

A First Web Service in Java

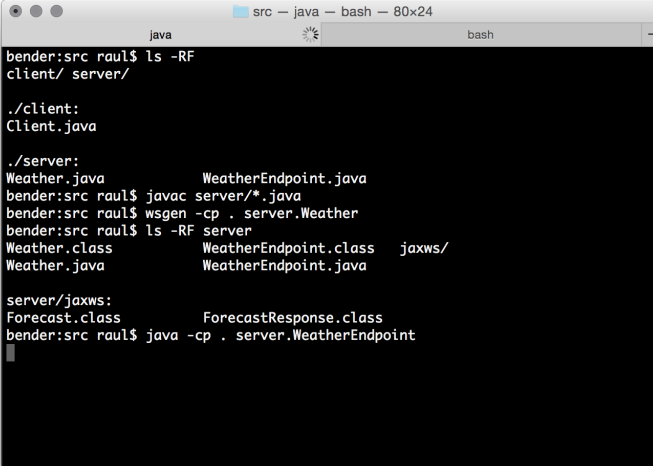
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Java introduced JAX-WS¹ (the Java API for XML Web Services) which is now a part of Java EE as well as Java SE since version 6. It simplifies the creation of web services, namely by providing the `wsgen` and `wsimport` tools. It is possible to use JAX-WS in GlassFish as well as Tomcat, and their usage is described in the official documentation.

1 Running a Simple Example

The simple example provided in the `src` directory allows you to run a web service with a standalone client. The service is implemented in `Weather.java` using the `@WebService` and `@WebMethod` annotations. The service is published by creating an endpoint in `WeatherEndpoint.java`.

We compile the server, generate the web service, and start the endpoint at port 8081, as the following figure shows.



```
java src -- java -- bash -- 80x24
bender:src raul$ ls -RF
client/ server/

./client:
Client.java

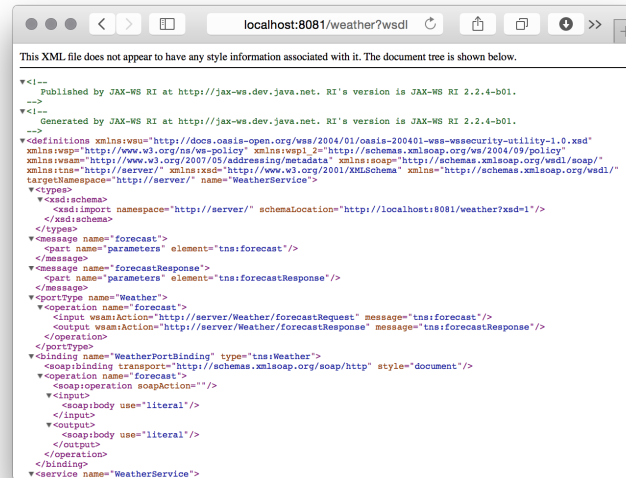
./server:
Weather.java          WeatherEndpoint.java
bender:src raul$ javac server/*.java
bender:src raul$ wsgen -cp . server.Weather
bender:src raul$ ls -RF server
Weather.class          WeatherEndpoint.class  jaxws/
Weather.java          WeatherEndpoint.java

server/jaxws:
Forecast.class          ForecastResponse.class
bender:src raul$ java -cp . server.WeatherEndpoint
```

We may then use a browser to check the WSDL file (Web Services Description Language), in order to test that the web service has been published

¹ <http://jax-ws.java.net>

correctly, as shown in the figure that follows.



Finally, we develop the client application, which is provided in `Client.java`, and use the `wsimport` tool to parse the WSDL file and automatically generate the necessary files. The client application may then be compiled and executed, as shown in the following figure.

