

Software Engineering of Distributed Systems, KTH

# Programming Web Services

## Homework 3

Lab of UDDI

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# 1. A short description of your activities for installation of the tools (what problems did you face)

**Answer:**

## 1.1 Installation of Java EE SDK

step 1: go to <http://java.sun.com/javaee/downloads/index.jsp>

step 2: click "Download with JDK"

step 3: select Windows as Platform, English as Language, confirm the license and continue

step 4: click [java ee sdk-5 04-windows.exe](#) and run

step5: follow the instruction to install Java EE SDK

## 1.2 Installation of Netbeans and GlassFish

step 1: go to <http://download.netbeans.org/netbeans/6.0/final/>

step 2: download "java and web EE" edition

step 3: install Netbeans with GlassFish

## 1.3 Installation of AXIS 1.4

step 1: go to [http://apache.dataphone.se/ws/axis/1\\_4/](http://apache.dataphone.se/ws/axis/1_4/)

step 2: download "[axis-bin-1\\_4.zip](#)" and unzip to local disk

step 3: copy %AXIS\_HOME%/webapps/axis to %TOMECAT\_HOME%/webapps

step 4: copy %AXIS\_HOME%/lib/\* to my project lib

## 1.4 Installation of MySQL

step 1: go to <http://dev.mysql.com/downloads/mysql/5.0.html#win32>

step 2: download "Windows ZIP/Setup.EXE (x86)" and run setup

step 3: follow the install guide and install MySQL

## 2. A short description of your activities for installation the UDDI registry.

### Answer:

step 1: go to <http://ws.apache.org/juddi/releases.html>

step 2: download [juddi-web-2.0rc5.war](#)

step 3: rename juddi-web-2.0rc5.war to juddi.war

step 4: copy juddi.war to %GLASSFISH\_HOME%/domains/domain1/autodeploy

step 5: create a database named "juddi" in MySQL

step 6: dump "create\_database.sql" from juddi\_home into DATABASE juddi

step 7: start GlassFish and configure a JNDI Datasource with a name of 'jdbc/juddiDB' in the GlassFish

step 8: start GlassFish and use <http://localhost:8080/juddi> to visit juddi home page

## 3. A protocol of compilation and execution of FindBusinessEntity.java

### Answer:

#### 3.1 compile:

go to PROJECT\_HOME and use follow command to compile FindBusinessEntity.java

```
"C:\Program Files\Java\jdk1.6.0_04\bin\javac" -classpath "C:\Documents and Settings\Tom\IntelliJdea70\system\webservices\axis-1.4.0\wsdl4j-1.5.1.jar;C:\Documents and Settings\Tom\IntelliJdea70\system\webservices\axis-1.4.0\log4j-1.2.8.jar;C:\Documents and Settings\Tom\IntelliJdea70\system\webservices\axis-1.4.0\saaj.jar;C:\Documents and Settings\Tom\IntelliJdea70\system\webservices\axis-1.4.0\jaxrpc.jar;C:\Documents and Settings\Tom\IntelliJdea70\system\webservices\axis-1.4.0\commons-logging-1.0.4.jar;C:\Documents and Settings\Tom\IntelliJdea70\system\webservices\axis-1.4.0\commons-discovery-0.2.jar;C:\Documents and Settings\Tom\IntelliJdea70\system\webservices\axis-1.4.0\axis.jar;C:\Program Files\Java\jdk1.6.0_04\jre\lib\charsets.jar;C:\Program Files\Java\jdk1.6.0_04\jre\lib\deploy.jar;C:\Program Files\Java\jdk1.6.0_04\jre\lib\javaws.jar;C:\Program Files\Java\jdk1.6.0_04\jre\lib\jce.jar;C:\Program Files\Java\jdk1.6.0_04\jre\lib\jsse.jar;C:\Program Files\Java\jdk1.6.0_04\jre\lib\management-
```

```
agent.jar;C:\Program Files\Java\jdk1.6.0_04\jre\lib\plugin.jar;C:\Program
Files\Java\jdk1.6.0_04\jre\lib\resources.jar;C:\Program
Files\Java\jdk1.6.0_04\jre\lib\rt.jar;C:\Program
Files\Java\jdk1.6.0_04\jre\lib\ext\dnsns.jar;C:\Program
Files\Java\jdk1.6.0_04\jre\lib\ext\localedata.jar;C:\Program
Files\Java\jdk1.6.0_04\jre\lib\ext\sunjc_provider.jar;C:\Program
Files\Java\jdk1.6.0_04\jre\lib\ext\sunmscapi.jar;C:\Program
Files\Java\jdk1.6.0_04\jre\lib\ext\sunpkcs11.jar;C:\IdeaProjects\PWS_HW2\out\production\PWS
_HW2;C:\IntelliJ_IDEA_7.0.2\lib\javaee.jar;C:\sun_mail;C:\sun_mail\mail.jar;C:\activation;C:\acti
vation\activation.jar;C:\junit4.4;C:\junit4.4\junit-4.4-src.jar;C:\junit4.4\junit-
4.4.jar;C:\juddi2_client;C:\juddi2_client\juddi-2.0rc5.jar;C:\juddi2_client\juddi-client-
2.0rc5.jar;C:\IntelliJ_IDEA_7.0.2\lib\idea_rt.jar" .\src\com\biibblesoft\pws\hw3\FindBusinessEntit
y.java
```

