Free JaxWs Project1

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Concepts

- WSDL
- SOAP
- Binding
- RPC Style/Document Style

Maven Coordinates - JaxWs

```xml
<dependencies>
    <dependency>
        <groupId>com.sun.xml.ws</groupId>
        <artifactId>jaxws-rt</artifactId>
        <version>2.1.4</version>
    </dependency>
</dependencies>
```

SampleService1.java

```java
@WebService(serviceName="SampleService1", name="SampleService1Port",
    targetNamespace="http://free.ndr.com")
public class SampleService1 {

    @WebMethod
    public String sampleMetod(){
        return "test1";
    }

}
```
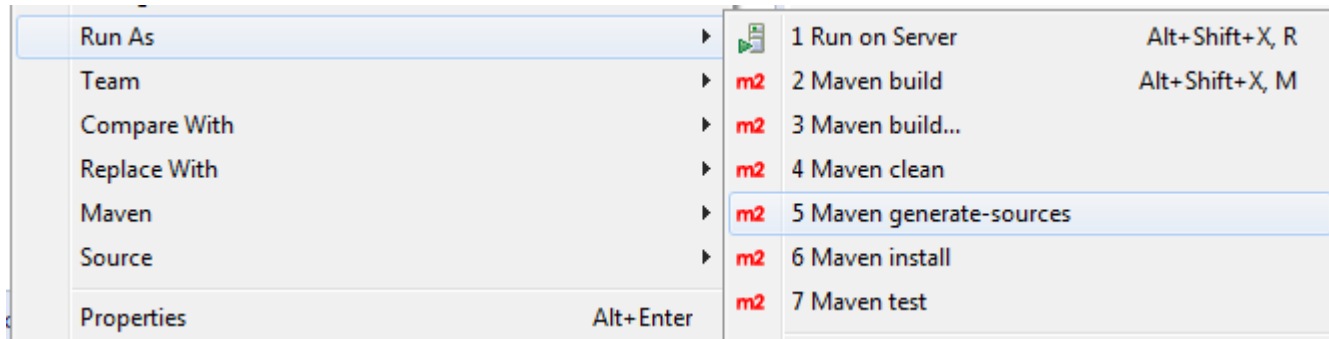
SampleServicePublisher1.java

```java
public class SampleServicePublisher1 {

    public static void main(String[] args) {
        Endpoint.publish("http://127.0.0.1:7001/FreeJaxWsProject1/SampleService1", new
            SampleService1());
    }

}
```

Maven - Build

```xml
<build>
    <plugins>
        <plugin>
            <groupId>org.codehaus.mojo</groupId>
            <artifactId>jaxws-maven-plugin</artifactId>
            <version>1.12</version>
            <executions>
                <execution>
                    <id>wsimport-from-jdk</id>
                    <goals>
                        <goal>wsimport</goal>
                    </goals>
                </execution>
            </executions>
            <configuration>
                <wsdlUrls>
                    <wsdlUrl>
                        http://localhost:7001/FreeJaxWsProject1/SampleService1?WSDL
                    </wsdlUrl>
                </wsdlUrls>
                <keep>true</keep>
                <packageName>com.ndr.free.jaxws.client.stubs</packageName>
                <sourceDestDir>src/main/java</sourceDestDir>
            </configuration>
        </plugin>
    </plugins>
</build>
```

Maven – Generate Sources

SampleClient1.java

```java
public class SampleClient1 {

    public static void main(String[] args) {
        URL url = null;
        try {
            url = new URL("http://127.0.0.1:7001/FreeJaxWsProject1/SampleService1?WSDL");
        } catch (MalformedURLException e) {
            // TODO Auto-generated catch block
            e.printStackTrace();
        }
        QName qname = new QName("http://free.ndr.com", "SampleService1");
        Service service = Service.create(url, qname);
        SampleService1Port sampleService1port = service.getPort(SampleService1Port.class);
        System.out.println(sampleService1port.sampleMetod());
    }

}
```

Console output

```
<terminated> SampleClient1 [Java Application] C:\Program Files\Java\jdk1.8.0_111\bin\javaw.exe (9 Nis 2018 21:24:14)
test1
```

