



LAB 9: WEB DATABASE PROGRAMMING II

JSP/Database Programming

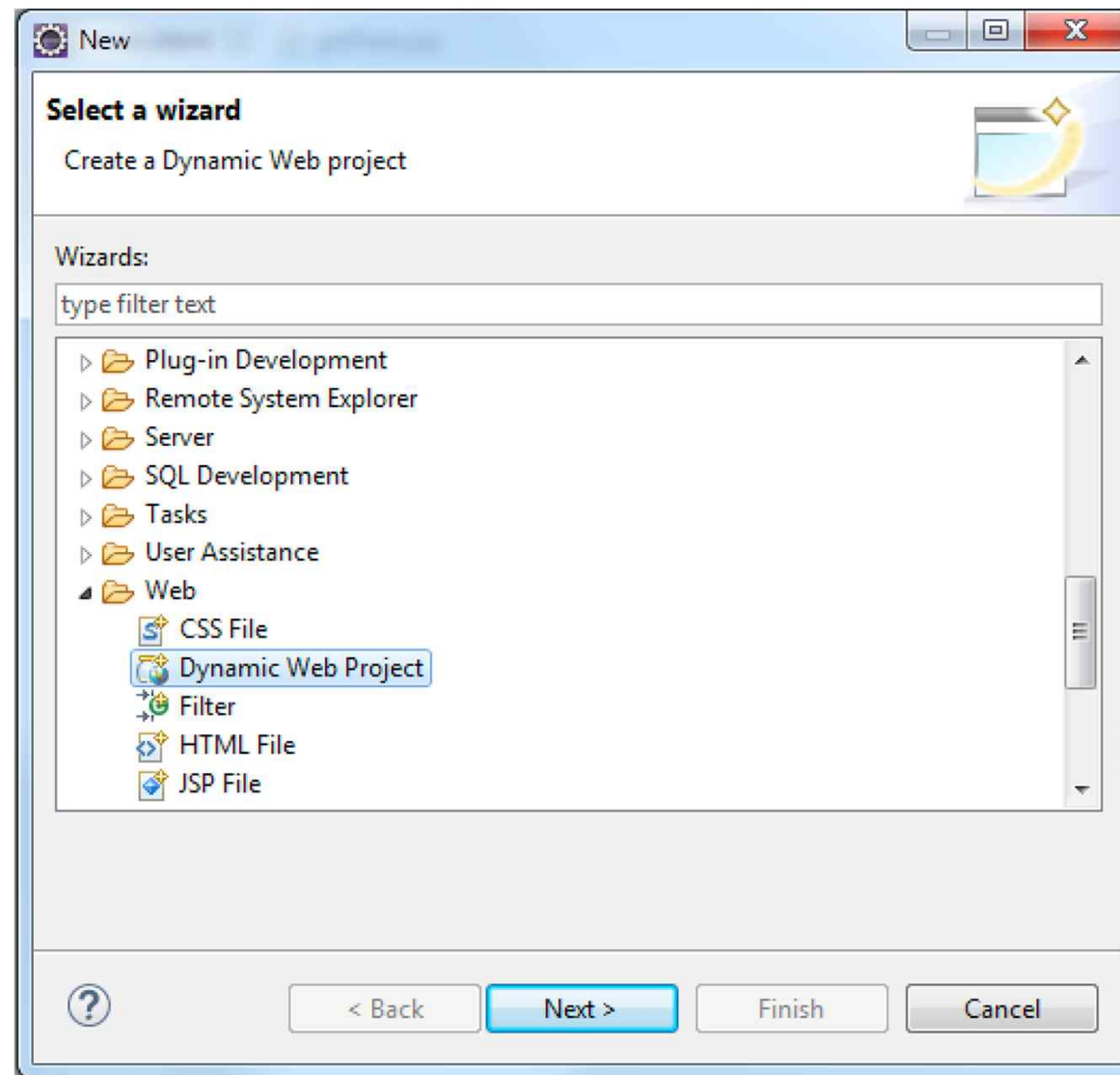
Prof. Young-Kyoon Suh

Run Eclipse EE

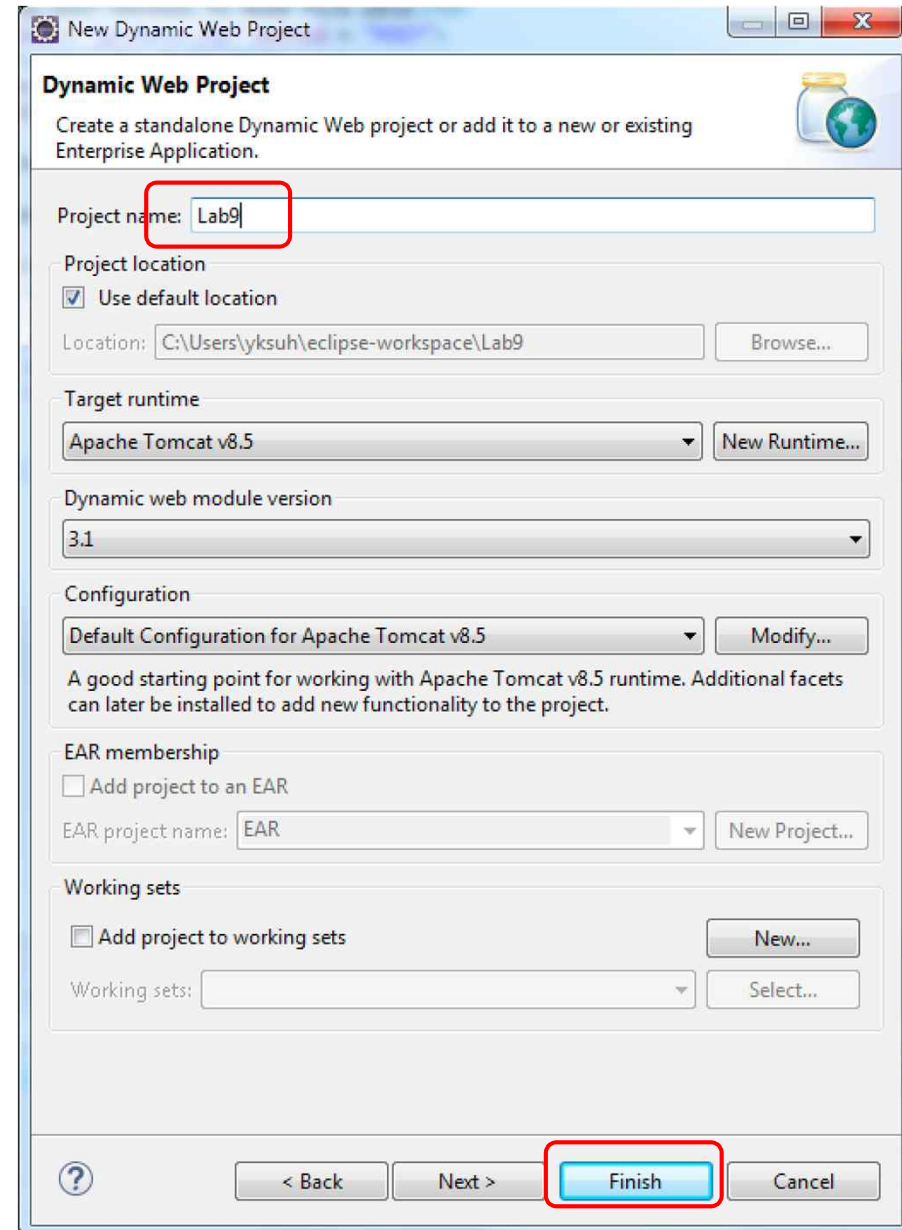
- Help -> Welcome
 - You should be able to see the following header in your Eclipse (EE).



