# Final project– Developer Machine Setup Instructions

## Basic setup

1. Java 8, 64-bit.  May need to remove old versions of Java.

* <http://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.html>
* Download and install: Windows x64    194.68 MB    jdk-8u102-windows-x64.exe

2. NetBeans

* <https://netbeans.org/downloads/index.html>
* Download and install: Java EE NetBeans IDE Download Bundle
* During installation: *Uncheck all application servers.*
  + We will not be using Glassfish or Tomcat. Last year we used Glassfish; however, Glassfish 4.1.1 has a major bug affecting database connectivity. In addition, Oracle has dropped support of Glassfish. We will be using a different application server called Payara. Please assume all references to Glassfish mean the same thing as Payara.

3. Payara

* <http://www.payara.fish/downloads>
* Download: Payara Server Full 163
* Extract contents of zip file to: C:\Program Files
* You should now have the folder C:\Program Files\payara41

4. MySQL

* <http://dev.mysql.com/downloads/mysql/>
* Windows (x86, 32-bit), MSI Installer
* During installation, use the following selections:
  + Developer default
  + Ignore check requirements and confirm
  + Execute!
  + Settings: use defaults
    - MySQL root Password: password

5. Resolve issues between Oracle Database and Glassfish Server.  You must stop Oracle database service before using NetBeans/Glassfish.  Restart Oracle database when NetBeans is closed.

* Start Menu -> Oracle Database -> Stop Server/Stop Server

6.  To Use a JDBC connection in Payara, copy MySQL JDBC driver (mysql-connector-java-5.1.39-bin.jar) from C:\Program Files (x86)\MySQL\Connector.J 5.1 to  
C:\Program Files\payara41\glassfish\lib

7. Open NetBeans, add Payara server.

* Tools -> Servers
* Add Server
* Select Glassfish Server. Click Next.
* Enter the folder where the server is located
  + C:\Program Files\payara41\glassfish
* Next. (leave defaults)
* Finish.

## JDBC Pools Setup

### Step 1

Create an empty MySQL database called “NotesDB”. Do **one** of the following:

* In a command shell, type:
  1. cd c:\Program Files\MySQL\MySQL Server 5.7\bin\
  2. mysql -u root -p
     + enter password: password
  3. create database NotesDB;
  4. exit
* Open NetBeans
  1. Right-click on MySQL Server and create a database called “NotesDB”

### Step 2a

Establishing a database connection is resource intensive. Instead, we will use a pool of connections and retrieve a connection from the pool.

1. Go to the admin console for Glassfish.
2. Under Resources -> JDBC -> JDBC Connection Pools, click on “New”.
   * Pool name: NotesPool
   * Resource Type: javax.sql.ConnectionPoolDataSource
   * Database Driver Vender: MySql
3. Next
4. Under “Additional Properties” edit the following name/value pairs. Leave the others as defaults. (Note: If you don’t see these options, you missed a step in the lab for Week 1 Lab 1.) Tip: Ctrl-F
   * User: root
   * Password: password
   * URL: jdbc:mysql://localhost:3306/NotesDB
   * Url: jdbc:mysql://localhost:3306/NotesDB
5. Finish

### Step 2b

In Glassfish admin console, add a JDBC Resource

* JNDI Name: jdbc/NotesDB
* Pool: NotesPool

In your connection class, you will use the JNDI name.

InitialContext ic = new InitialContext();

dataSource = (DataSource)ic.lookup("jdbc/NotesDB");

### Step 3 (optional)

Add a database connection in NetBeans

1. Under the Services tab, right-click “Databases” and choose “New Connection”
2. Choose “MySQL” Driver and click Next
3. Enter the following values:
   * Host: localhost
   * Database: notesdb
   * Port: 3306
   * User Name: root
   * Password: password
   * Remember password: checked
4. Next
5. Next
6. Input connection name: NotesDB
7. Finish