

## CS 328 - Week 3 Lab Exercise - 2024-02-02

### Deadline

Due by the end of lab.

### Purpose

To practice creating and validating another strict-style HTML document, including practice with a `table` and a `form` element.

### How to submit

Submit your file for this lab using `~st10/328submit` on `nrs-projects`, each time entering a lab number of **83**.

### 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** issues along the way.
- Make sure **BOTH** of your names appear in each file submitted.
- When you are done, before you leave lab, somehow e-mail or copy the lab exercise file so that **BOTH** of you have copies, and **BOTH** of you should submit this file using `~st10/328submit` on `nrs-projects`, with a lab number of **83**.
- For this lab exercise's problems, the **only** CSS permitted is **EITHER**:
  - **Just** the external CSS `normalize.css` included in `html-template.html`, **OR**
  - The external CSS `normalize.css` included in `html-template.html`, **after** which you **also** put:

```
<link href="https://nrs-projects.humboldt.edu/~st10/styles/lab3-table.css" type="text/css" rel="stylesheet" />
```

(and this would be right **BEFORE** the `head` elements closing tag)  
...which adds a *little* mostly-table-related formatting.

### Lab Exercise set-up

Starting from the `html-template.html` posted on the course public site and along with this lab exercise handout, create a strict-style HTML document that meets the class style standards as well as the following requirements:

- Include **lab3** somewhere in its file name, and give its file name the suffix `.html`.
- Fill in the opening comment block as specified, 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!)

- Give the **title** element appropriate descriptive content.
- Include an appropriate **h1** element indicating this document is for the **CS 328 Week 3 Lab Exercise**
- Include **your last names** within a **p** element that you add to the **footer** element.

## Problem 1

To your HTML document for today's lab exercise, add the following after the **h1** element you added above:

- Add an appropriate **h2** element indicating the parts following are for **Problem 1**
- Within one or more **p** elements, include:
  - an **a** element to a reference you think could be useful related to HTML (it can be one from the posted HTML references, or another, your choice)
  - an **img** element for a small image of your choice
    - If your image's URL does not validate as strict-style HTML when used as your **img** element's **src** attribute,
      - make a copy of the image in your nrs-projects account (if you can legally do so) or use a service such as such as tinyurl to avoid problematic characters, and use that URL instead.
  - a visible **special character** of your choice (something starting with **&** and ending with **;**, such as **&amp;**; for an ampersand character or **&lt;**; for a less-than character)
- Decide on a programming language of your choice,
  - and include a **pre** element whose content is a **code** element whose content is **at least 3 lines** of a code fragment of your choice using your chosen programming language.
- (You may also include other strict-style HTML elements in this part of your document if you wish.)
- End this problem's part with an **hr** element.

## **validate your document-so-far**

Before you go on...

- REMEMBER that it does not check for all of the CS 328 required style standards -- but you can use an **.xhtml** copy of your document with <https://html5.validator.nu/> to assist you in validating and checking over your document.
- SAVE a copy of your page-so-far with your Problem 1 elements as follows -- at the nrs-projects prompt, type the Linux command:
 

```
cp your-file-name-lab3.html your-file-name-lab3.xhtml
```
- Go to: <https://html5.validator.nu/>
  - and paste in the absolute URL of the **your-file-name-lab3.xhtml** version of your file
  - and click the "Validate" button.
    - SAD-BUT-TRUE THING: this validator seems to get overwhelmed frequently -- if you get an error "Bad Gateway 502", that's likely the culprit.
    - IF you get this error, wait a little bit, then try again.

## Problem 2 - add a `table` element

Decide on some tabular data you'd like to include in your document, consisting of at least 3 rows and 3 columns.

- (It can be as simple as showing data for three of the departments from `set-up-ex-tbls.sql`'s `dept` table, or it can be data about a topic you choose.)

To your HTML document for today's lab exercise, add the following **after** the `hr` element you added at the end of Problem 1's parts above:

- Add an appropriate `h2` element indicating the parts following are for **Problem 2**.
- Add a `table` element structuring and displaying your tabular data that also meets the following requirements:
  - It should include an appropriate `caption` element.
  - It should include appropriate `tr` elements that contain appropriate `td` and/or `th` elements.
  - Its `th` elements should include appropriate `scope` attributes.
- End this problem's part with an `hr` element.

