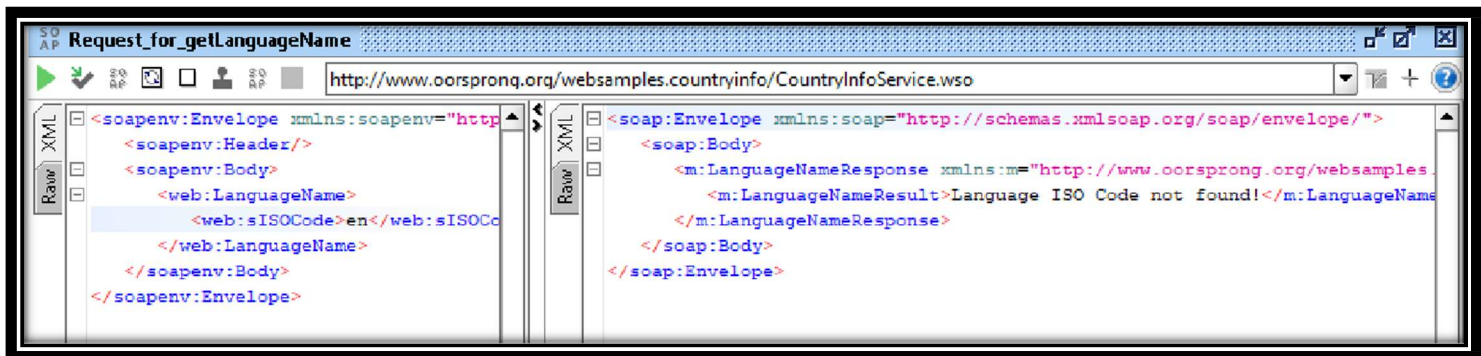
```
<?xml version='1.0' encoding='UTF-8'>
<http://schemas.xmlsoap.org/soap/envelope/>
  <http://www.oorsprong.org/websamples.countryinfo/>
    <http://www.oorsprong.org/WebSamples.CountryInfo/Flag>
```

response time: 194ms (337 bytes)
- Bottom Right: Request_for_getCurrencyName**
URL: <http://www.oorsprong.org/websamples.countryinfo>
Response XML:

```
<?xml version='1.0' encoding='UTF-8'>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <m:CurrencyNameResponse xmlns:m="http://www.oorsprong.org/websamples.countryinfo">
      <m:CurrencyNameResult>Euro</m:CurrencyNameResult>
    </m:CurrencyNameResponse>
  </soap:Body>
</soap:Envelope>
```

response time: 194ms (337 bytes)

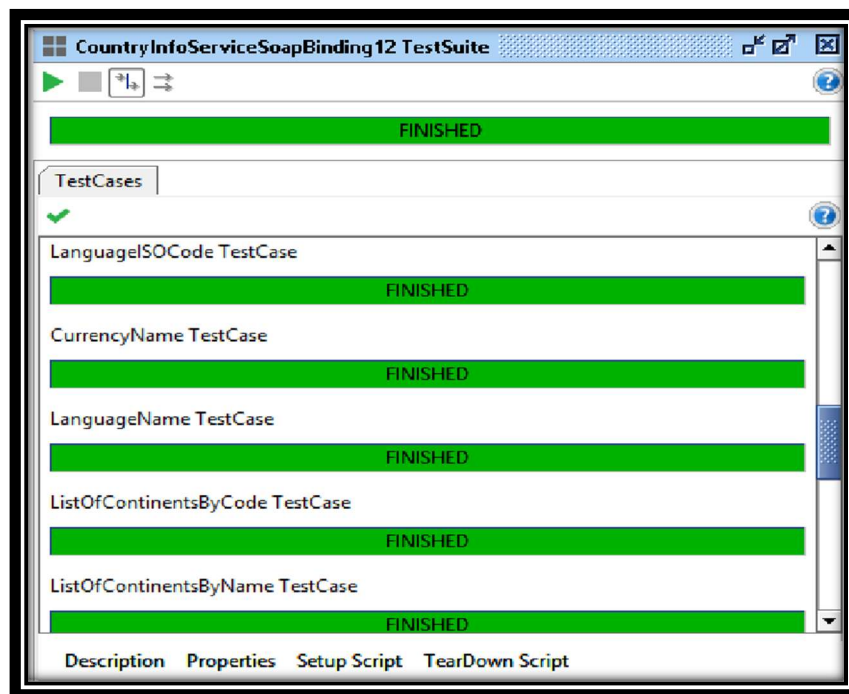
⇒ **Failed Testcase:** When we passing some relevant language in **getLanguageName** Testcase, then it returned error.



```
<?xml version='1.0' encoding='utf-8'>
<soap:Envelope xmlns:soap='http://schemas.xmlsoap.org/soap/envelope/'>
  <soap:Header/>
  <soap:Body>
    <web:LanguageName>
      <web:sISOCode>en</web:sISOCode>
    </web:LanguageName>
  </soap:Body>
</soap:Envelope>

<?xml version='1.0' encoding='utf-8'>
<soap:Envelope xmlns:soap='http://schemas.xmlsoap.org/soap/envelope/'>
  <soap:Header/>
  <soap:Body>
    <m:LanguageNameResponse xmlns:m='http://www.oorsprong.org/websamples.countryinfo'>
      <m:LanguageNameResult>Language ISO Code not found!</m:LanguageNameResult>
    </m:LanguageNameResponse>
  </soap:Body>
</soap:Envelope>
```