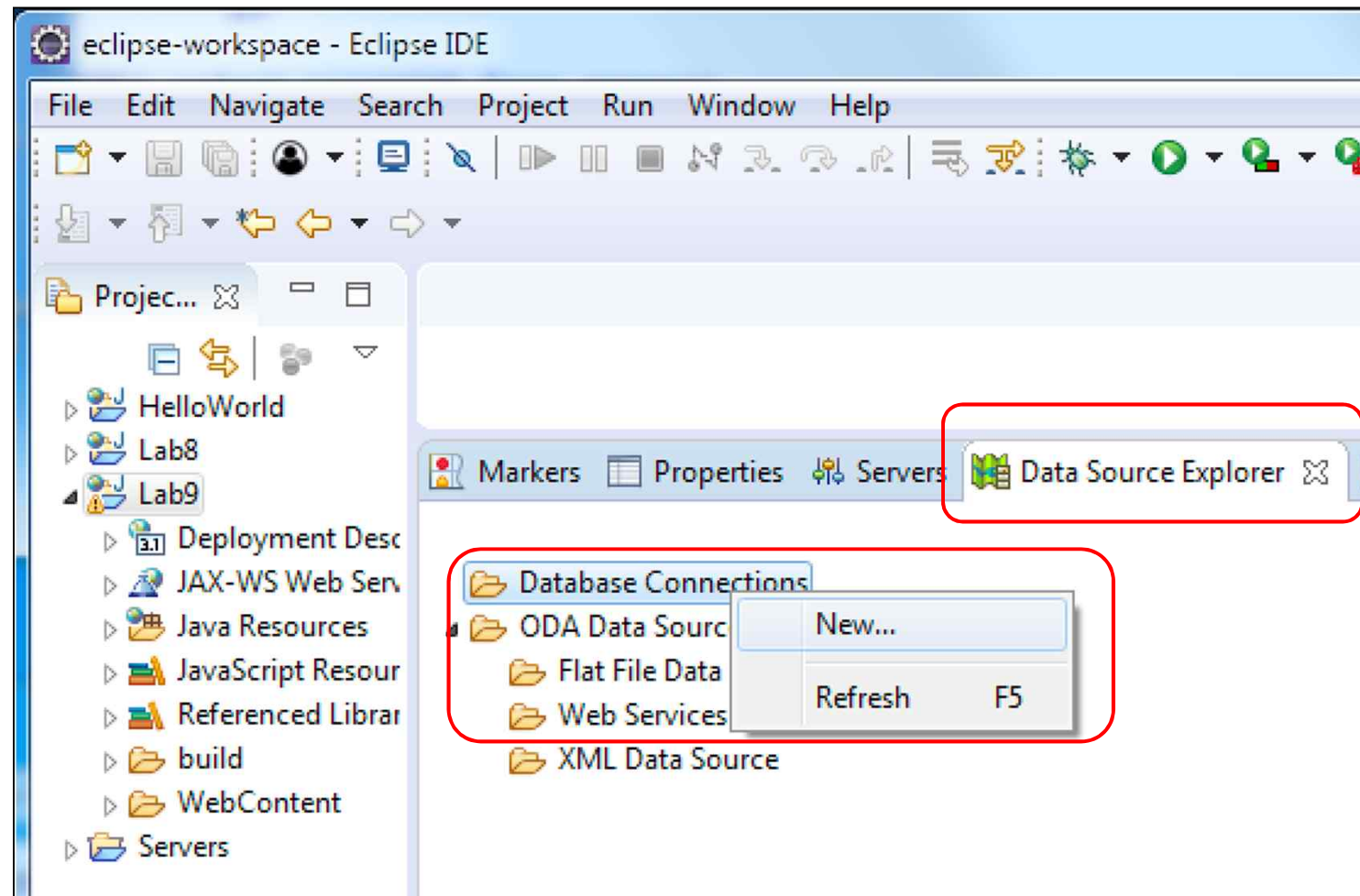
Creating a New Project in Eclipse EE



Creating a New Project in Eclipse (Cont'd)

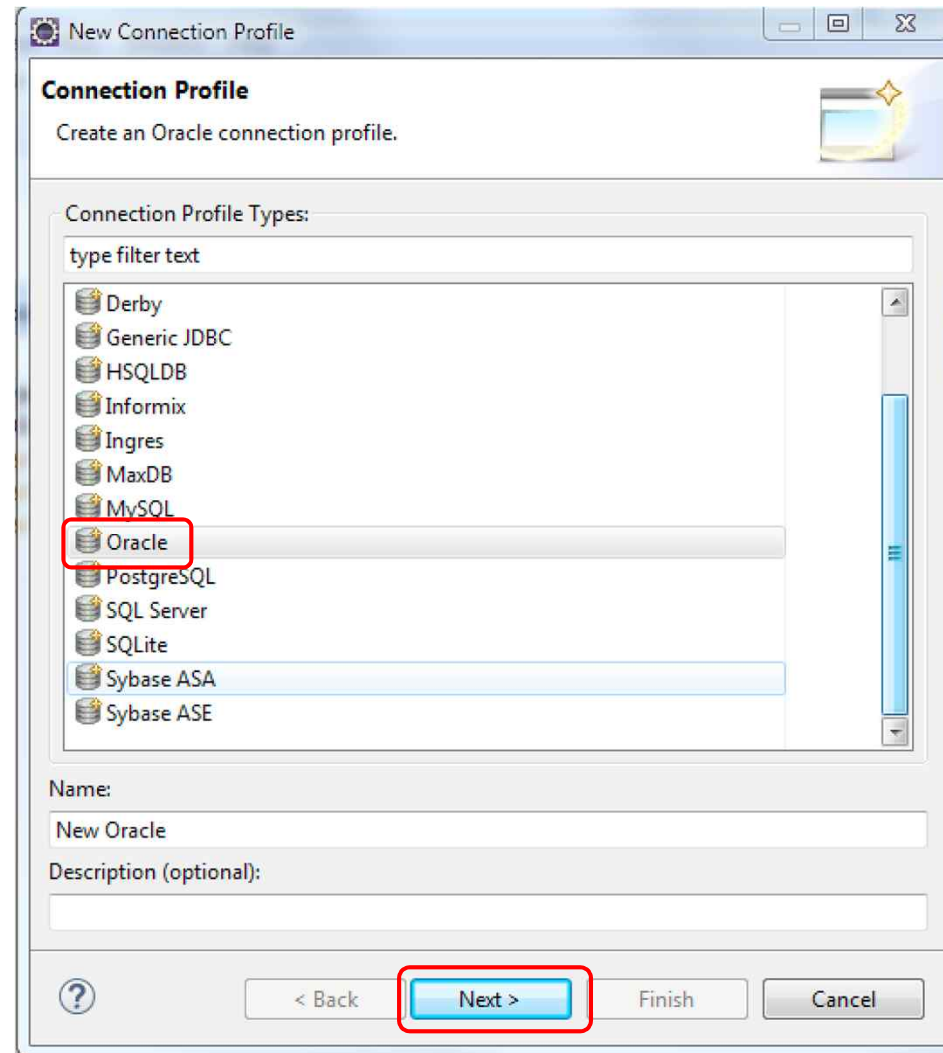


Database Connections in the New Project



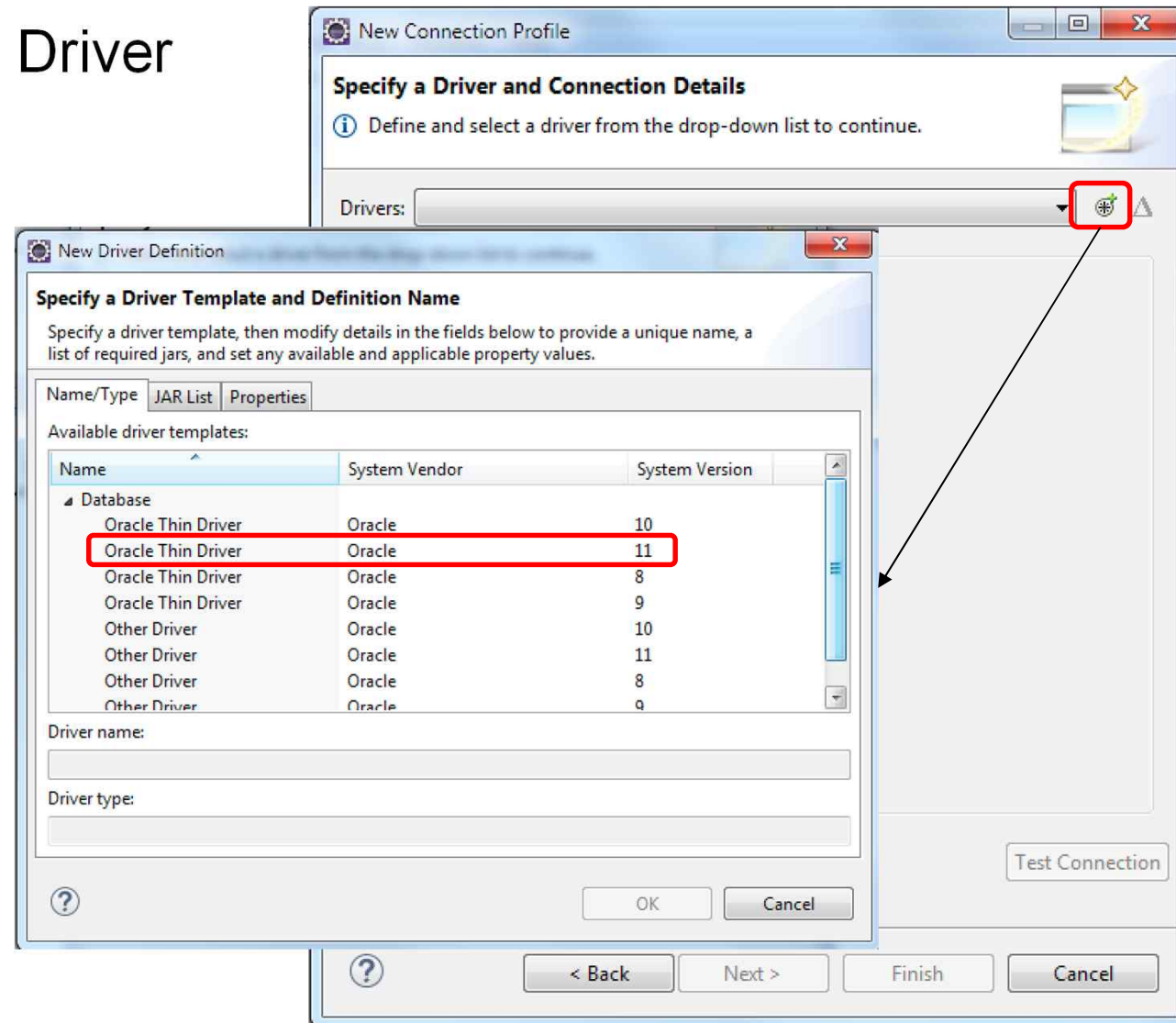
Database Connections in the New Project (Cont'd)

- Select Oracle.



