CSCI 311 Spring 2020: Lab 2

In this lab, students create web documents including a form that is processed by an instructor-provided php file. Students will embed various forms of media into a web page, and structure a page using two types of tables.

Learning Objectives:
- Create multiple linked html files
- Use CSS to style a form
- Include media files in web pages
- Appropriately attribute all media files

What to hand in:
- zip and submit the following files (as a single zip file) to VIU Learn no later than Jan. 25, 18:00:
    - index.html
    - Lab2Form.html
    - Lab2Table.html
    - Lab2Media.html
    - Lab2Styles.css
    - any media files

Note:
- late submissions will be penalized 20% per day
- All work must be individual
- Plagiarized work will result in a mark of 0. Further penalties may apply

Marking Scheme:
- Specifications: 4 marks
- Requirements: 4 marks
- Code standards: 4 marks

Instructions:
All html files:
All files must include the following:
- A header element with a title
- A nav element with:
    - Links to all other Lab 2 html files
- A main div that contains the portion specified below for each file
- A footer with your name, the date, and copyright information

index.html
This file should contain links to this lab's html files: Lab2Form.html, Lab2Table.html, Lab2Media.html. You can add any other content you wish.

Note: for this file, the names/ids of the form elements must match exactly. In addition, the submit button must be an input element of type submit.

Create a form that meets the following specifications:
- Form is processed by the given php file by setting the following attributes:
  - method: `post`
  - action: `Lab2ProcessForm.php`
- Has two inputs of type number, for the user to enter 2 different number values
  - give one the following attributes and values:
    - name: `numberA`
    - id: `numberA`
    - range: 50-400
  - give the other the following attributes and values:
    - name: `numberB`
    - id: `numberB`
    - range: 1-350
- Has one input of type text, for the user to enter their name
  - give it the following attributes and values:
    - name: `aName`
    - id: `aName`
- Has one input of type color to let the user select a color
  - give it the following attributes and values:
    - name: `colour`
    - id: `colour`
- Tab order must be as follows:
  - 1: name
  - 2: number A
  - 3: number B
  - 4: colour
- Physical order of elements must be as shown in figure below (numbers, then name, then colour)

Figure 1: Lab2Form.html with two number inputs, a text input, and a colour picker. Tab order should be: name, Number A, Number B, then Colour

- Each input should have an associated label element. Labels should be right aligned, and form elements should be left aligned and the same width (as shown below).

- o This can be achieved by:
  - ▪ wrapping each pair of labels and inputs in a div with a class "inputRow"
  - ▪ setting the class of each label to "myLabel"
  - ▪ setting the class of each input to "myInput"
  - ▪ Adding the (or similar) css rules shown in Figure 2

```css
.inputRow{

    padding: 10px;
}
.myLabel{
    margin: 0;
    padding: 0;
    display: block;
    font-size: 100%;
    padding-top: 2px;
    padding-right: 5px;
    width: 200px;
    text-align: right;
    float: left;
}


.myInput{
    margin: 0;
    padding: 0;
    display: block;
    font-size: 100%;
    width: 200px;
    padding-left: 5px;
}
```

Figure 2: Style rules for form inputs

- When submitted, the form should generate an html file such that:
  - o the page's background colour matches the colour selected
  - o the larger of the two numbers is given
  - o an error is output if any values are not correct

Lab2Table.html

Create a web page that presents data in two tables, as following:
- Note: All styling should be achieved using an external style sheet (see Lab2Styles.css, below). You will need to add classes and/or ids to the html tags.
- The first table should be created using all of the following elements correctly:
  - o `table`
  - o header row correctly uses `thead`, `tr`, and `th` elements
  - o remaining rows correctly use `tr` and `td` elements
- The second table is created using only the following elements:
  - o `div`, `span`
  - o all `divs` and `spans` have class attributes that are used in the CSS to create a table-like structure
- Both tables are formatted as shown below in Figure 2
- The page has headings that match the image below in both content and style

- o   centered text
- o   white
- All divs are given a dashed blue border (but this is overwritten for the divs used to make the second table)
- See the links below for tips on how to format the table using divs.

Lab 2: Tables!

General Styling

All headings are centered, with dark red background, and white text

All divs have a 1 pixel dashed blue border. Other styles are applied. Try to figure them out!

A Table made with table elements

This table contains a head row, using the <thead> element, and one <tr>, in which there are three <th> elements

Each subsequent row contains three <td> elements

Name	Colour	Type
Pikachu	Yellow	Electric
Bulbasaur	Green	Grass
Charmander	Orange	Fire

A Table made with div and span elements, only

This table consists of a main div, with a div for each row, and then a span for each column. The first "row" and "columns" have special classes to style them differently for the header row

Classes are used for each element to style the cells to behave like a table. Google "display: table" and "display: table-row" etc. for how to achieve this

Name	Colour	Type
Pikachu	Yellow	Electric
Bulbasaur	Green	Grass
Charmander	Orange	Fire

Figure 3: Lab 2 Table html layout and style

Lab2Media.html

This page can be styled and structured out any way you like. Your task is to create a page that demonstrates the inclusion of at least two of the following forms of media:

- An image using the `img` element
- A `video` element
  - o   Video must be locally stored
  - o   Even though it is evil, make it `autoplay`
- An `audio` element
  - o   Audio file must be locally stored

- NOTE: all media must be correctly sourced. You must have rights to use it. So, either use your own files, or use files that are licensed for reuse.

Lab2Styles.css
This CSS file should include the style rules for the above html files. No inline or internal css should be used in this lab.

Specifications:
- An index.php file is located in the Lab2 directory, as specified above
- Lab2Form.html produces correct results when form is submitted
- Given php file is not modified
- Lab2Table.html is styled using css to match the given example, as specified above
- Lab2Media.html includes two of: image, audio or video elements
- all media is correctly attributed and sourced (also put the source link in a comment in the html)
- All CSS is located in the external CSS file Lab2Styles.css

Requirements:
- All submitted code must be error free
- All permissions for all files and folders correctly set
- Submission followed all instructions

Code Readability, and Comments:
- Code adheres to all course code standards

Resources:
- HTML Forms: https://developer.mozilla.org/en-US/docs/Learn/Forms
- Creating a table using divs: https://www.dummies.com/web-design-development/css3/using-the-div-tag-to-create-tables/
- CSS display Property: https://www.w3schools.com/CSSref/pr_class_display.asp
- CSS border-collapse: https://www.w3schools.com/CSSref/pr_border-collapse.asp
- HTML Audio element: https://www.w3schools.com/tags/tag_audio.asp
- HTML video element: https://www.w3schools.com/tags/tag_video.asp
- HTML Image element: https://www.w3schools.com/tags/tag_img.asp
- Creative Commons Image search: https://search.creativecommons.org/
- Creative Commons licensed videos: https://vimeo.com/creativecommons
- Creative Commons licensed audio: https://creativecommons.org/about/program-areas/arts-culture/arts-culture-resources/legalmusicforvideos/