

CS 235 - Week 13 Lab Exercise - 2015-10-18

Deadline

Due by the end of lab on 2015-10-18.

How to submit

Submit your file for this lab using `~st10/235submit` on nrs-projects, with a homework number of **93**

(Note that you will also be demonstrating your running programs to me as part of this lab exercise.)

Purpose

Re-setup what is needed for JDBC on nrs-projects (perhaps with less chaos this time!), and verify that you can successfully use JDBC on nrs-projects to connect to the HSU Oracle `student` database in advance of Homework 10.

Change CLASSPATH to refer to ojdbc6.jar

- I think we actually ended up using an older version of the Java Oracle drivers during the last lab. So, we are going to revamp what we did to use the newer version.
- Use PuTTY to ssh to nrs-projects.
- Use nano (or your favorite text editor) to open up your `.bashrc` file:

```
nano .bashrc
```

- Use the down-arrow to navigate down to the last line of your `.bashrc` file.
- IF you successfully ran `EmpSal.java` or `GetDate.java` during the last lab, CAREFULLY EDIT your last line FROM:

```
export CLASSPATH=$CLASSPATH:/opt/oracle/product/11.2.0/client_1/oui/jlib/classes12.jar:.
```

TO:

```
export CLASSPATH=$CLASSPATH:/opt/oracle/product/11.2.0/client_1/oui/jlib/ojdbc6.jar:.
```

- ELSE (you did NOT successfully run `EmpSal.java` or `GetDate.java` during the last lab), PASTE this line at the END of your `.bashrc` file:

(it is also on the public course web site, on the "In-class examples" page under "Week 13 Lab", for your pasting convenience)

```
export CLASSPATH=$CLASSPATH:/opt/oracle/product/11.2.0/client_1/oui/jlib/ojdbc6.jar:.
```

- SAVE your `.bashrc` file -- in nano, you do this by typing the control key and the letter `o` at the same time, and then typing the enter key to confirm the file's name.
- EXIT your text editor -- in nano, you do this by typing the control key and the letter `x` at the same time.
- Log out, and use PuTTY to again ssh to nrs-projects. (Now your `.bashrc` should have been run with the revised or new command.)

Set up Week 13 Lab Exercise directory

- Make a new directory for this week's lab exercise on nrs-projects, protect it, and go to that directory.

```
mkdir 235lab13
chmod 700 235lab13
cd 235lab13
```

- Create a file `pwd-file.txt` that contains 1 line, the password for the Oracle `java` account. Save this file and also protect it:

```
chmod 600 pwd-file.txt
```

Test 1: GetDate.java

- In your directory `235lab13`, make a copy of the latest version of `GetDate.java` from the public course web site, on the "In-class examples" page under "Week 13 Lab".
- Modify this, adding a statement printing your name to the screen.
- Compile and test your resulting `GetDate.java`, and make sure it successfully runs as expected.

Test 2: EmpSal.java

- In your directory `235lab13`, make a copy of the latest version of `EmpSal.java` from the public course web site, on the "In-class examples" page under "Week 13 Lab".
- Modify this, adding a statement printing your name to the screen.
- Compile and test your resulting `EmpSal.java`, and make sure it successfully runs as expected.

Test 3: AddToLog.java

- In your directory `235lab13`, make a copy of the latest version of `AddToLog.java` from the public course web site, on the "In-class examples" page under "Week 13 Lab".
 - make sure you grab the Week 13 Lab version -- it accepts names up to 7 characters long, to (hopefully) make sure the tests specified below can work
- Modify this, adding a statement printing your name to the screen.
- Compile and test your resulting `AddToLog.java`,
making sure at least one of your tests involves successfully adding a line to `log_table` whose name is *your* HSU username.
- (How can you know? By carefully checking in the Oracle SQL*Plus program:
 - at the nrs-projects prompt, type:

```
sqlplus
```
 - when prompted to log in, use the username `java` and the password given in class.
 - at the `SQL>` prompt, type:

```
SQL> select *
```

```
from log_table;
```

- if you see a row with your HSU username, your row addition succeeded!
- type:
`exit`
...to exit SQL*Plus.)

Test 4: AddManyToLog.java

- In your directory 235lab13, make a copy of the latest version of `AddManyToLog.java` from the public course web site, on the "In-class examples" page under "Week 13 Lab".
 - make sure you grab the Week 13 Lab version -- it accepts names up to 7 characters long, to (hopefully) make sure the tests specified below can work
- Modify this, adding a statement printing your name to the screen.
- Compile and test your resulting `AddManyToLog.java`,
making sure at least one of your tests involves successfully adding THREE lines to `log_table` whose names are *your* HSU username concatenated with 2, 3, and 4, respectively.
- (How can you know? By carefully checking in the Oracle SQL*Plus program:
 - at the nrs-projects prompt, type:
`sqlplus`
 - when prompted to log in, use the username `java` and the password given in class.
 - at the SQL> prompt, type:
`SQL> select *`
`from log_table;`
 - if you see rows with your HSU username plus 2, 3, and 4, your row addition succeeded!
 - type:
`exit`
...to exit SQL*Plus.)

Final Steps

- Add your name to the waiting-to-demo list on the front whiteboard, and when it is your turn, run all 4 of these programs for me, so that I can see them working and running from your nrs-projects account.
 - Make sure I check off that you have done so on my check-off list.
- Submit your 235lab13 directory's source code files using `~st10/235submit` and a lab number of 93