⇒ **Test_Suite's and Load Test result:**



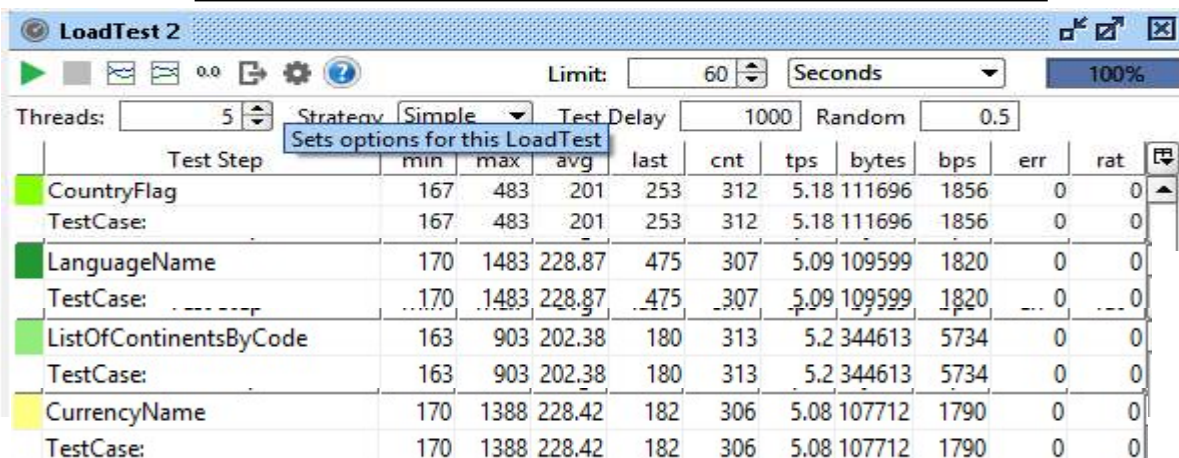
CountryInfoServiceSoapBinding12 TestSuite

FINISHED

TestCases

- LanguageISOCode TestCase
- CurrencyName TestCase
- LanguageName TestCase
- ListOfContinentsByCode TestCase
- ListOfContinentsByName TestCase

Description Properties Setup Script TearDown Script



LoadTest 2


Limit: 60 Seconds 100%

Threads: 5 Strategy: Simple Test Delay: 1000 Random: 0.5

Sets options for this LoadTest

Test Step	min	max	avg	last	cnt	tps	bytes	bps	err	rat
CountryFlag	167	483	201	253	312	5.18	111696	1856	0	0
TestCase:	167	483	201	253	312	5.18	111696	1856	0	0
LanguageName	170	1483	228.87	475	307	5.09	109599	1820	0	0
TestCase:	170	1483	228.87	475	307	5.09	109599	1820	0	0
ListOfContinentsByCode	163	903	202.38	180	313	5.2	344613	5734	0	0
TestCase:	163	903	202.38	180	313	5.2	344613	5734	0	0
CurrencyName	170	1388	228.42	182	306	5.08	107712	1790	0	0
TestCase:	170	1388	228.42	182	306	5.08	107712	1790	0	0

⇒ **Test_Report:**



Project Results for
country_information_api_testing
CountryInfoServiceSoapBinding12 TestSuite Summary

Status	Start Time	Time Taken	Reason
PASS	10:50:11	21437 ms	

TestSuite Properties

Name	Value
------	-------

TestCase Results

TestCase	Status	Start Time	Time Taken	Reason
CapitalCity TestCase	PASS	10:50:11	413 ms	
CountriesUsingCurrency TestCase	PASS	10:50:11	197 ms	
CountryCurrency TestCase	PASS	10:50:12	583 ms	
CountryFlag TestCase	PASS	10:50:12	180 ms	
CountryIntPhoneCode TestCase	PASS	10:50:12	186 ms	
CountryISOCode TestCase	PASS	10:50:13	176 ms	
CountryName TestCase	PASS	10:50:13	180 ms	
CurrencyName TestCase	PASS	10:50:13	177 ms	
FullCountryInfo TestCase	PASS	10:50:13	184 ms	
FullCountryInfoAllCountries TestCase	PASS	10:50:13	4418 ms	
LanguageISOCode TestCase	PASS	10:50:18	201 ms	
LanguageName TestCase	PASS	10:50:18	177 ms	
ListOfContinentsByCode TestCase	PASS	10:50:18	179 ms	

Learning outcomes (What I have learnt):

1. Learned the structure of SOAP web services and how they communicate using XML-based messages.
2. Understood the role of WSDL in defining the API structure and operations.
3. Explored how to create test projects, send requests, and validate responses in SoapUI.