



WebService com Abordagem SAOP

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Sumário

1 Lado Cliente / Consumidor do Serviço

Criando Projeto Java/Maven Lado Cliente

Criar um projeto Java/Maven com as seguintes definições:

`groupId: ifmt.cba`

`artifactId: clientewscal`

`version: 1.0-SNAPSHOT`

Alterando o arquivo POM (1)

Configure o arquivo pom.xml conforme listagem a seguir

```
1 <?xml version="1.0" encoding="UTF-8"?>
2
3 <project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
4   xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/xsd/maven-4.0.0.xsd">
5   <modelVersion>4.0.0</modelVersion>
6
7   <groupId>ifmt.cba</groupId>
8   <artifactId>clientewscal</artifactId>
9   <version>1.0-SNAPSHOT</version>
10
11   <name>clientewscal</name>
12
13   <properties>
14     <java.version>17</java.version>
15   </properties>
16
17   <dependencies>
18     <dependency>
19       <groupId>junit</groupId>
20       <artifactId>junit</artifactId>
21       <version>4.11</version>
22       <scope>test</scope>
23     </dependency>
24
25     <dependency>
26       <groupId>jakarta.xml.ws</groupId>
27       <artifactId>jakarta.xml.ws-api</artifactId>
28       <version>3.0.0</version>
29     </dependency>
```

Alterando o arquivo POM (2)

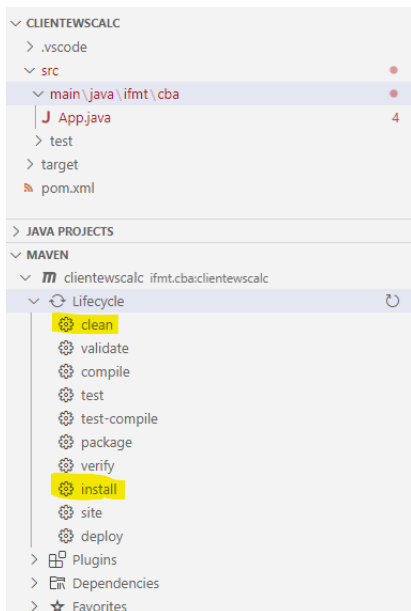
```
30 <dependency>
31   <groupId>com.sun.xml.ws</groupId>
32   <artifactId>jaxws-rt</artifactId>
33   <version>3.0.0</version>
34 </dependency>
35
36 <dependency>
37   <groupId>com.sun.xml.ws</groupId>
38   <artifactId>jaxws-ri</artifactId>
39   <version>3.0.0</version>
40   <type>pom</type>
41 </dependency>
42
43 </dependencies>
44
45 <build>
46   <plugins>
47     <plugin>
48       <groupId>org.apache.maven.plugins</groupId>
49       <artifactId>maven-compiler-plugin</artifactId>
50       <version>3.7.0</version>
51       <configuration>
52         <release>17</release>
53       </configuration>
54     </plugin>
55     <dependencies>
56       <dependency>
57         <groupId>org.ow2.asm</groupId>
58         <artifactId>asm</artifactId>
59         <version>9.1</version> <!-- Use newer version of ASM -->
60       </dependency>
61     </dependencies>
```

Alterando o arquivo POM (3)

```
62 </plugin>
63 <plugin>
64   <groupId>com.sun.xml.ws</groupId>
65   <artifactId>jaxws-maven-plugin</artifactId>
66   <version>3.0.0</version>
67   <executions>
68     <execution>
69       <goals>
70         <goal>wsimport</goal>
71       </goals>
72     </execution>
73   </executions>
74   <configuration>
75     <wsdlUrls>
76       <wsdlUrl>http://localhost:8083/servico/calculadora?wsdl</wsdlUrl>
77     </wsdlUrls>
78     <keep>true</keep>
79     <packageName>ifmt.cba.servico</packageName>
80     <sourceDestDir>src/main/java</sourceDestDir>
81   </configuration>
82 </plugin>
83 </plugins>
84 </build>
85 </project>
```

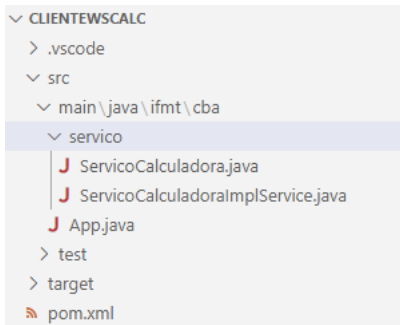
Gerando o Código Lado Cliente

Executar as etapas Clear e Install do Maven



Gerando o Código Lado Cliente

Executar as etapas Clear e Install do Maven



Obtendo Informações no WSDL

Essas informações são usadas no código do cliente.

This XML file does not appear to have any style information associated with it. The document tree is shown below.

```
<!-- Published by JAX-WS RI (https://github.com/eclipse-ee4j/metro-jax-ws). RI's version is JAX-WS RI 3.0.0 git-re
<!-- Generated by JAX-WS RI (https://github.com/eclipse-ee4j/metro-jax-ws). RI's version is JAX-WS RI 3.0.0 git-re
▼ <definitions xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd"
  xmlns:wsp="http://www.w3.org/ns/ws-policy" xmlns:wsp1_2="http://schemas.xmlsoap.org/ws/2004/09/policy"
  xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata" xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
  xmlns:tns="http://servico.cba.ifmt/" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/" targetNamespace="http://servico.cba.ifmt/"
  name="ServicoCalculadoraImplService">
  <types/>
  ▼ <message name="multiplicar">
    <part name="arg0" type="xsd:double"/>
    <part name="arg1" type="xsd:double"/>
  </message>
  ▼ <message name="multiplicarResponse">
    <part name="return" type="xsd:double"/>
  </message>
```

Escrevendo o Cliente (1)

Implemente o seguinte código para consumir o WSCalculadora

```
1 package ifmt.cba;
2
3 import java.net.MalformedURLException;
4 import java.net.URL;
5
6 import javax.xml.namespace.QName;
7
8 import ifmt.cba.servico.ServicoCalculadora;
9 import jakarta.xml.ws.Service;
10
11 public class App {
12     public static void main(String[] args) {
13
14         URL url;
15         try {
16             url = new URL("http://localhost:8083/servico/calculadora?wsdl");
17             QName qname = new QName("http://servico.cba.ifmt/", "ServicoCalculadoraImplService");
18
19             Service service = Service.create(url, qname);
20
21             ServicoCalculadora calc = service.getPort(ServicoCalculadora.class);
22             System.out.println("Soma: " + calc.somar(30, 20));
23             System.out.println("Subtracao: " + calc.subtrair(30, 20));
24             System.out.println("Multiplicacao: " + calc.multiplicar(30, 20));
25             System.out.println("Dividir: " + calc.dividir(30, 20));
26         } catch (MalformedURLException e) {
27             e.printStackTrace();
28         }
29     }
```

Escrevendo o Cliente (2)

```
30     }  
31  
32 }
```