### 3.2 execute:

go to PROJECT\_HOME and use follow command to execute FindBusinessEntity.java

```
"C:\Program Files\Java\jdk1.6.0_04\bin\java" -classpath "C:\Documents and
Settings\Tom\IntelliJ_Idea70\system\webservices\axis-1.4.0\wsdl4j-1.5.1.jar;C:\Documents and
Settings\Tom\IntelliJ_Idea70\system\webservices\axis-1.4.0\log4j-1.2.8.jar;C:\Documents and
Settings\Tom\IntelliJ_Idea70\system\webservices\axis-1.4.0\saaj.jar;C:\Documents and
Settings\Tom\IntelliJ_Idea70\system\webservices\axis-1.4.0\jaxrpc.jar;C:\Documents and
Settings\Tom\IntelliJ_Idea70\system\webservices\axis-1.4.0\commons-logging-
1.0.4.jar;C:\Documents and Settings\Tom\IntelliJ_Idea70\system\webservices\axis-
1.4.0\commons-discovery-0.2.jar;C:\Documents and
Settings\Tom\IntelliJ_Idea70\system\webservices\axis-1.4.0\axis.jar;C:\Program
Files\Java\jdk1.6.0_04\jre\lib\charsets.jar;C:\Program
Files\Java\jdk1.6.0_04\jre\lib\deploy.jar;C:\Program
Files\Java\jdk1.6.0_04\jre\lib\javaws.jar;C:\Program
Files\Java\jdk1.6.0_04\jre\lib\jce.jar;C:\Program
Files\Java\jdk1.6.0_04\jre\lib\jsse.jar;C:\Program Files\Java\jdk1.6.0_04\jre\lib\management-
agent.jar;C:\Program Files\Java\jdk1.6.0_04\jre\lib\plugin.jar;C:\Program
Files\Java\jdk1.6.0_04\jre\lib\resources.jar;C:\Program
Files\Java\jdk1.6.0_04\jre\lib\rt.jar;C:\Program
Files\Java\jdk1.6.0_04\jre\lib\ext\dnsns.jar;C:\Program
Files\Java\jdk1.6.0_04\jre\lib\ext\localedata.jar;C:\Program
Files\Java\jdk1.6.0_04\jre\lib\ext\sunjc_provider.jar;C:\Program
Files\Java\jdk1.6.0_04\jre\lib\ext\sunmscapi.jar;C:\Program
Files\Java\jdk1.6.0_04\jre\lib\ext\sunpkcs11.jar;C:\IdeaProjects\PWS_HW2\out\production\PWS
_HW2;C:\IntelliJ_IDEA_7.0.2\lib\javaee.jar;C:\sun_mail;C:\sun_mail\mail.jar;C:\activation;C:\acti
vation\activation.jar;C:\junit4.4;C:\junit4.4\junit-4.4-src.jar;C:\junit4.4\junit-
4.4.jar;C:\juddi2_client;C:\juddi2_client\juddi-2.0rc5.jar;C:\juddi2_client\juddi-client-
2.0rc5.jar;C:\IntelliJ_IDEA_7.0.2\lib\idea_rt.jar" com.biibblesoft.pws.hw3.FindBusinessEntity
```

### 3.3 output

Follow table are output of FindBusinessEntity.java (formatted)

