CS 4513 – Fall 2013
Instructions for using JDBC on Oracle 11g

Step 1. Download JDBC driver ojdbc6.jar from the link:

http://www.oracle.com/technetwork/database/enterprise-edition/jdbc-112010-090769.html

Step 2. Write a *Java* program to use *Java JDBC* to connect to the Oracle database. Add *ojdbc6.jar* to the Java build path. If you are using eclipse, this can be done by right click *project name -> Properties -> Java Build Path -> Libraries -> Add External JARS* and select *ojdbc6.jar*.

Step 2.1. Import the java.sql package.

```
import java.sql.*;
```

Setp 2.2. Load a database driver.

```
try {
        Class.forName("oracle.jdbc.OracleDriver");

}
catch(Exception x){
        System.out.println( "Unable to load the driver class!" );
}
```

Step 2.3. Create an Oracle JDBC Connection. Replace the LoginName and Password in the statement below with your Oracle SQL Developer login name and password, respectively.

```
try{
Connection dbConnection=DriverManager.getConnection("jdbc:oracle:thin:@stu-
oracle.cs.ou.edu:1521:cs4513db","loginName","Password")
}
catch( SQLException x ){
        System.out.println( "Couldn't get connection!" );
}
```

Step 2.4. Create an Oracle Statement object.

To execute SQL statements, you need to instantiate a Statement object from your connection object by using the createStatement() method.

```
Statement stmt = dbConnection.createStatement();
```

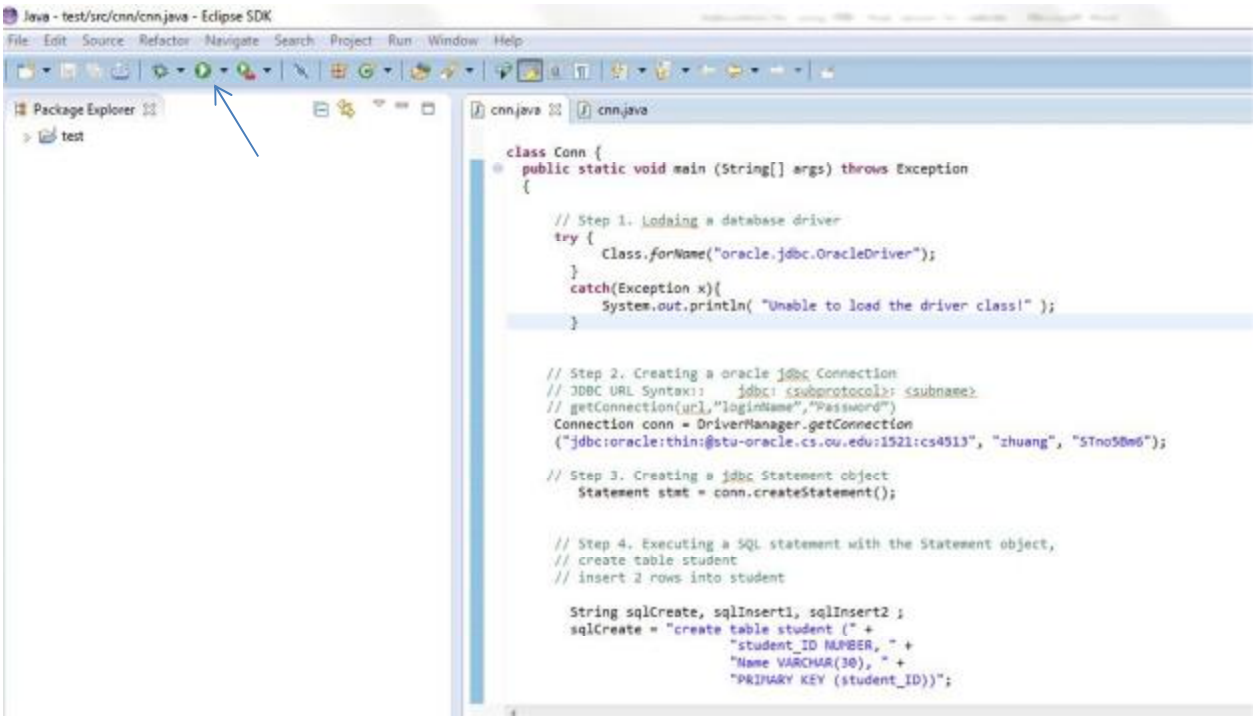
Step 2.5. Execute a SQL statement with the Statement object.

An example of a Java program using JDBC connection to perform database operations on Oracle 11g

```
// A sample Java program using JDBC to connect to an Oracle database,
// create a table student, insert 2 rows into student and
// display the IDs and names of all students

package cnn;
import java.sql.*;

class Conn {
  public static void main (String[] args) throws Exception
  {

        // Step 1. Loading a database driver
          try {
                    Class.forName("oracle.jdbc.OracleDriver");
            }
            catch(Exception x){
                    System.out.println( "Unable to load the driver class!" );
            }

        // Step 2. Creating an Oracle JDBC Connection.  The following example assumes
        // that the login name is smith1234 and the password is johnsmith

    Connection conn = DriverManager.getConnection
    ("jdbc:oracle:thin:@stu-oracle.cs.ou.edu:1521:cs4513db","smith1234", "johnsmith");

   // Step 3. Creating a JDBC Statement object
      Statement stmt = conn.createStatement();
```

```
    // Step 4. Executing the SQL statements with the Statement object

    // create table student
    // insert 2 rows into student

                String sqlCreate, sqlInsert1, sqlInsert2 ;
                sqlCreate = "create table student (" +
                                                "student_ID NUMBER, " +
                                                "Name VARCHAR(30), " +
                                                "PRIMARY KEY (student_ID))";

                sqlInsert1 = "insert into student values (100, 'Alice')";
                sqlInsert2 = "insert into student values (200, 'Bob')";

                try {
                        stmt.executeUpdate(sqlCreate);
                        stmt.executeUpdate(sqlInsert1);
                        stmt.executeUpdate(sqlInsert2);
                } catch(SQLException ex) {
                        System.err.println("SQLException: " + ex.getMessage());
                }



    // display the IDs and names column of all students using the JDBC resultSet

    ResultSet rset = stmt.executeQuery("select * from student");
    System.out.println("Student ID     Student Name");
    while (rset.next())
          System.out.println (rset.getString(1) + "       " + rset.getString(2));
    conn.close();
  }
}
```

Step 3. To compile and run the program in *eclipse*, just press the RUN button pointed to by the arrow below.



References:

Some useful references for using JDBC:

Chapter 5 “Advanced SQL” in the textbook;

http://docs.oracle.com/javase/tutorial/jdbc/basics/index.html

http://www.jdbc-tutorial.com/