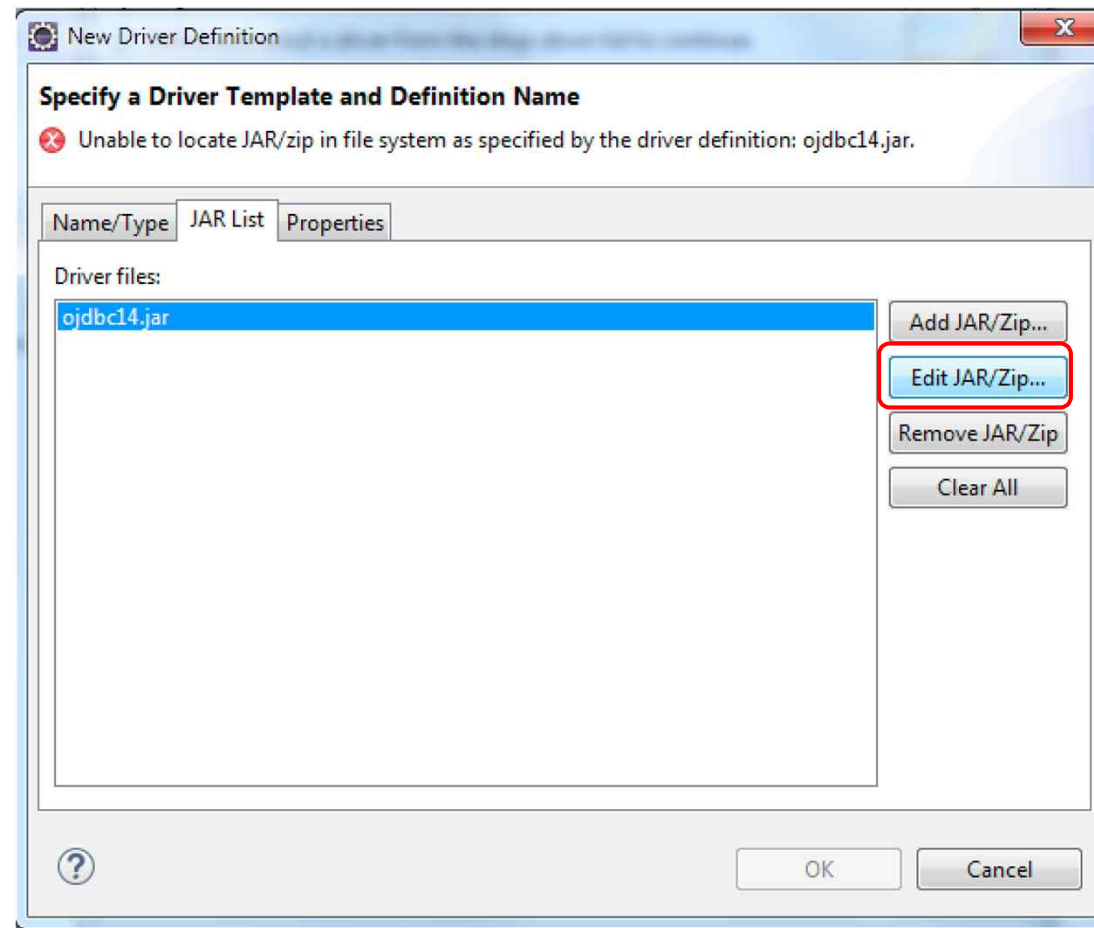
Database Connections in the New Project (Cont'd)

- Specify a Driver



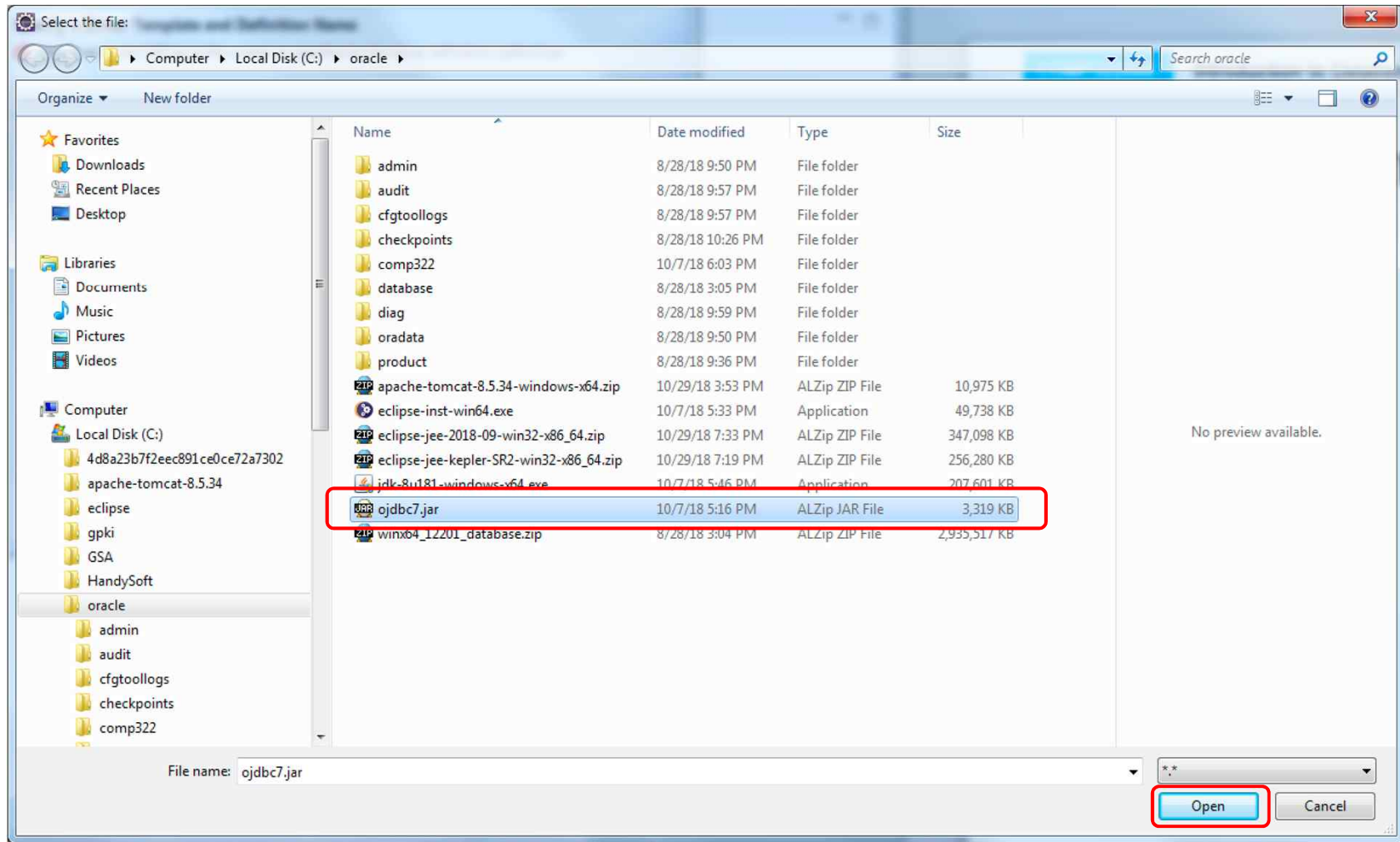
Database Connections in the New Project (Cont'd)

- Specify a Driver.



Database Connections in the New Project (Cont'd)

- Select `ojdbc7.jar`.



Database Connections in the New Project (Cont'd)

- Configuring properties
 - SID: **orcl**
 - Host: **localhost**
 - Username: **knu**
 - Password: **comp322**
 - Click “Save password” for future reference.

New Connection Profile

Specify a Driver and Connection Details

Select a driver from the drop-down and provide login details for the connection.

Drivers: Oracle Thin Driver

Properties

General Optional

Database instance: ☐ Service Name db ☒ SID orcl

Connection URL: jdbc:oracle:thin:@10.211.55.13:1521:orcl

Host: 10.211.55.13 // localhost로 대체 가능

Port number: 1521

User name: knu

Password: ••••••

☒ Save password

Catalog: User

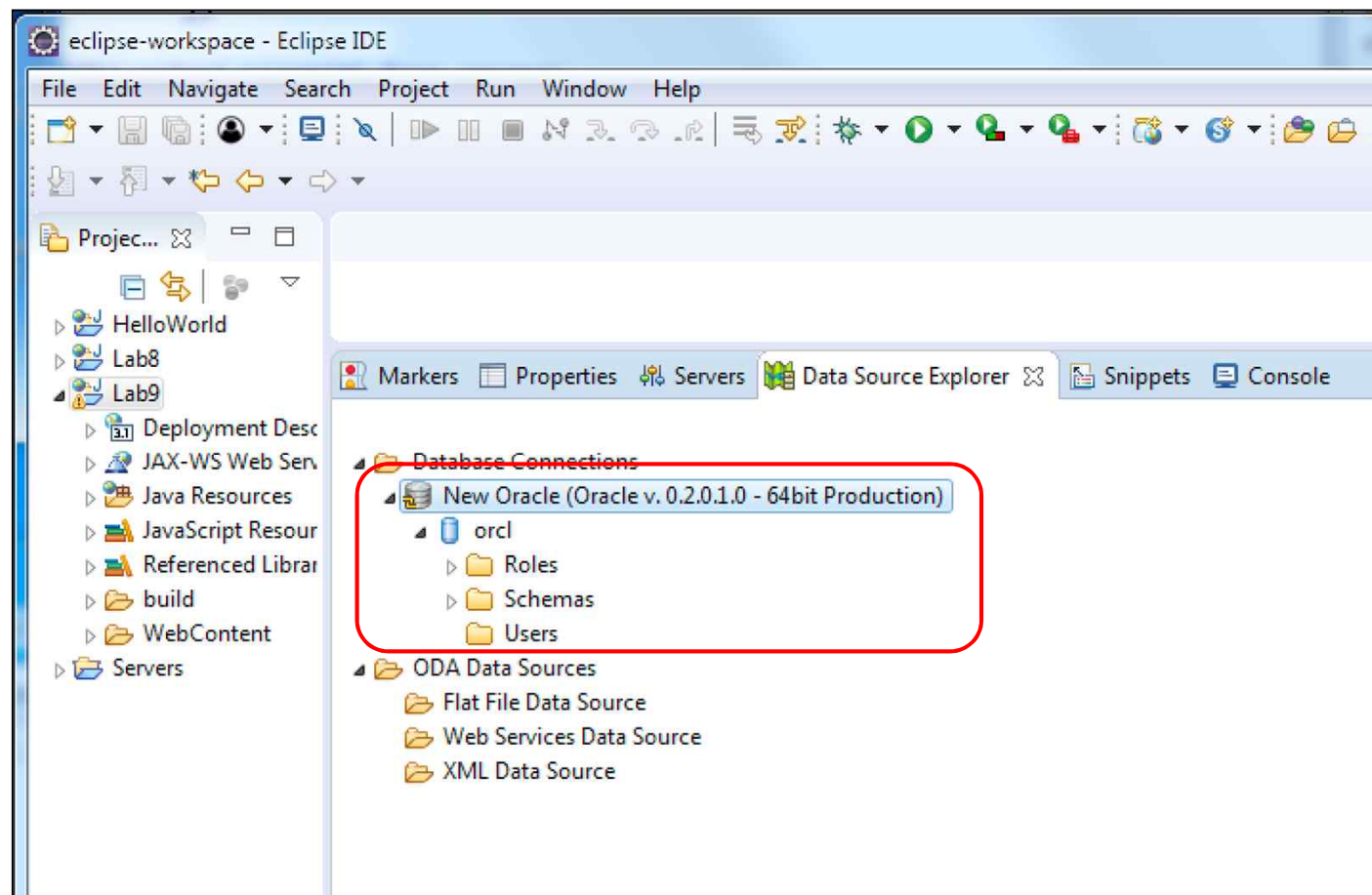
☒ Connect when the wizard completes

☐ Connect every time the workbench is started

? < Back Next > Finish Cancel

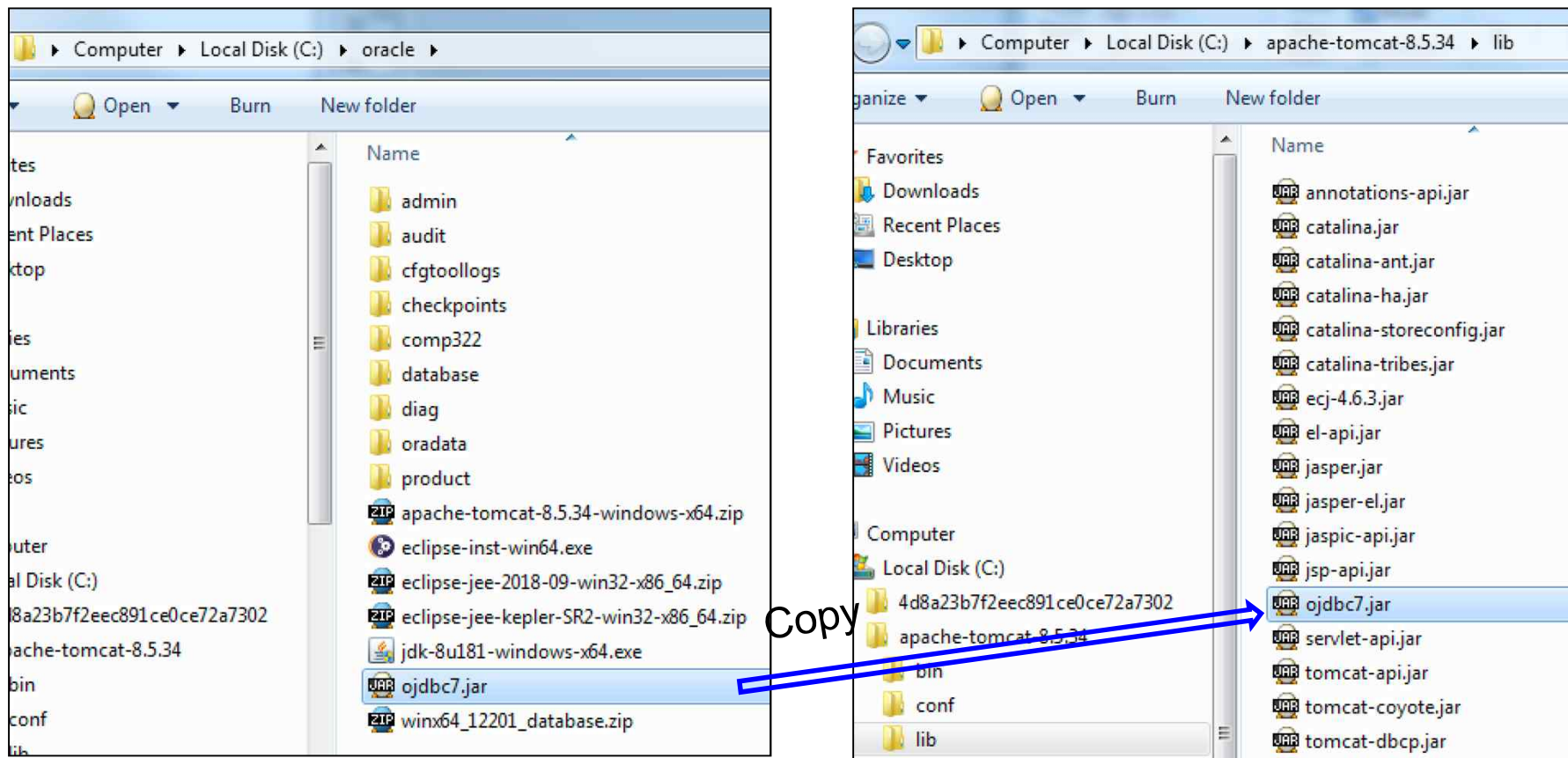
Database Connections in the New Project (Cont'd)

- Connection confirmation



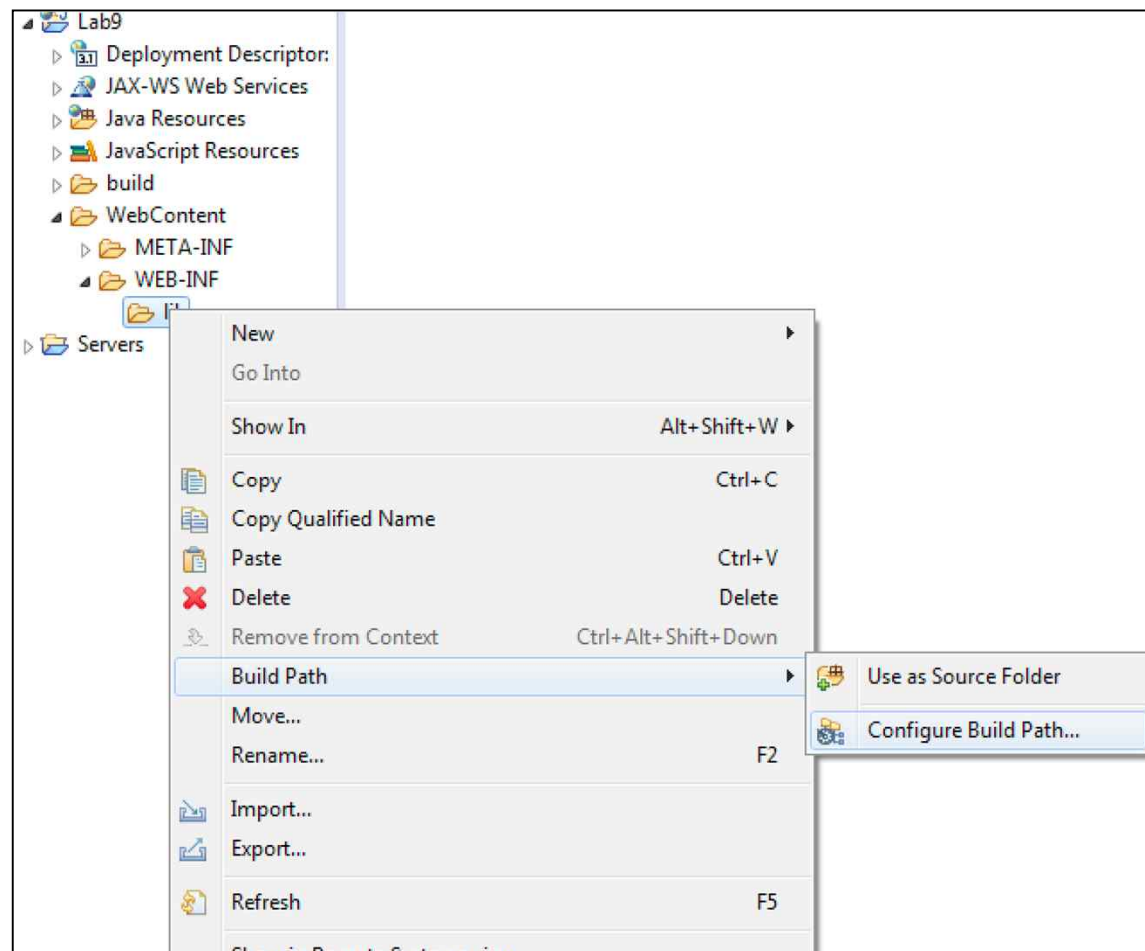
Configuring the Oracle-JDBC Driver in Tomcat

- Copy **ojdbc7.jar** in `oracle` into the `lib` directory in the Tomcat directory.



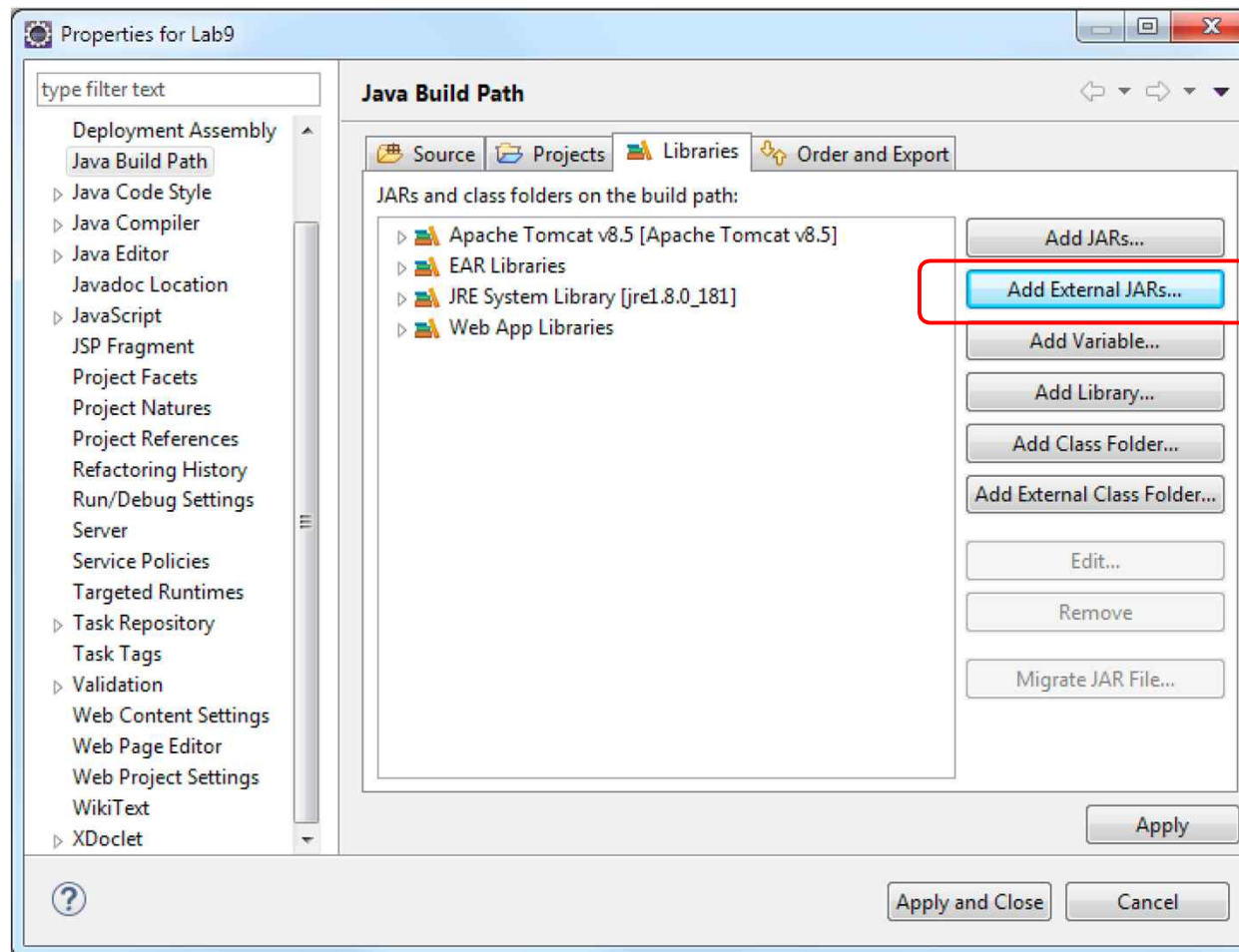
Configuring the Oracle-JDBC Driver in the Created Dynamic Web Project

- Add **ojdbc7.jar** to Build Path.



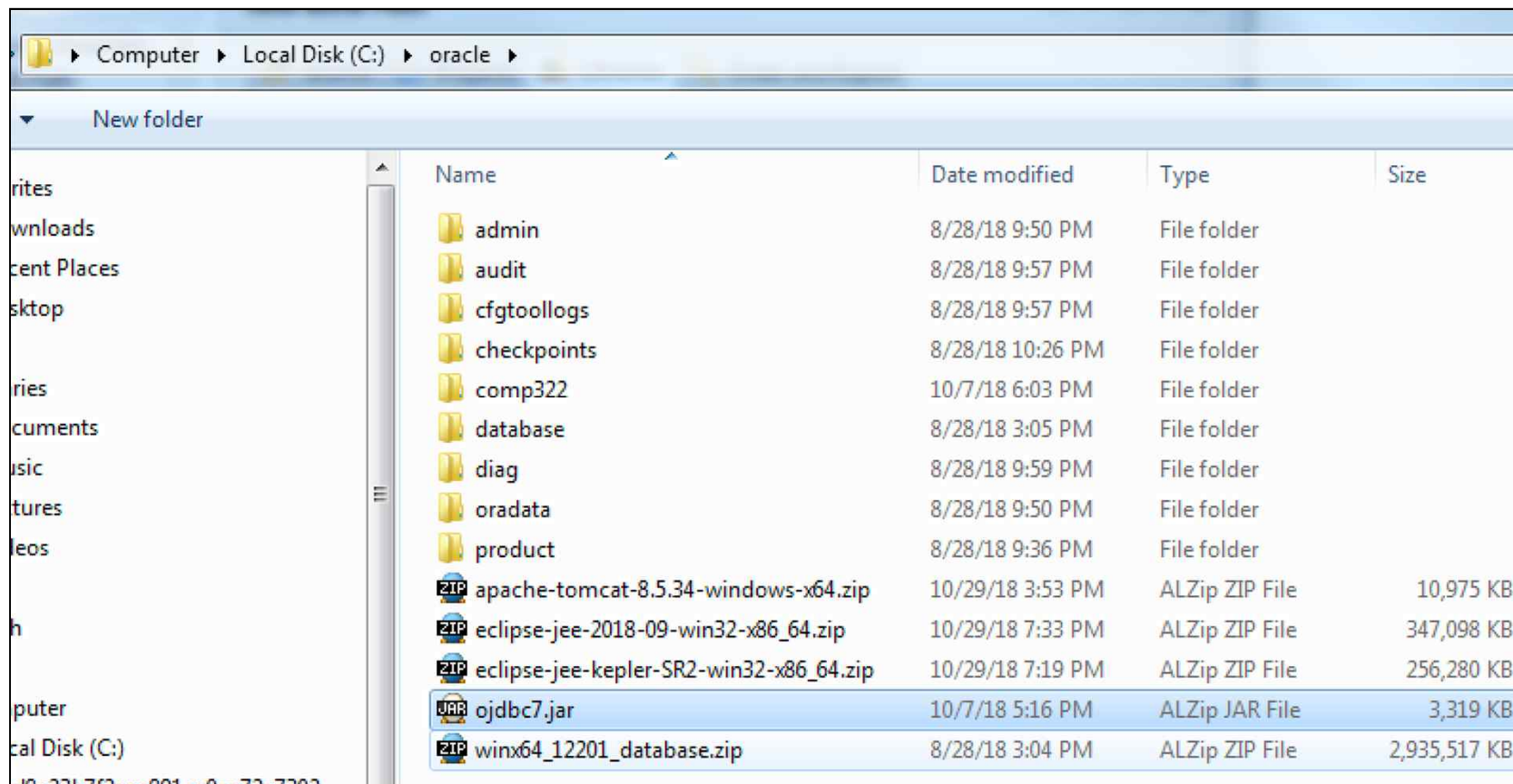
Configuring the Oracle-JDBC Driver in the Created Dynamic Web Project (Cont'd)

- Libraries -> Add External JARs...

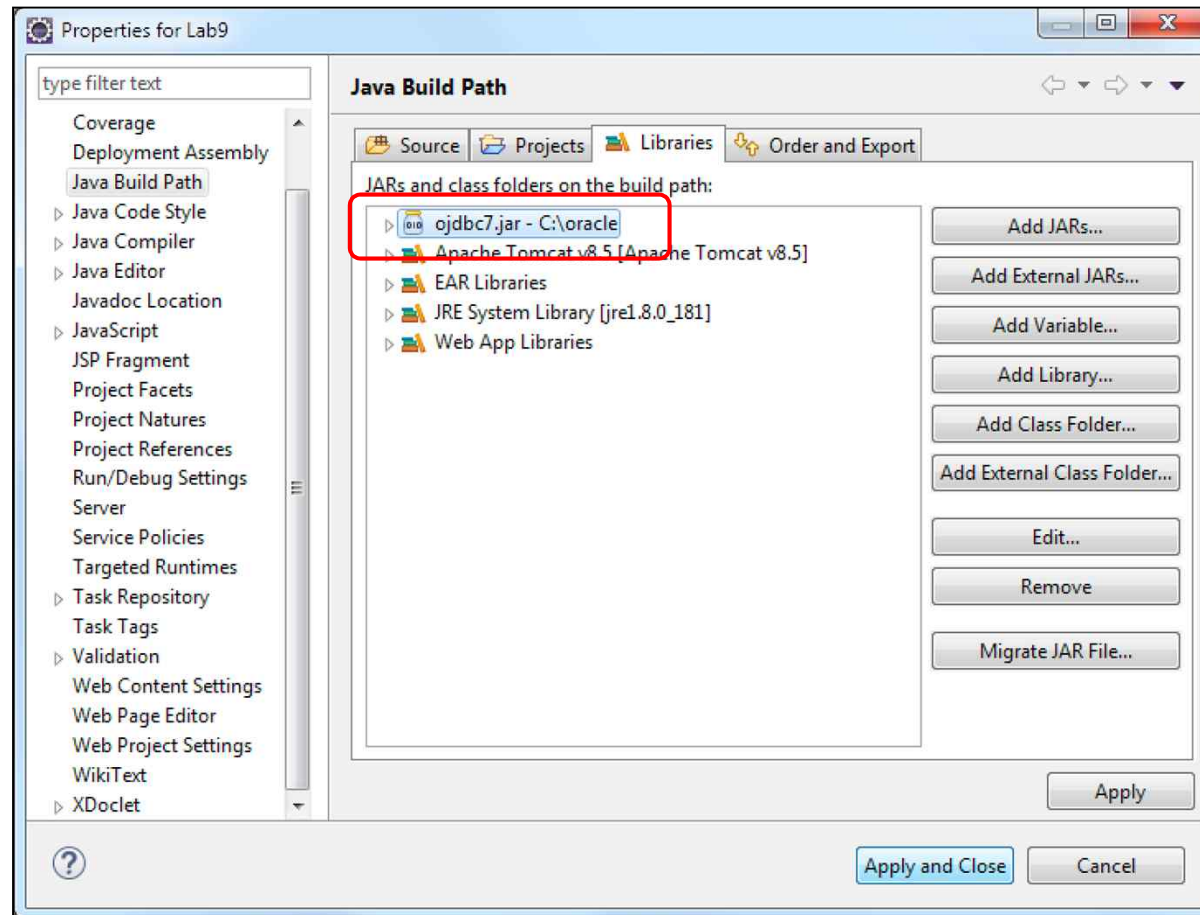


Configuring the Oracle-JDBC Driver in the Created Dynamic Web Project (Cont'd)

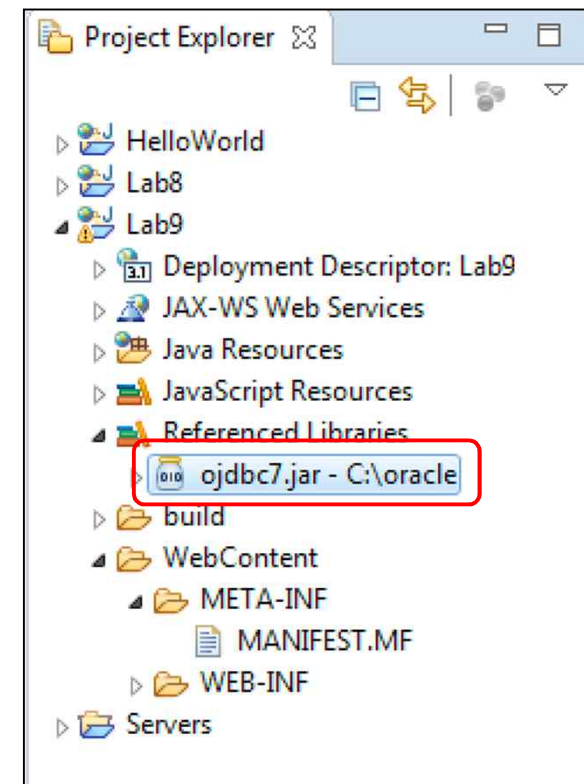
- Locate **ojdbc7.jar** in C:\oracle.



Configuring the Oracle-JDBC Driver in the Created Dynamic Web Project (Cont'd)



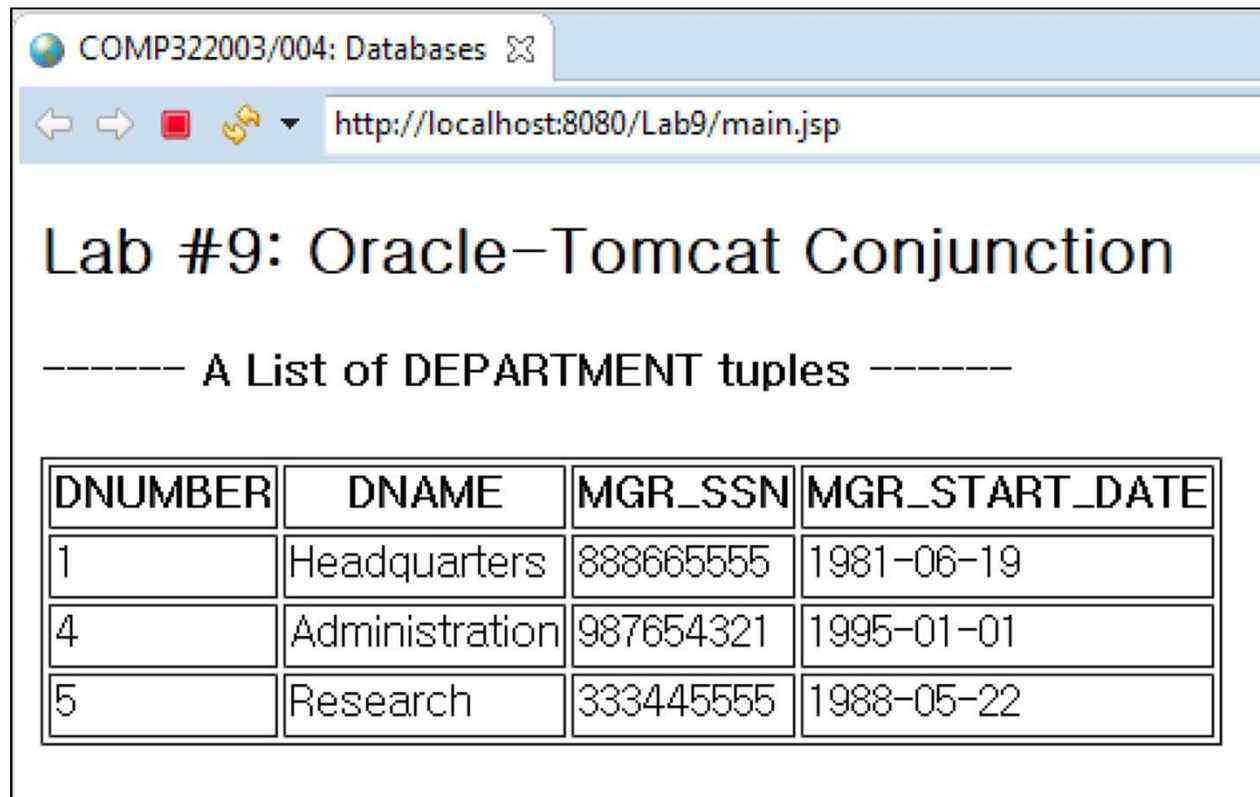
[Confirmation in Java Build Path]



[Confirmation
in Eclipse]

Lab9/WebContent/main.jsp

- Browse all the DEPARTMENT tuples from the COMPANY database.



COMP322003/004: Databases

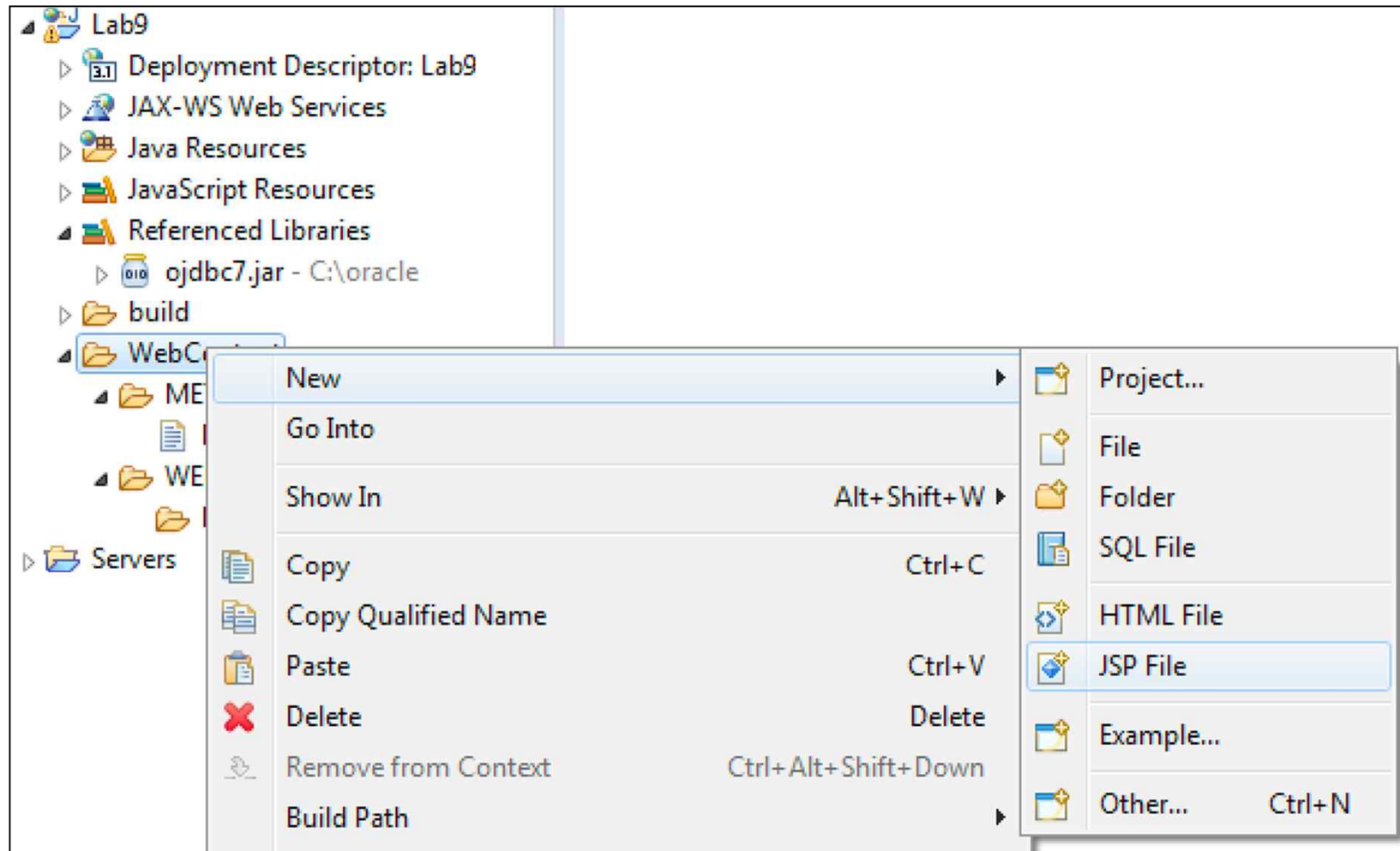
http://localhost:8080/Lab9/main.jsp

Lab #9: Oracle-Tomcat Conjunction

----- A List of DEPARTMENT tuples -----

DNUMBER	DNAME	MGR_SSN	MGR_START_DATE
1	Headquarters	888665555	1981-06-19
4	Administration	987654321	1995-01-01
5	Research	333445555	1988-05-22

Lab9/WebContent/main.jsp (Cont'd)



Lab9/WebContent/main.jsp (Cont'd)

```
main.jsp COMP322003/004: Databases
1 <%@ page language="java" contentType="text/html; charset=EUC-KR"
2   pageEncoding="EUC-KR"%>
3 <!-- import JDBC package -->
4 <%@ page language="java" import="java.text.*,java.sql.*" %> // Don't forget this scripting.
5 <!DOCTYPE html>
6 <html>
7 <head>
8   <meta charset="EUC-KR">
9   <title>COMP322003/004: Databases</title>
10 </head>
11 <body>
12   <h2>Lab #9: Oracle-Tomcat Conjunction</h2>
13 <%
14   String serverIP = "10.211.55.13";
15   String strSID = "orcl";
16   String portNum = "1521";
17   String url = "jdbc:oracle:thin:@"+serverIP+": "+portNum+": "+strSID;
18   String user = "knu";
19   String pass = "comp322";
20   Connection conn;
21   PreparedStatement pstmt;
22   ResultSet rs;
23   Class.forName("oracle.jdbc.driver.OracleDriver");
24   conn = DriverManager.getConnection(url, user, pass);
25   String query = "SELECT Dnumber, Dname, Mgr_ssn, Mgr_start_date "
26     + "FROM DEPARTMENT ORDER BY Dnumber";
27   pstmt = conn.prepareStatement(query);
28   rs=pstmt.executeQuery();
29 %>
30
```

// To print out the query string, use
System.out.println(query);

Lab9/WebContent/main.jsp (Cont'd)

```
31      <h4>----- A List of DEPARTMENT tuples -----</h4>
32  <%
33      //out.println(): print out given text to the current HTML document.
34      out.println("<table border='1'>");
35      ResultSetMetaData rsmd = rs.getMetaData();
36      int cnt = rsmd.getColumnCount();
37      for(int i=1;i<=cnt;i++){
38          // Place each column name in the header of this table.
39          out.println("<th>" + rsmd.getColumnName(i) + "</th>");
40      }
41      while(rs.next()){
42          out.println("<tr>");
43          out.println("<td>" + rs.getString(1) + "</td>");
44          out.println("<td>" + rs.getString(2) + "</td>");
45          out.println("<td>" + rs.getString(3) + "</td>");
46          SimpleDateFormat sdfDate = new SimpleDateFormat("yyyy-MM-dd");
47          Date mgrStartDate = rs.getDate(4);
48          String strMSDate = sdfDate.format(mgrStartDate);
49          out.println("<td>" + strMSDate + "</td>");
50          out.println("</tr>");
51      }
52      out.println("</table>");
53      pstmt.close();
54      conn.close();
55  %>
56  </body>
57  </html>
```

Lab #9: Repeating Lab #5-3 Using JSP

Project Explorer

COMP322003/004: Databases

http://localhost:8080/Lab9/main2.html

Lab #9: Repeating Lab #5-3 via JSP

Query 1: Search for employees satisfying the following condition:

Project name: Department number: Salary:

Query 2: Search for employees with the following information:

Supervisor's SSN: Address:

Query 3: Search for employees working on:

Project name:

Department number:

Employees with the following information:

Department number:

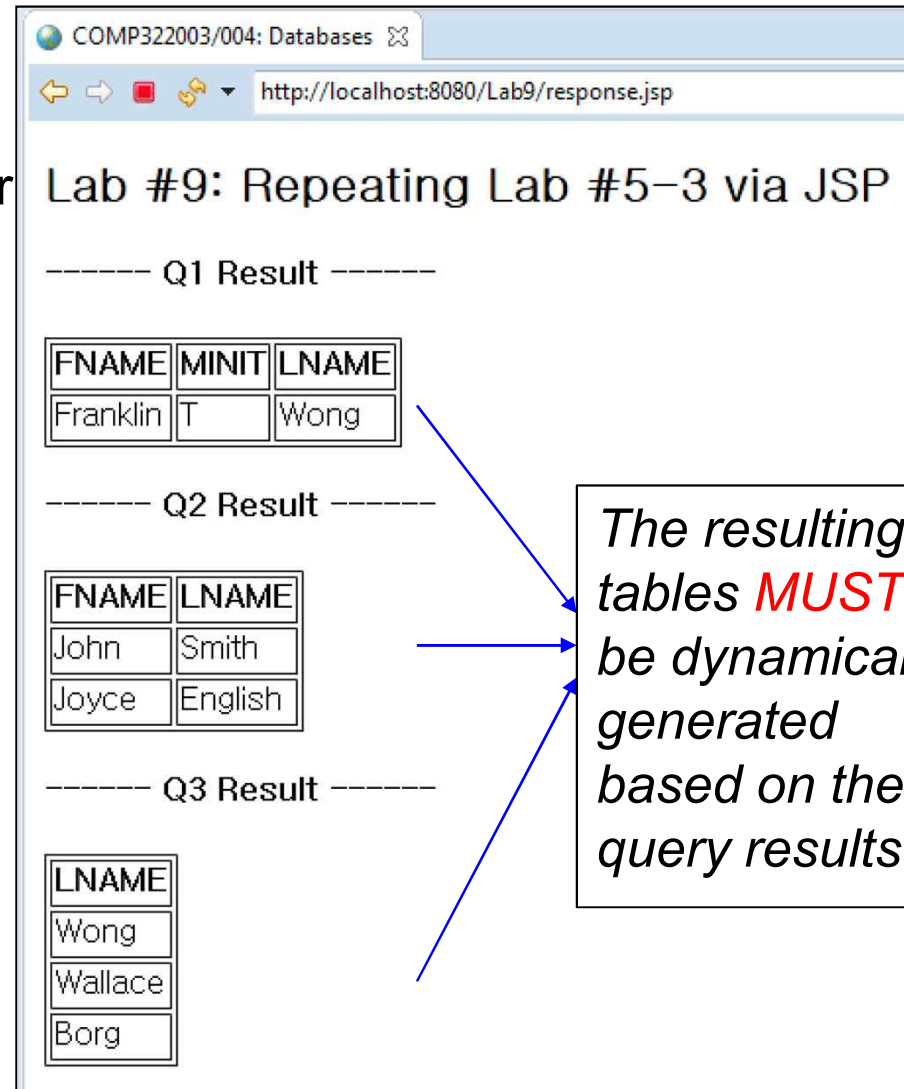
1
4
5

- **main2.html**
 - Provide input interface for each of the three queries.
 - Post the entered values to **response.jsp** to be discussed shortly.

```
Department number: <select name="dNum">
  <option value="1">1</option>
  <option value="4">4</option>
  <option value="5" selected>5</option>
</select>
```


Lab #9: Repeating Lab #5-3 Using JSP (Cont'd)

- **response.jsp**
 - Receive parameter values for each query input passed from **main2.html**.
 - Run each query on Oracle.
 - Output the result in the tabular form for each of the three queries.
- [Note] Don't put the hard-wired resulting values directly into the tabular forms.



COMP322003/004: Databases

http://localhost:8080/Lab9/response.jsp

Lab #9: Repeating Lab #5-3 via JSP

----- Q1 Result -----

FNAME	MINIT	LNAME
Franklin	T	Wong

----- Q2 Result -----

FNAME	LNAME
John	Smith
Joyce	English

----- Q3 Result -----

LNAME
Wong
Wallace
Borg

*The resulting tables **MUST** be dynamically generated based on the query results.*

Lab #9: Repeating Lab #5-3 Using JSP (Cont'd)

[Submission]

- Deadline: **Sunday midnight** (11/11/2018) – Pepero Day?!
- Name your files like:
 - 'lab9-Your_Student_ID.html' and
 - 'lab9-Your_Student_ID.jsp'
- Get a screenshot from your Web app and save them each as
 - 'lab9-Your_Student_ID_main.jpg' and
 - 'lab9-Your_Student_ID_result.jpg'
- Zip the four files.
- Upload the zip file into LMS.

JDK 8 Installation

- <https://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.html>

Oracle Technology Network / Java / Java SE / Downloads

Overview Downloads Documentation Community Technologies Training

Java SE Development Kit 8 Downloads

Thank you for downloading this release of the Java™ Platform, Standard Edition Development Kit (JDK™). The JDK is a development environment for building applications, applets, and components using the Java programming language.

The JDK includes tools useful for developing and testing programs written in the Java programming language and running on the Java platform.

See also:

- [Java Developer Newsletter](#): From your Oracle account, select **Subscriptions**, expand **Technology**, and subscribe to **Java**.
- [Java Developer Day](#) hands-on workshops (free) and other events
- [Java Magazine](#)

JDK 8u191 [checksum](#)
JDK 8u192 [checksum](#)

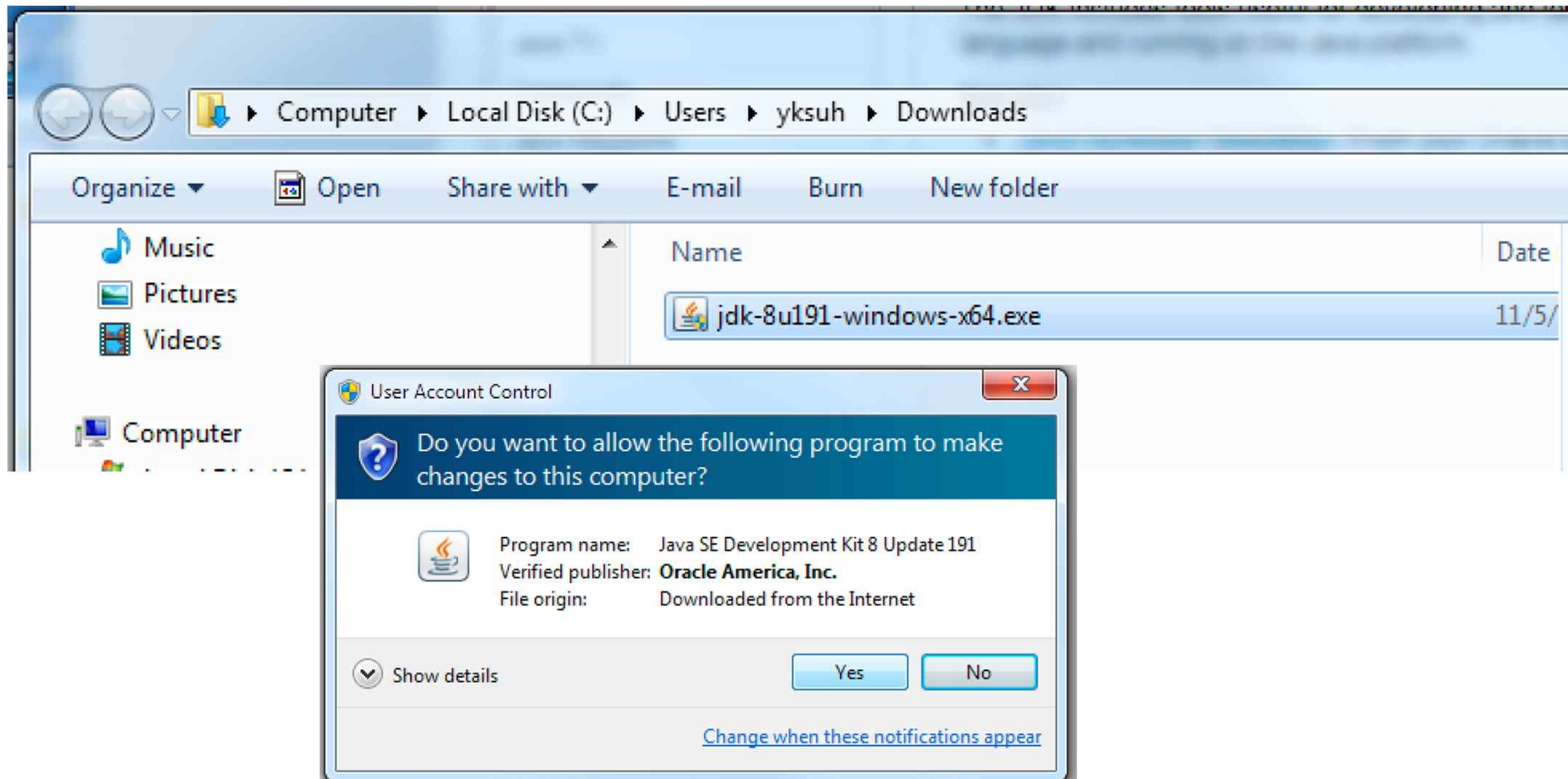
Java SE Development Kit 8u191

You must accept the [Oracle Binary Code License Agreement for Java SE](#) to download this software.