SampleService2.java

```java
@WebService(serviceName="SampleService2", name="SampleService2Port",
                                    targetNamespace="http://free.ndr.com")
public class SampleService2 {

    @WebMethod
    public @WebResult(name="sampleResponse2") SampleResponse
                    sampleMetod2(@WebParam(name="sampleRequest2") SampleRequest sampleRequest){
        SampleResponse sampleResponse = new SampleResponse();
        sampleResponse.setSampleStrProperty(sampleRequest.getSampleStrProperty());
        return sampleResponse;
    }
}
```

SampleRequest.java

```java
@XmlRootElement
public class SampleRequest {

    private String sampleStrProperty;

    public String getSampleStrProperty() {
        return sampleStrProperty;
    }

    public void setSampleStrProperty(String sampleStrProperty) {
        this.sampleStrProperty = sampleStrProperty;
    }

}
```

SampleResponse.java

```java
@XmlRootElement
public class SampleResponse {

    private String sampleStrProperty;

    public String getSampleStrProperty() {
        return sampleStrProperty;
    }

    public void setSampleStrProperty(String sampleStrProperty) {
        this.sampleStrProperty = sampleStrProperty;
    }

}
```

SampleServicePublisher2.java

```java
public class SampleServicePublisher2 {

    public static void main(String[] args) {
        Endpoint.publish("http://127.0.0.1:7001/FreeJaxWsProject1/SampleService2",
            new SampleService2());
    }

}
```

Maven build

```xml
<build>
    <plugins>
        <plugin>
            <groupId>org.codehaus.mojo</groupId>
            <artifactId>jaxws-maven-plugin</artifactId>
            <version>1.12</version>
            <executions>
                <execution>
                    <id>wsimport-from-jdk</id>
                    <goals>
                        <goal>wsimport</goal>
                    </goals>
                </execution>
            </executions>
            <configuration>
                <wsdlUrls>
                    <wsdlUrl>
                        http://localhost:7001/FreeJaxWsProject1/SampleService2?WSDL
                    </wsdlUrl>
                </wsdlUrls>
                <keep>true</keep>
                <packageName>com.ndr.free.jaxws.client.stubs</packageName>
                <sourceDestDir>src/main/java</sourceDestDir>
            </configuration>
        </plugin>
    </plugins>
</build>
```

SampleClient2.java

```java
public class SampleClient2 {

    public static void main(String[] args) {
        URL url = null;
        try {
            url = new URL("http://127.0.0.1:7001/FreeJaxWsProject1/SampleService2?WSDL");
        } catch (MalformedURLException e) {
            e.printStackTrace();
        }
        QName qname = new QName("http://free.ndr.com", "SampleService2");
        Service service = Service.create(url, qname);
        SampleService2Port sampleService2port = service.getPort(SampleService2Port.class);
        SampleRequest sampleRequest = new SampleRequest();
        sampleRequest.setSampleStrProperty("Hello World!");
        SampleResponse sampleResponse =sampleService2port.sampleMetod2(sampleRequest);
        System.out.println(sampleResponse.getSampleStrProperty());
    }

}
```

Console output

```
<terminated> SampleClient2 [Java Application] C:\Program Files\Java\jdk1.8.0_111\bin\javaw.exe (10 Nis 2018 23:39:44)
Hello World!
```

SampleService3.java

```java
@WebService(serviceName="SampleService3", name="SampleService3Port",
    targetNamespace="http://free.ndr.com")
public class SampleService3 {

    @WebMethod
    public @WebResult(name="sampleResponse") boolean sampleMetod3() throws  SampleException
    {
        SampleException sampleException = new SampleException("Error!");
        if (true) throw sampleException;
            return false;

    }

}
```

SampleException.java

```java
public class SampleException extends Exception {

    public SampleException(String message){
        super(message);
    }

}
```

SampleServicePublisher3.java

```java
public class SampleServicePublisher3 {

    public static void main(String[] args) {
        Endpoint.publish("http://127.0.0.1:7001/FreeJaxWsProject1/SampleService3", new
            SampleService3());
    }

}
```
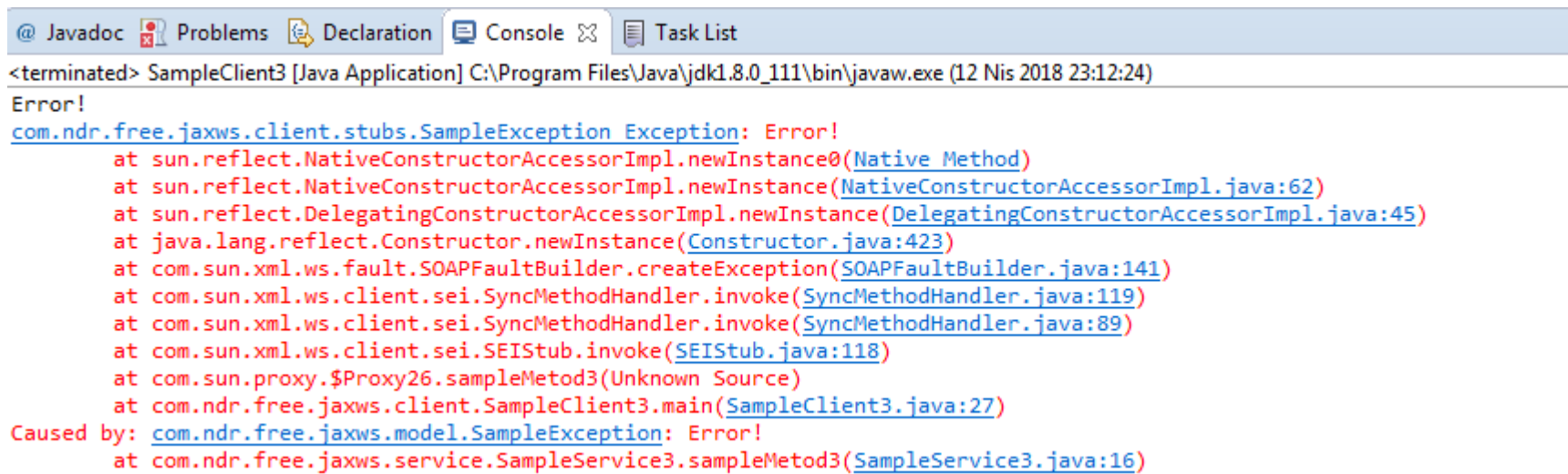
Maven build

```xml
<build>
    <plugins>
        <plugin>
            <groupId>org.codehaus.mojo</groupId>
            <artifactId>jaxws-maven-plugin</artifactId>
            <version>1.12</version>
            <executions>
                <execution>
                    <id>wsimport-from-jdk</id>
                    <goals>
                        <goal>wsimport</goal>
                    </goals>
                </execution>
            </executions>
            <configuration>
                <wsdlUrls>
                    <wsdlUrl>
                        http://localhost:7001/FreeJaxWsProject1/SampleService3?WSDL
                    </wsdlUrl>
                </wsdlUrls>
                <keep>true</keep>
                <packageName>com.ndr.free.jaxws.client.stubs</packageName>
                <sourceDestDir>src/main/java</sourceDestDir>
            </configuration>
        </plugin>
    </plugins>
</build>
```

SampleClient3.java

```java
public class SampleClient3 {

    public static void main(String[] args) {
        URL url = null;
        try {
            url = new URL("http://127.0.0.1:7001/FreeJaxWsProject1/SampleService3?WSDL");
        } catch (MalformedURLException e) {
            e.printStackTrace();
        }
        QName qname = new QName("http://free.ndr.com", "SampleService3");
        Service service = Service.create(url, qname);
        SampleService3Port sampleService3port = service.getPort(SampleService3Port.class);
        boolean boolVar;
        try {
            boolVar = sampleService3port.sampleMetod3();
            System.out.println(boolVar);
        } catch (SampleException_Exception e) {
            System.out.println(e.getMessage());
            e.printStackTrace();
        }
    }

}
```

