CS 328 - Week 7 Lab Exercise - 2024-03-01

Deadline

Due by the end of lab.

Purpose

To practice and experiment with CSS.

How to submit

Submit your files for this lab using `~st10/328submit` on nrs-projects, each time entering a lab number of **87**.

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 files so that **BOTH** of you have copies, and **BOTH** of you should submit these files using `~st10/328submit` on nrs-projects, with a lab number of **87**.

Consider before you start:

You can approach today's lab exercise in a number of different ways.

You are going to be creating an HTML document, and then creating an external CSS stylesheet to style it.

More-Scattershot approach:

You can create a document whose content is "scattered" but that meets the requirements, and create rules for styling it that visibly/noticeably meet the CSS requirements.

More-Thematic approach:

You can decide on an overall "theme" for your HTML document at the beginning, and create its content based on that theme as well as the requirements, and create rules for styling it that complement that theme as well as visibly/noticeably meet the CSS requirements.

...and there are certainly possibilities between these two extremes, also.

Note: available list of CSS properties

There is now posted a page of CS 328 CSS References, and as part of this page, you can find a link to an alphabetical hyperlinked index of CSS properties that is part of the MDN CSS Web Docs:

https://developer.mozilla.org/en-US/docs/Web/CSS/Reference

Start an HTML document `lab7.html`:

Starting from the **`html-template.html`** posted on the course public site and along with this lab exercise handout, start creating a strict-style HTML document **`lab7.html`** that meets the class style standards as well as the following requirements:

- 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.
- ADD a **`link`** element following course style standards **after** the `link` element for `normalize.css` within the `head` element so that `lab7.html` will be styled using both `normalize.css` and an external style sheet `lab7.css` that you are about to create.
  - **Do not include any inline or internal CSS rules in your `lab7.html`.**
- Include an appropriate **`h1`** element.
- Include **your names** within a **`p`** element that you add to the **`footer`** element.
- (You will be adding more elements as described further below.)

Start an external CSS stylesheet `lab7.css`:

Also start creating an external CSS file **`lab7.css`** in the same directory as your `lab7.html` to style your `lab7.html`:

- Start this with an opening comment block containing your **names** and the last modified **date**.
- (You will be adding CSS rules as described further below.)

Add to your `lab7.html` and `lab7.css` as follows:

- In your **`lab7.html`**, add:
  - at least **6 block** element instances of at least **3** different element types of your choice to your document's `body` element.
    - (for example, three paragraphs, one ordered list, and two unordered lists would be 6 block elements of 3 different element types)
  - at least **6 inline** element instances of at least **3** different element types of your choice to your document's `body` element.
    - (for example, two anchor elements, three `strong` emphasis elements, and one `code` element would be 6 inline elements of 3 different element types)

- In your **`lab7.css`**, include CSS style rules -- each of which has a **visible, noticeable** effect in your displayed `lab7.html` -- to do at least the following:
  - (You can **mix and match** and **combine** properties in your rules such that the following requirements are all met in your resulting `lab7.css`!)
  - (While all of the following are covered in zyBooks Chapter 3, all but a couple of the properties are also mentioned in the Week 7 Lecture 1 projected notes.)
  - Include at least one rule with multiple **declarations** (more than one **property-value** pair).
  - Include at least one rule whose selector is a comma-separated list of selectors (**grouping** selectors).
  - Include at least one rule with an **element selector**.
  - Include at least one rule with a **class selector**.
  - Include at least one rule with an **id selector**.
  - Use the **`color`** property to visibly style **at least two** different kinds of elements (using **at least two** different colors).
  - Use the **`background-color`** property to visibly style **at least two** different kinds of elements (using **at least two** different colors).
  - Amongst your rules, represent colors in **at least three** of the five ways discussed in class:
    - predefined color name - for example, `red`
    - hexadecimal color code - for example, `#ffa500`
    - red-green-blue color code - for example, `rgb(255, 165, 00)`
    - hue-saturation-luminance code - for example, `hsl(128, 128, 64)`
    - semi-transparent red-green-blue-alpha color code - for example, `rgba(255, 165, 0, 0.5)`
  - Use at least **two** different properties that are **not** color-related to visibly style **at least two** different kinds of elements. Some examples of such properties:
    - `text-align` (for inline elements, with values such as `left`, `right`, `center`)
    - `text-decoration` (with a value such as `underline`)
    - `font-weight` (with a value such as `bold`)
    - `font-style` (with a value such as `italic`)

Validate your files:

Make sure an **`.xhtml`** copy of your `lab7.html` validates as **strict-style HTML**,

and that your `lab7.css` validates as **valid CSS** at https://jigsaw.w3.org/css-validator/.

BEFORE you leave lab:

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

- **`lab7.html`** and **`lab7.css`**

...and you BOTH submit these using `~st10/328submit` on nrs-projects, with a lab number of **87**.

How the navigator can get `lab7.html` and `lab7.css`:

- Because this happen to be a file the nrs-projects web server has to be able to reach, the navigator should be able to get a copy of these files 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 `328lab07`, and this sub-directory contains `lab7.html` and `lab7.css` to be submitted for the lab exercise.
    - The NAVIGATOR `yz89` can now:
      - log in to THEIR nrs-projects account

```
cd public_html
mkdir 328lab07   # or other name they choose
chmod 711 328lab07
cp ~ab12/public_html/328lab07/lab7.html . # note space & dot!
cp ~ab12/public_html/328lab07/lab7.css  . # note space & dot!
```

      - And now the navigator `yz89` has their own copy of these files.
- I will leave it up to the navigator to decide if they would like to UPDATE their `lab7.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.