

CS 328 - Week 1 Lab Exercise - 2025-01-23/24

Deadline

Due by the end of lab.

Purpose

To see if there are issues logging into nrs-projects and running `sqlplus`, to set up your nrs-projects account for web pages, and to practice submitting files using the tool `~st10/328submit`.

How to submit

Submit your files for this lab using `~st10/328submit` on nrs-projects as specified below, EACH TIME giving a lab number of **81**.

(Why 81? So that I can more easily tell Week 1 Lab Exercise files from future Homework 1 files, which will use a homework number of 1...)

Requirements

- This is a **rare** lab exercise where you are working individually rather than in pairs, since it is double-checking and setting up things in your individual nrs-projects accounts. Please help one another along the way, however!

Problem 1 - `ssh` to nrs-projects and make sure you can run `sqlplus`

- Read over the handout "**Connecting to nrs-projects and sqlplus**".
 - Note that, for nrs-projects, you use the hostname:
`nrs-projects-ssh.humboldt.edu`
...with `ssh` and `sftp`, even though its "public" name is still `nrs-projects.humboldt.edu`.
 - Also note that, to use `ssh` and `sftp` to connect to nrs-projects **from off-campus**, you must **first** connect to the campus GlobalProtect VPN. Links for setting this up are included in that handout.
- Then, read over the handout "**Useful details: ssh and sftp**".
 - (If you would find reviewing them to be useful, the handout "**Useful Linux commands**" includes brief descriptions of a collection of common Linux commands.)
- Anyone with a Humboldt username is supposed to be able to `ssh` to nrs-projects. Let's verify this for all of you in CS 328!

Open a Terminal on a lab computer and use `ssh` to connect to nrs-projects:

`ssh your-humboldt-username@nrs-projects-ssh.humboldt.edu`

- The first time you do this, it may ask you if you really want to proceed. Answer **y** to this!
- Note that when it asks for your password, you will see NOTHING on screen as you type it in -- that's a security measure. But type it in and type return, and you should be logged in.
- **LET ME KNOW** if you are unable to log into nrs-projects!

- Now create a new directory 328lab01:

```
mkdir 328lab01
```

...and protect it:

```
chmod 700 328lab01
```

...and go to that new directory:

```
cd 328lab01
```

- COPY over the follow (possibly familiar) SQL script:

```
cp ~st10/set-up-ex-tb1s.sql . # notice the SPACE and PERIOD at the end!
```

- Start up sqlplus using the NEW approach now required from the newly-rebuilt system:

```
sqlplus / # note the SPACE and FORWARD SLASH at the end!
```

- You will NOT be prompted to enter your campus username and password -- external authentication is being used here, instead!

- **LET ME KNOW** if you are unable to get into sqlplus!

- Within sqlplus:

- Run the script you just copied over:

```
start set-up-ex-tb1s.sql
```

- Insert an additional row of your choice into the dept table you just created -- for example (but your department's attributes CAN be different from these!!):

```
insert into dept
values
('999', 'Chocolate', 'Arcata');
```

- Make sure the insertion worked:

```
select *
from dept;
```

- Commit this change:

```
commit;
```

- ...and exit sqlplus:

```
exit
```

- Back in your 328lab01 directory on nrs-projects, use emacs, vim, or nano to create a SQL script 328lab1.sql containing the following (including blank lines between parts for readability):

- comment(s) containing CS 328 Week 1 Lab and your name

- the command to start spooling to a file named 328lab1-part1.txt:

```
spool 328lab1-part1.txt
```

- a prompt command outputting your name

- a SQL statement giving the relational selection of the dept table (which, when run, should demonstrate that your earlier insert worked):

```
select *
from dept;
```

- the command to stop spooling:

```
spool off
```

- Save your resulting 328lab1.sql, and again run sqlplus:

```
sqlplus /
```

...and run your SQL script 328lab1.sql.

- If all goes well, this will also create a spooled output file 328lab1-part1.txt in your 328lab01 directory.
- Once you have run your script, again exit sqlplus.

- Back in your nrs-projects directory 328lab01:

- Make sure the files 328lab1.sql and 328lab1-part1.txt exist and have the contents you expect.

- Then, submit them using the command:

```
~st10/328submit
```

...and enter a lab number of **81** when prompted.

- I recommend answering y to the question about whether to submit all files with certain suffixes.

You will see that this results in also submitting your set-up-ex-tbls.sql file, also, but that's **not** a problem!

- See the handout "Useful details: ~st10/328submit" for a bit more about the tool

```
~st10/328submit.
```

Problem 2 - setting up your nrs-projects web directory

Using the handout "Setting up your nrs-projects web directory", walk through its steps in the section "Set up your public_html directory" to set up your public_html directory.

I am not going to have you set up an index.html in this lab, so that you can experiment with what you would like in this "default"/special file as you go through the soon-to-be-assigned zyBooks HTML readings.

But, so that I can see if you set this your public_html directory correctly, also do the following:

- On nrs-projects, cd to your public_html directory.
- Either in that directory, or in a subdirectory of public_html if you prefer, COPY over the example strict-style HTML file 328lab01.html:

```
cp ~st10/328lab01.html . # notice the SPACE and PERIOD at the end!
```

- Edit your copy of 328lab01.html, making the following **THREE** changes:

1. In the line by: YOUR NAME, replace YOUR NAME with your actual name.

2. After the line **you can run this using the URL:**, type in the **complete, absolute URL** (starting with **https://**) that can be typed into a browser to run YOUR version of this file **328lab01.html**.
 - Note that the handout "**Setting up your nrs-projects web directory**" talks about this, if you are not sure -- see the section "**Fun Facts, part 2**".
3. Where you see:

```
<p> PUT YOUR NAME here! (and other text IF you'd like) </p>
```

...replace the part **BETWEEN** the **<p>** and **</p>** with your actual name, and other text if you'd like.
- Make sure that your resulting **328lab01.html** displays when you paste the URL you typed in Step 2 above into a browser!
 - If this URL does not work when I or the grader tries it, you will not receive full credit for this problem.
 - In the handout, "**Setting up your nrs-projects web directory**", the section "**Fun facts, part 1**" talks about the needed permissions for the nrs-projects web server to be able to access an HTML file, and the section "**Fun Facts, part 2**" discusses the URL (uniform resource locator) possibilities for your files on nrs-projects.
- Submit your resulting **328lab01.html** using **~st10/328submit** with a lab number of **81**.
 - This will NOT overwrite your earlier submission -- each submission is submitted into its own time-and-date-stamped tar archive file.