## validate your document-so-far

Before you go on...

- Again SAVE a copy of your page-so-far, now also including your Problem 2 elements:

```
cp your-file-name-lab3.html your-file-name-lab3.xhtml
```

- Go to: <https://html5.validator.nu/>

and paste in the absolute URL of the `your-file-name-lab3.xhtml` version of your file and click the "Validate" button.

- SAD-BUT-TRUE THING: this validator seems to get overwhelmed frequently -- if you get an error "**Bad Gateway 502**", that's likely the culprit.
- IF you get this error, wait a little bit, then try again.

## Problem 3 - add a `form` element

To your HTML document for today's lab exercise, add the following **after** the `hr` element you added at the end of Problem 2's parts above:

- Add an appropriate `h2` element indicating the parts following are for **Problem 3**.
- Add a `form` element that meets the following requirements:
  - It should have an `action` attribute whose value is a "real" URL of your choice (because we haven't gotten to writing an actual application program to handle this form yet).
  - It should have a `method` attribute whose value is "get".
  - It should contain at least one `fieldset` element that contains an appropriate `legend` element of your choice, and within this/these should be:
    - at least two `input` elements with `type="text"` with appropriate `name` and `id` attributes

- appropriate logically-related `label` elements for each of those `input` elements
- an `input` element with `type="submit"`
- For this lab exercise, you may not use CSS to format or layout this form, although you **can** tastefully use `br` void elements or `div` elements if you wish.
- Try entering some info into your form, click submit, and look over the name=value pairs that appear at the end of your form's action URL as a result.

### **validate your document-so-far**

Before you go on...

- Again SAVE a copy of your page-so-far, now also including your Problem 3 elements:
 

```
cp your-file-name-lab3.html your-file-name-lab3.xhtml
```
- Go to: <https://html5.validator.nu/>
 and paste in the absolute URL of the *your-file-name-lab3.xhtml* version of your file
 and click the "Validate" button.
  - SAD-BUT-TRUE THING: this validator seems to get overwhelmed frequently -- if you get an error "Bad Gateway 502", that's likely the culprit.
  - IF you get this error, wait a little bit, then try again.
- If necessary, let me know, submit what you have by the end of lab, and if you try later and find there was something you needed to fix, resubmit your fixed file and let me know, so that version will be graded instead.

### **BEFORE you leave lab:**

Make sure that you **both** have the file *your-file-name-lab3.html* with a correct URL in a comment for successfully executing this document from one of your nrs-projects account(s), and that **EACH** of you submits this file.

- When you are done, **before** you leave lab, somehow e-mail or copy the lab exercise file so that **BOTH** of you have copies, and **BOTH** of you should submit this file using `~st10/328submit` on nrs-projects, with a lab number of **83**.
  - Because these happen to be files the nrs-projects web server has to be able to reach, the navigator should be able to get a copy of a file from the driver using an approach like this:
    - Assume the driver has username `ab12`, and the navigator has username `yz89`.
  - Also assume the driver created, in their `public_html` directory, a sub-directory named `328lab03`, and this sub-directory contains a lab file *your-file-name-lab3.html* to be submitted for the lab exercise.
    - The NAVIGATOR `yz89` can now:
      - log in to THEIR nrs-projects account
 

```
cd public_html
mkdir 328lab03 # or other name they choose
```

```
chmod 711 328lab03
```

```
cp ~ab12/public_html/328lab03/your-file-name-lab3.html . # note space & dot!
```

– And now the navigator yz89 has their own copy of *your-file-name*-lab3.html.

- As an experiment: I will leave it up to the navigator to decide if they would like to UPDATE their *your-file-name*-lab3.html so its opening comment includes the URL to *their* copy, or if they want to leave the URL for the driver's copy.
  - **HOWEVER:** remember that you *will* lose some credit if this URL does not work when I or the grader paste your submitted file's URL into a browser, in either case.