CS 328 - Week 13 Lab Exercise - 2025-04-24/25

Deadline

Due by the end of lab.

Purpose

To practice using PHP involving sessions AND Oracle OCI.

How to submit

Submit your files using **~st10/328submit** on nrs-projects, each time entering a lab number of **93**.

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.
- 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 **93**.

Start your file `328lab13.php`

- Use the course HTML template to start up a PHP document **328lab13.php**:

  ```
  cp ~st10/html-template.html 328lab13.php
  ```
- **Add** the needed PHP tag at the beginning of this file to **enable this PHP to use sessions.**
- 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: **IF** you would like, include PHP tag(s) with statement(s):
  - to enable PHP error reporting
  - to include the definition of function **hum_conn_sess**, from a local copy of file **hum_conn_sess.php**
  - Note that you can get a local copy of **hum_conn_sess.php** with the command:

    ```
    cp ~st10/hum_conn_sess.php .   # remember the space and period!
    ```
- **Do not include any inline or internal CSS rules in your 328lab13.php**.
  - (If you are sufficiently annoyed by the default formatting, you may **optionally** add a **lab13.css** file to further format your **328lab13.php**.)
- Within the **body** element, include an **h1** element with appropriate content.

- *Somewhere* in the **body** element, include an element that **visibly** includes **your names**.
  - (Just in case you'd like to try out using **328footer-plus-end.html** for this lab exercise, I am *not* requiring that your name be in the **footer** element for this lab exercise.)
  - Note that you can get a local copy of **328footer-plus-end.html** with the command:

    cp ~st10/328footer-plus-end.html . `# remember the space and period!`

You are now going to add to this so that **328lab13.php** will be a postback document implementing a small application involving the **empl** and **dept** tables and described using this finite state diagram:
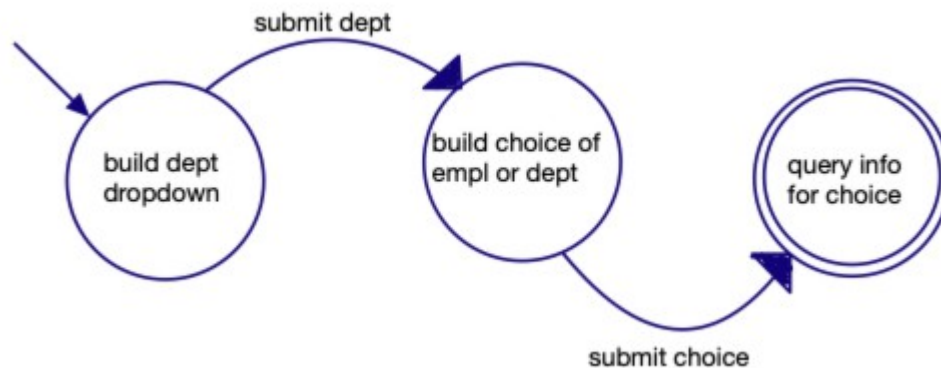
The finite state diagram and files for **try-quad.php** have been posted for your reference.

I **RECOMMEND** that you use helper functions to handle the main actions for each state in this finite state diagram, and feel free to also add any additional helpful functions to your task easier!

Make sure you submit copies of ALL files needed for your application.

Requirements for state "build dept dropdown"

- The state **build dept dropdown** should create a form for selecting a desired department.
  - (Like the form in the Week 11 Lab Exercise, it includes a dynamically-built **select**/drop-down element displaying department names but submitting the selected department's department number, and a submit button (an **input** element with **type="submit"**))
  - Can you adapt one of your pair's Week 11 Lab Exercise code for this into this state's helper function for use in this lab exercise?
    - **YES**, just note it is adapted from the Week 11 Lab Exercise, include the name(s) of those involved in that, and add "adapted by" and your names.
  - BE SURE to **FREE** your OCI statement and **CLOSE** your OCI connection before the end of this state!

Requirements for state "build choice of empl or dept"

- The state **build choice of empl or dept** should:
  - attempt to SAFELY grab the selected department number from the submitted select-a-department form
  - SAVE this as the value of a suitable session attribute in **$_SESSION**
  - Display the selected department number tastefully in the response,

    along with a form allowing the user to now CHOOSE whether they wish to see information about that

department or about employees within that department.

- – The user should be able to choose between **two logically-related radio buttons** to make this choice.
- – This form should also include a submit button (an `input` element with `type="submit"`))
- – (Note that you do **NOT** need to connect to the database in this particular state.)

Requirements for state "query info for choice"

- The state **query info for choice** should:
  - – attempt to SAFELY grab the choice of department or employee from the submitted empl-or-dept form
  - – grab the previously-selected department number using its session attribute in `$_SESSION`
  - – tastefully display this previously-selected department number in the response
  - – depending on the submitted radio button choice, use this previously-selected department number (binding its value to a BIND VARIABLE) to query for either:
    - – (if they chose department)

      the name and location of that department,
      - – displaying these tastefully within an appropriate HTML element, or
    - – (if they chose employee)

      the last names and job titles of employees within that department,
      - – displaying these tastefully within a `table` element <-- (you can adapt one of your pair's Week 11 Lab Exercise code for this, also, if you wish)
    - – In either case: you will lose **substantial** credit if you use concatenation to include the department number within your query string -- you are **required** to use a **bind variable** instead!
  - – BE SURE to **FREE** your OCI statement and **CLOSE** your OCI connection before the end of this state!
  - – For more-convenient starting over, include a **hypertext** link with appropriate text that links back to your `328lab13.php`.

BEFORE you leave lab:

(Note: your PHP *is* expected to generate strict-style HTML, but because of the clunkiness in trying to create `.xhtml` files when sessions are involved when so many browsers re-request the document for showing the source, you are **not** required to submit `.xhtml` files for this lab exercise.)

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

- `328lab13.php` and all additional files it uses
- (If you created the optional `lab13.css`, submit it, also.)

...and you BOTH submit these using `~st10/328submit` on nrs-projects, with a lab number of **93**.