# CS 328 - Week 1 Lab Exercise - 2026-01-22

## Deadline

Due by the end of lab.

## Purpose

To double-check that there are no new 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 double-check that you still can run `sqlplus`

- If needed, read over the handout **"Connecting to nrs-projects and sqlplus"**.
  - Reminder: for nrs-projects, 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.
- If needed, 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 that this is still the case 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 following (probably familiar!) SQL script:

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

- Start up `sqlplus` so that it uses external authentication (as you did in CS 325):

  ```
  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-tbls.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!

  - **DOUBLE-CHECK**: `~st10/328submit` LISTS the files that it submitted.

    **LOOK** and **MAKE SURE** that you see **`328lab1.sql`** and **`328lab1-part1.txt`** listed as having been submitted!

  - 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 "**TO DO: 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 up 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 (preferred) 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 "**MORE BACKGROUND - Fun facts, part 2 (for your information)**".
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 (preferred) 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 "**BACKGROUND - Fun facts, part 1 (info, no actions here yet)**" talks about the needed permissions for the nrs-projects web server to be able to access an HTML file,

    and the section "**MORE BACKGROUND - Fun facts, part 2 (for your information)**" 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.
  - **DOUBLE-CHECK**: **LOOK** and **MAKE SURE** that you see **`328lab01.html`** listed as having been submitted!