<b>Name of Business found:</b>
<b>SkatesTown</b>
<b>url -&gt; http://localhost:8080/juddi/uddiget.jsp?businesskey=5A2EA9D0-D7F1-11DC-B811-9565EF1EBB50</b>
<b>SkatesTown</b>
<b>url -&gt; http://localhost:8080/juddi/uddiget.jsp?businesskey=127ACC40-D7F1-11DC-B811-E0E565F9AFB2</b>
<b>SkatesTown</b>
<b>url -&gt; http://localhost:8080/juddi/uddiget.jsp?businesskey=B4273E80-D7DC-11DC-AD8A-F895A8E56DDB</b>
<b>SkatesTown</b>
<b>url -&gt; http://localhost:8080/juddi/uddiget.jsp?businesskey=699B86F0-D3F9-11DC-A71E-E2123889688B</b>
<b>SkatesTown</b>
<b>url -&gt; http://localhost:8080/juddi/uddiget.jsp?businesskey=2EAC3D00-D3EA-11DC-BD00-94A260B3E523</b>
<b>SkatesTown</b>
<b>url -&gt; http://localhost:8080/juddi/uddiget.jsp?businesskey=0D0FA790-D3EA-11DC-A790-A15B2B6B5F04</b>
<b>SkatesTown</b>
<b>url -&gt; http://localhost:8080/juddi/uddiget.jsp?businesskey=07F7A370-D3EA-11DC-A370-E9E593D3F496</b>
<b>SkatesTown</b>
<b>url -&gt; http://localhost:8080/juddi/uddiget.jsp?businesskey=F7F520B0-D3E9-11DC-A0B0-FEFB25DBB03D</b>
<b>SkatesTown</b>
<b>url -&gt; http://localhost:8080/juddi/uddiget.jsp?businesskey=ED087F30-D3E9-11DC-BF30-F7214F2A11F8</b>
<b>SkatesTown</b>
<b>url -&gt; http://localhost:8080/juddi/uddiget.jsp?businesskey=D97C1260-D3E9-11DC-9260-D81FED3C1103</b>
<b>done.</b>

#### 4. Source code for finding all business entities that have name "SkatesTown".

##### Answer:

check the source file:

```
%PROJECT_HOME% \src\com\biibblesoft\pws\hw3\FindBusinessEntityNamedSkatesTown.java
```

#### 5. Results of running PublishBusinessEntity.java and publishing you CalculatorService from homework 2 in the UDDI registry.

##### Answer:

##### 5.1 Result of Publishing Business Entity

Follows are the output of PublishBusinessEntity.java

---

Successful get AuthToken!

AuthToken = authToken:0602E820-D7F7-11DC-B811-AE6221A292FA

Registry Successful!

Published businessEntity key: 0613B100-D7F7-11DC-B811-FDD191A23C31.

---

and we can use this link to find the business we just published:

<http://localhost:8080/juddi/uddiget.jsp?businesskey=0613B100-D7F7-11DC-B811-FDD191A23C31>

## 5.2 Result of Publishing WSDL to UDDI registry

To publish a WSDL to UDDI we have to create a tModel of our Calculator Service and bind the tModel to a BusinessService

### 5.2.1 Result of Publishing WSDL tModel

Follows are the output of *SaveCalcTModel.java*

---

```
save_CalculatorService_tModel
```

```
-----
```

```
userID: jdoe
```

```
password:
```

```
AuthToken: authToken:79ED1850-D810-11DC-9850-BE6818908C25
```

```
TModel Key: uuid:79FB7030-D810-11DC-B030-A69DA691C47F
```

```
done.
```

---

### 5.2.2 Result of Publish a business service and associated binding template above

Before we run the *PublishWSDLService.java* we have to copy the tModel Key which we get when we save Calculator Service as tModel to *PublishWSDLService.java*.

*And use this code to set the tModel Key:*

---

```
tModelInstanceInfo.setTModelKey("uuid:79FB7030-D810-11DC-B030-A69DA691C47F ");
```

---

Follows are the output of *PublishWSDLService.java*

**userID: jdoe**

**password:**

**AuthToken: authToken:C38306E0-D811-11DC-86E0-A168D21CE7CC**

**Successful Publish the following Service**

**Name = Calculator Service**

**Business Key = 4C3F8BC0-D3D5-11DC-B283-E46ED1945E25**

**Service Key = C393CFC0-D811-11DC-8FC0-E45591460515**

**Description = A Calculator Service By BiibleSoft**

**Binding Template:**

**Binding Key = C39619B0-D811-11DC-99B0-AD0F8837075E**

**Service Key = C393CFC0-D811-11DC-8FC0-E45591460515**

**Access Point = http://localhost:8080/axis/services/CalculatorService**

**TModel Instance Info:**

**TModel Key = uuid:79FB7030-D810-11DC-B030-A69DA691C47F**

**Instance Details:**

**Description = CalculatorService by BiibleSoft**

**Overview URL = http://localhost:8080/axis/services/CalculatorService?wsdl**

**done.**

And we can use this link to check the WSDL on UDDI:

<http://localhost:8080/juddi/uddiget.jsp?businesskey=4C3F8BC0-D3D5-11DC-B283-E46ED1945E25>

Screenshot:

