

CS 328 - Week 10 Lab Exercise - 2026-04-02

Deadline

Due by the end of lab.

Purpose

To practice using OCI from PHP to request data from Oracle.

How to submit

Submit your files using `~st10/328submit` on nrs-projects, each time entering a lab number of **90**.

Requirements

- You are required to work in **pairs** for this lab exercise.
 - This means **two** people working at **ONE** computer, one typing ("driving"), one saying what to type ("navigating"),
while **BOTH** are looking at the **shared** computer screen and **discussing** concepts/issues along the way.
- Make sure **BOTH** of your names appear in each file submitted.
- Make a `public_html` **sub-directory** for today's lab exercise with a **not-too-obvious name** of your choice, and be sure to **chmod** it to permissions **711**.
- And, your **.php** and **.css** files for this lab exercise should all have permissions **644**.
- When you are done, before you leave lab, **BOTH** of you should submit appropriate versions of these files using `~st10/328submit` on nrs-projects, with a lab number of **90**.
- You are expected to follow CS 328 style standards, including those from the posted "CS 328 PHP Coding Standards so far" (at <https://nrs-projects.humboldt.edu/~st10/s26cs328/328-php-coding-standards.pdf>).

Set up your files for this lab exercise

- Use the course HTML template to start up a PHP document **328lab10.php**:

```
cp ~st10/html-template.html 328lab10.php
```
- Copy this file into the **same** directory as your file `328lab10.php`:

```
cp ~st10/hum_conn_no_login.php . # DON'T FORGET the SPACE and PERIOD!!
```
- Copy this external CSS file into the **same** directory as your file `328lab10.php`:

```
cp ~st10/328lab10.css . # DON'T FORGET the SPACE and PERIOD!!
```

Requirements for 328lab10.php

In your file **328lab10.php**:

- Fill in the opening comment block, putting in your **names**, the last modified **date**, and the **URL** that can be used to run your document.
 - (You *will* lose some credit if this URL does not work when I or the grader paste it into a browser!)

- **Within** the **head** element, edit the **title** element, giving it appropriate content.
- **Within** the **head** element, after the **link** element specifying that this document is being styled by `normalize.css`, add a second **link** element following course style standards specifying that this document will then be further styled using the file `328lab10.css`.
 - **Do not include any inline or internal CSS rules in your 328lab10.php.**
- Within the **body** element, include an **h1** element with appropriate content.
- **Within** the **footer** element near the end of the **body** element, add a **p** element whose content includes your names.

Now -- consider the two PHP examples from Week 10 Lecture 2, `try-oracle.php` and `328lect10-2.php`, that use OCI to connect to the Oracle student database on campus.

- First: consider the `empl`, `dept`, and `customer` tables set up in `set-up-ex-tbls.sql`.

And, consider the query string in `328lect10-2.php`:

```
"select empl_last_name, hiredate, salary
  from empl
 order by empl_last_name"
```

- Determine a **different** query, involving your choice of `empl`, `dept`, and/or `customer`, that selects at least THREE rows, and projects at least THREE columns, at least TWO of which are **different** from those in the above query.
- `328lect10-2.php` builds a **p** element with its query results -- but a **table** element would be a better choice!
- In your `328lab10.php`, use function `hum_conn_no_login` to set up a connection to your account on Humboldt's Oracle student database.
- And, use OCI to allow PHP to ask Oracle to execute your selected query, outputting its result in a **table** element that meets class style standards, including:
 - a **caption** element
 - **th** elements with appropriate **scope** attributes
 - **tr** elements containing your queried results in **td** elements
- Remember to **free** your statement and **close** your connection when you are done with them!

Run your `328lab10.php` -- you should see a table of your query's results.

Strict-validate your `328lab10.php`'s result by running it from a browser, viewing its source, copying and pasting that source into a file named `328lab10.xhtml`, and put the URL of your `328lab10.xhtml` into the validator.

To make sure EACH of you can successfully connect to Oracle using OCI from nrs-projects, for THIS particular lab exercise:

- the navigator needs to make sure **their** copy of `328lab10.php` successfully runs from **THEIR** nrs-projects account,
- and so for this lab the navigator **SHOULD change** the URL in the opening comment of **THEIR** copy of `328lab10.php` to be the URL of this in **THEIR** nrs-projects account.

Quick note about 328lab10.css

In the interests of time, an external CSS file **328lab10.css** is being provided as part of the lab exercise.

HOWEVER, if you have the time and interest, you may **ADD rules** to and/or **ADD declarations** to rules in your copy of **328lab10.css**.

IF you do this:

- **ADD** an "**adapted by:** " followed by your names to 328lab10.css' opening comment block
- If you change any of the default foreground and background colors, make sure the result is **at least WCAG 2 AA Compliant** based on the tester at: https://snook.ca/technical/colour_contrast/colour.html
- Make sure your resulting 328lab10.css still validates as valid CSS.

BEFORE you leave lab:

Make sure that you **both** have copies of the files:

- **328lab10.php**
- **328lab10.xhtml**
- **hum_conn_no_login.php**
- **328lab10.css**

...and you BOTH submit these using **~st10/328submit** on nrs-projects, with a lab number of **90**.