Console output

```
<terminated> SampleClient3 [Java Application] C:\Program Files\Java\jdk1.8.0_111\bin\javaw.exe (12 Nis 2018 23:12:24)
Error!
com.ndr.free.jaxws.client.stubs.SampleException_Exception: Error!
        at sun.reflect.NativeConstructorAccessorImpl.newInstance0(Native Method)
        at sun.reflect.NativeConstructorAccessorImpl.newInstance(NativeConstructorAccessorImpl.java:62)
        at sun.reflect.DelegatingConstructorAccessorImpl.newInstance(DelegatingConstructorAccessorImpl.java:45)
        at java.lang.reflect.Constructor.newInstance(Constructor.java:423)
        at com.sun.xml.ws.fault.SOAPFaultBuilder.createException(SOAPFaultBuilder.java:141)
        at com.sun.xml.ws.client.sei.SyncMethodHandler.invoke(SyncMethodHandler.java:119)
        at com.sun.xml.ws.client.sei.SyncMethodHandler.invoke(SyncMethodHandler.java:89)
        at com.sun.xml.ws.client.sei.SEIStub.invoke(SEIStub.java:118)
        at com.sun.proxy.$Proxy26.sampleMetod3(Unknown Source)
        at com.ndr.free.jaxws.client.SampleClient3.main(SampleClient3.java:27)
Caused by: com.ndr.free.jaxws.model.SampleException: Error!
        at com.ndr.free.jaxws.service.SampleService3.sampleMetod3(SampleService3.java:16)
```

SampleService4.java

```java
@WebService(serviceName="SampleService4", name="SampleService4Port",
                                  targetNamespace="http://free.ndr.com")
public class SampleService4 {

    @Resource
    private WebServiceContext webServiceContext;

    @WebMethod
    public String sampleMetod(String strParam){
        for(String key: webServiceContext.getMessageContext().keySet()){
            System.out.println(key + " - " +  webServiceContext.getMessageContext().get(key));
        }
        return strParam;
    }

}
```

SampleServicePublisher4.java

```java
public class SampleServicePublisher4 {

    public static void main(String[] args) {
        Endpoint.publish("http://127.0.0.1:7001/FreeJaxWsProject1/SampleService4",
                new SampleService4());
    }

}
```

Maven build

```xml
<build>
    <plugins>
        <plugin>
            <groupId>org.codehaus.mojo</groupId>
            <artifactId>jaxws-maven-plugin</artifactId>
            <version>1.12</version>
            <executions>
                <execution>
                    <id>wsimport-from-jdk</id>
                    <goals>
                        <goal>wsimport</goal>
                    </goals>
                </execution>
            </executions>
            <configuration>
                <wsdlUrls>
                    <wsdlUrl>
                        http://localhost:7001/FreeJaxWsProject1/SampleService4?WSDL
                    </wsdlUrl>
                </wsdlUrls>
                <keep>true</keep>
                <packageName>com.ndr.free.jaxws.client.stubs</packageName>
                <sourceDestDir>src/main/java</sourceDestDir>
            </configuration>
        </plugin>
    </plugins>
</build>
```
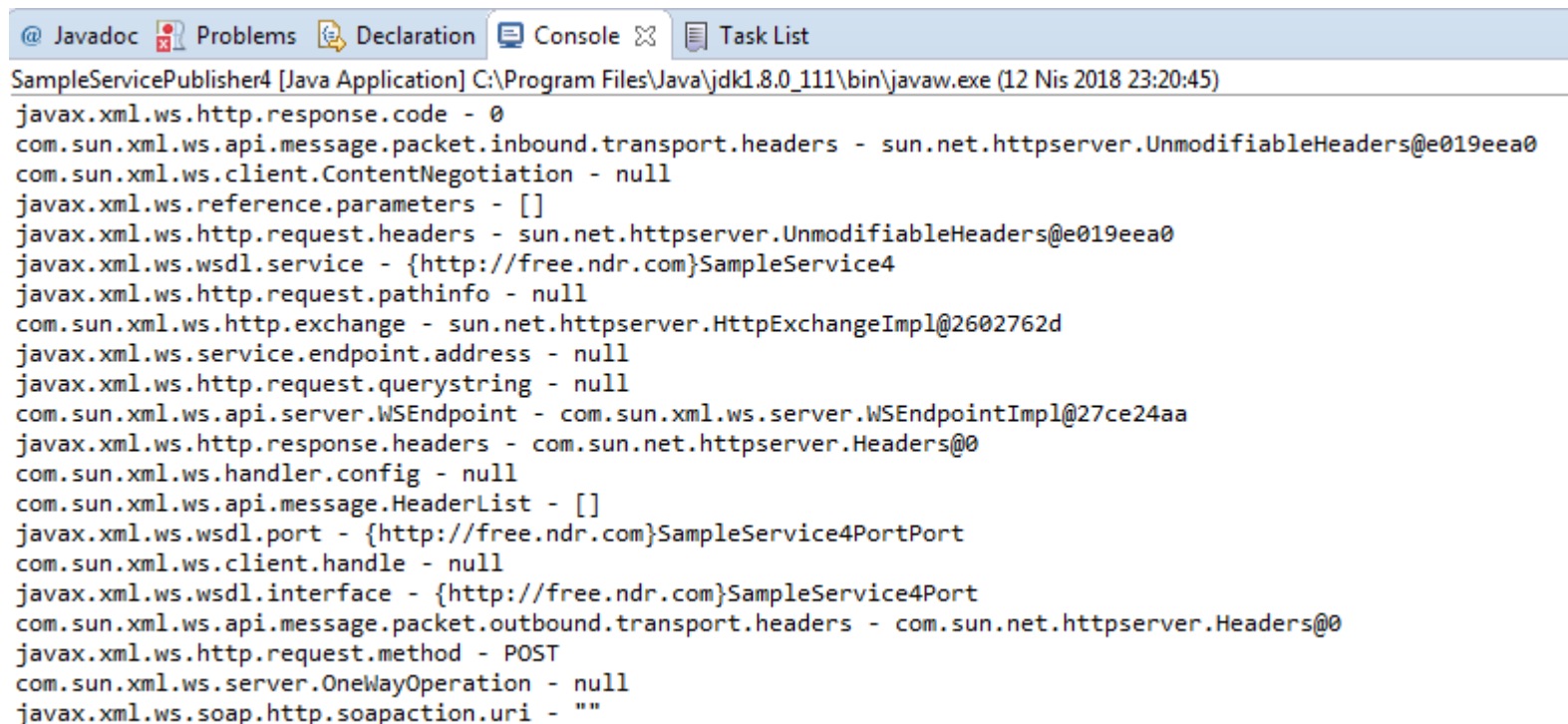
SampleClient4.java

```java
public class SampleClient4 {

    public static void main(String[] args) {
        URL url = null;
        try {
            url = new URL("http://127.0.0.1:7001/FreeJaxWsProject1/SampleService4?WSDL");
        } catch (MalformedURLException e) {
            e.printStackTrace();
        }
        QName qname = new QName("http://free.ndr.com", "SampleService4");
        Service service = Service.create(url, qname);
        SampleService4Port sampleService4port = service.getPort(SampleService4Port.class);
        System.out.println(sampleService4port.sampleMetod("Hello world!"));
    }

}
```