☒ Accept License Agreement ☐ Decline License Agreement

Product / File Description	File Size	Download
Linux ARM 32 Hard Float ABI	72.97 MB	jdk-8u191-linux-arm32-vfp-hflt.tar.gz
Linux ARM 64 Hard Float ABI	69.92 MB	jdk-8u191-linux-arm64-vfp-hflt.tar.gz
Linux x86	170.89 MB	jdk-8u191-linux-i586.rpm
Linux x86	185.69 MB	jdk-8u191-linux-i586.tar.gz
Linux x64	167.99 MB	jdk-8u191-linux-x64.rpm
Linux x64	182.87 MB	jdk-8u191-linux-x64.tar.gz
Mac OS X x64	245.92 MB	jdk-8u191-macosx-x64.dmg
Solaris SPARC 64-bit (SVR4 package)	133.04 MB	jdk-8u191-solaris-sparcv9.tar.Z
Solaris SPARC 64-bit	94.28 MB	jdk-8u191-solaris-sparcv9.tar.gz
Solaris x64 (SVR4 package)	134.04 MB	jdk-8u191-solaris-x64.tar.Z
Solaris x64	92.13 MB	jdk-8u191-solaris-x64.tar.gz
Windows x86	197.34 MB	jdk-8u191-windows-i586.exe
Windows x64	207.22 MB	jdk-8u191-windows-x64.exe

JDK 8 Installation (Cont'd)



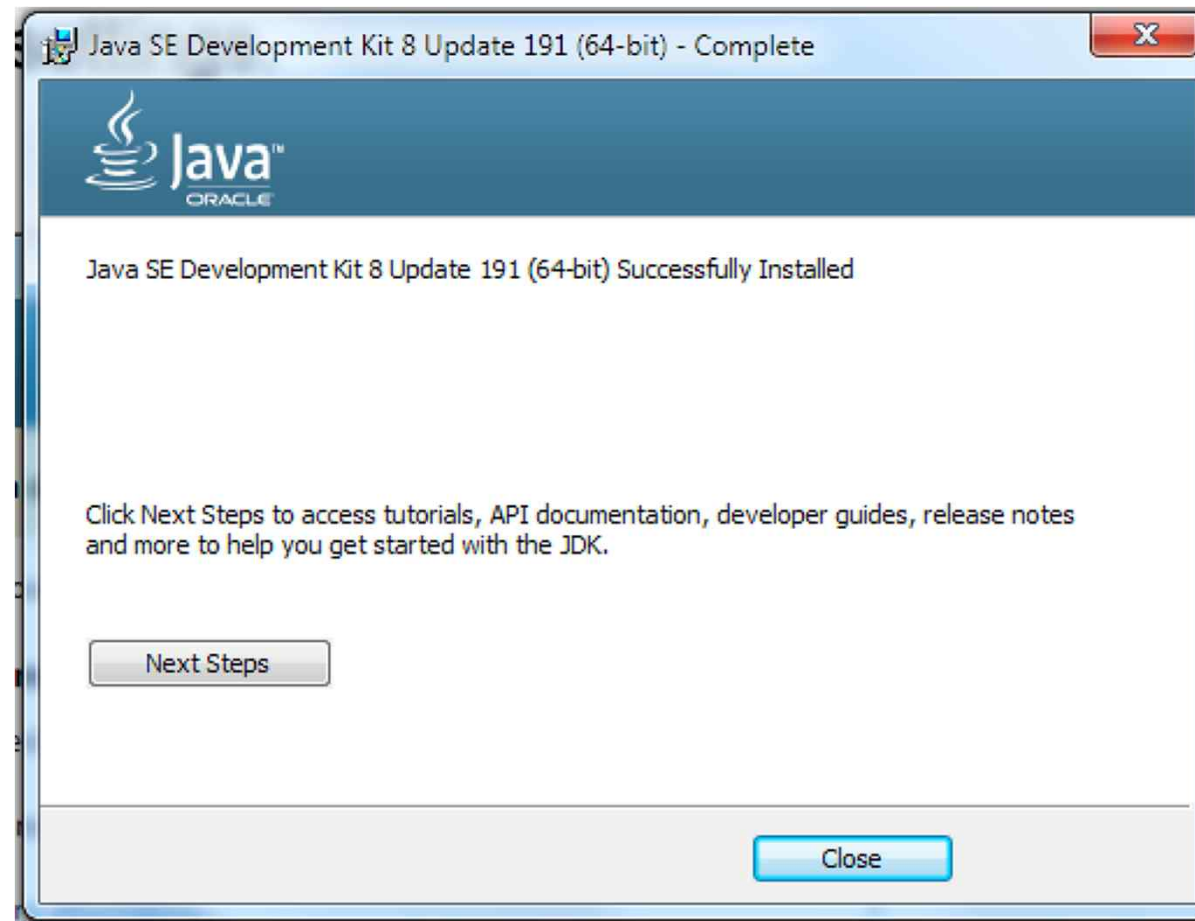
JDK 8 Installation (Cont'd)

- Proceed with OK
- Don't change any default settings.



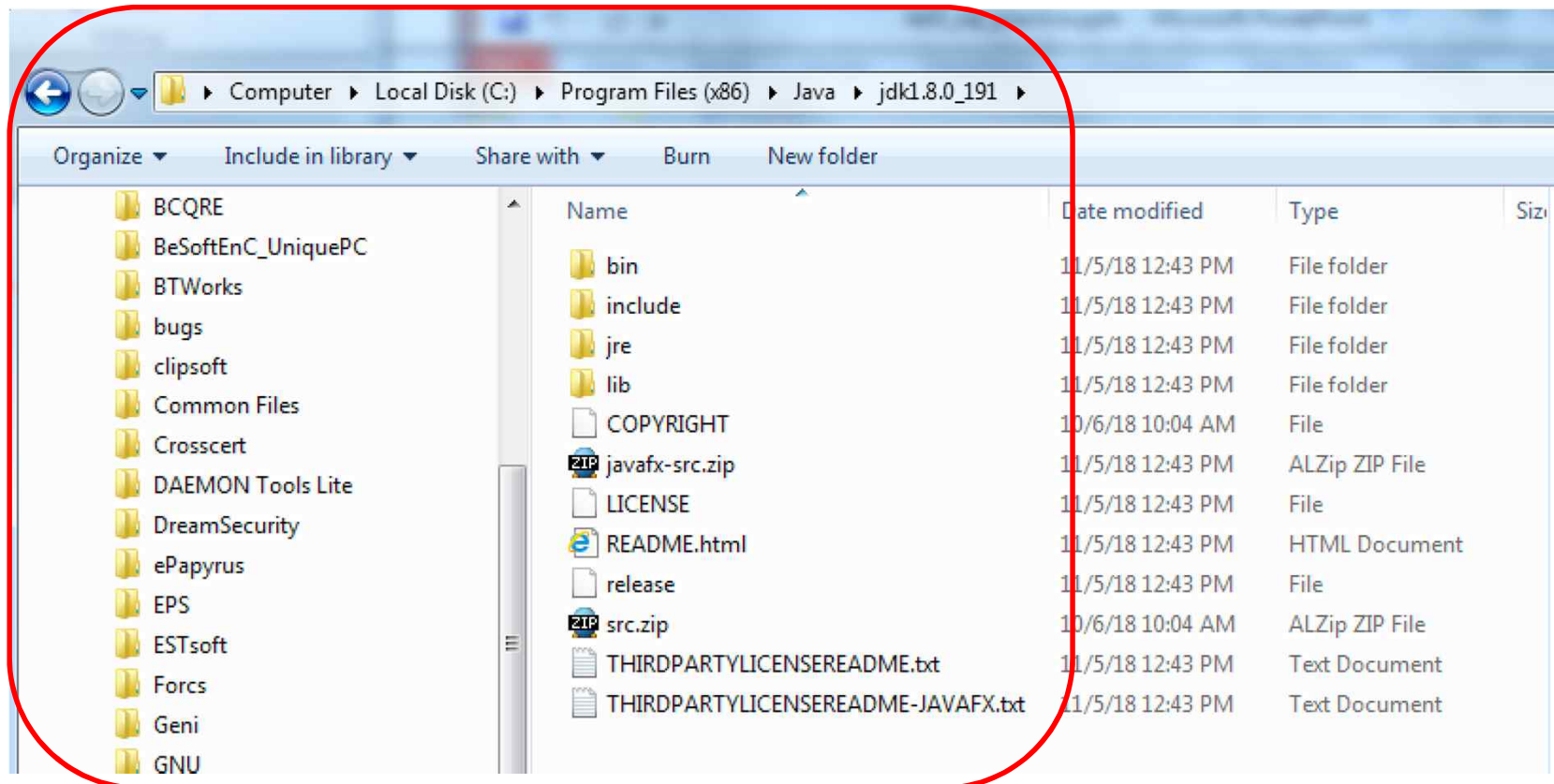
JDK 8 Installation (Cont'd)

- Installation completed.



JDK 8 Installation (Cont'd)

- Installation confirmation



- Check if C:\Program Files\Java\jdk1.8.0_191 exists.
- If not, then create the directory manually ahead of installation.