Console output


```
@ Javadoc    Problems    Declaration    Console ⌧    Task List

SampleServicePublisher4 [Java Application] C:\Program Files\Java\jdk1.8.0_111\bin\javaw.exe (12 Nis 2018 23:20:45)
javax.xml.ws.http.response.code - 0
com.sun.xml.ws.api.message.packet.inbound.transport.headers - sun.net.httpserver.UnmodifiableHeaders@e019eea0
com.sun.xml.ws.client.ContentNegotiation - null
javax.xml.ws.reference.parameters - []
javax.xml.ws.http.request.headers - sun.net.httpserver.UnmodifiableHeaders@e019eea0
javax.xml.ws.wsdl.service - {http://free.ndr.com}SampleService4
javax.xml.ws.http.request.pathinfo - null
com.sun.xml.ws.http.exchange - sun.net.httpserver.HttpExchangeImpl@2602762d
javax.xml.ws.service.endpoint.address - null
javax.xml.ws.http.request.querystring - null
com.sun.xml.ws.api.server.WSEndpoint - com.sun.xml.ws.server.WSEndpointImpl@27ce24aa
javax.xml.ws.http.response.headers - com.sun.net.httpserver.Headers@0
com.sun.xml.ws.handler.config - null
com.sun.xml.ws.api.message.HeaderList - []
javax.xml.ws.wsdl.port - {http://free.ndr.com}SampleService4PortPort
com.sun.xml.ws.client.handle - null
javax.xml.ws.wsdl.interface - {http://free.ndr.com}SampleService4Port
com.sun.xml.ws.api.message.packet.outbound.transport.headers - com.sun.net.httpserver.Headers@0
javax.xml.ws.http.request.method - POST
com.sun.xml.ws.server.OneWayOperation - null
javax.xml.ws.soap.http.soapaction.uri - ""
```