## » Assignment 1 » HTML and CSS

## **Objective**

This assignment is intended to demonstrate your knowledge of HTML and CSS (JavaScript should not be used and is not required). You will manage the design of HTML files and learn how to control the display of HTML elements using CSS, in addition to learning HTML forms. Refer to the section on Task and Requirements for additional information on this assignment.

#### **Preparation**

Canvas hosts a *start.zip* file that contains the necessary startup files for this assignment. Before beginning the assignment, please download start.zip and navigate through the folders to determine which preassignment files are included.

## Task & Requirements

You must submit valid and semantically appropriate HTML5.

You need to create the **two HTML web pages** shown on pages 2 and 3 of this handout, respectively, in addition to a **CSS** file. This CSS file allows you to control and manage the display of HTML elements. You will be supplied with the necessary images (Canvas  $\rightarrow$  Assignments  $\rightarrow$  Assignment 1  $\rightarrow$  *start.zip*). You must use CSS for formatting; however, other than some floats, CSS positioning will not be necessary. The **pages you implement do not need to be an exact match** to the mockups provided on the following pages; however, they should be **as close as possible** and look the same in the major browsers.

#### **Technical Notes:**

- The two link menus must be lists with different hover behavior.
- For dummy links, make destination URL "#".
- Both HTML pages **must** use the same single **external** CSS file.

#### Demo

- You will find a short recorded video that demonstrates the expectations of the layout and design for this assignment (Canvas → Assignment 1).

**Deliverable** (upload to Canvas → Assignments → Assignment 1) the following files:



Place your assignment in a folder with the name **assign1\_username** (for example, assign1\_ealmasri). Place all materials used and/or required to evaluate the assignment in this folder, including CSS file and images. Compress your folder into a zip file (for example, **assign1\_ealmasri.zip**) and upload it to Canvas (Assignments Assignment 1) as a compressed file.)

**assign1\_username.zip** containing pageOne.html, pageTwo.html, CSS and all other required files.

#### **Grading Rubric** (10 marks)



#### pageOne.html

- [3 marks] correct output (design and layout are similar to or very close to the provided mockup)
- [2 marks] use of CSS floats for side-by-side layout

#### pageTwo.html

- [1 mark] correct output (design and layout closely resemble the provided mockup)
- [1 mark] at least three form handling validation implemented
- [2 marks] form functions as expected (submits to the correct URL and all elements correctly mapped)

#### Cascading style sheet (.css file)

- [1 mark] CSS implementation for assignment 1 as an external file with expected/proper design/layout

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### Page One

You are required to create a HTML file that resembles the snapshot and layout below as closely as possible.

- 1. This HTML file must be named pageOne.html.
- 2. It must use CSS floats to implement the side-by-side layouts

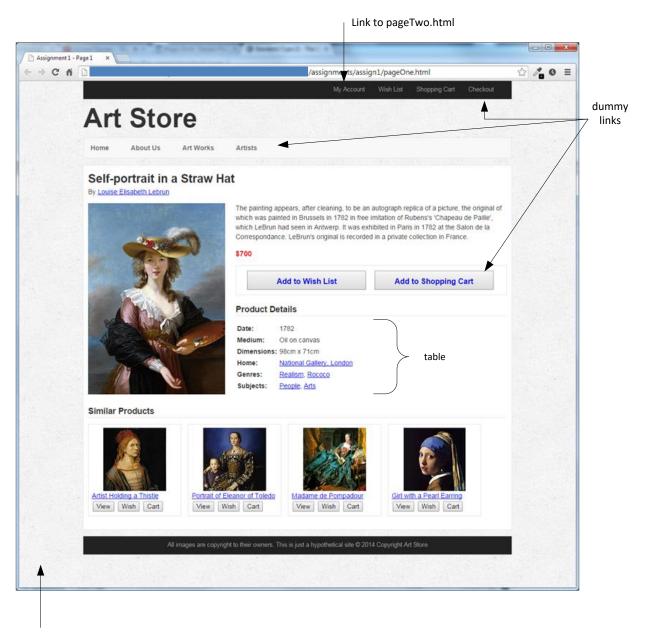


Image background => assign1\images\stucco\stucco.png)

## Page Two

You are required to create a HTML file that contains a form which allows end users to send data collected from the form element to a destination endpoint (i.e., URL).

- 1. This file must be named pageTwo.html.
- 2. It must use a table to layout the form elements.
- 3. This page uses a form for submitting form elements to a destination URL (or action). You are not required to create the action (e.g., handler) that handles the submission of the form. A form action has already been developed in PHP for handling incoming requests that use the destination URL. Hence, the form must use <a href="http://faculty.washington.edu/ealmasri/assign1.php">http://faculty.washington.edu/ealmasri/assign1.php</a> as its action. To be able to map your form elements to those handled by the action, be sure to name the form elements as shown in the mockup below. For simplicity, the action expects the attribute names that appear in the mockup on the next page (e.g., first, last, email, etc.).
- 4. Use the correct form element types. Remember that some of the HTML5 elements look different in different browsers. (The screen captures are from Chrome).
- 5. Your form must use at *least three different* HTML5 built-in validation form handling rules with displaying appropriate messages preventing users from submitting the form without filling/selecting form fields with acceptable input values.

Please visit the following URL for more information on HTML5 input validation from Mozilla.org: https://developer.mozilla.org/en-US/docs/Learn/Forms/Form validation.

#### What is HTML5 form validation?

Forms are web page component that uses form controls such as text fields, drop down menus, range controls, color pickers, among many others. Users can interact with the form through these controls providing data that can then be processed on the web server when a form is submitted. Validating users' entries through these form elements (e.g. submitting non-null values for a password text field) can be done through the browser prior to the data is transmitted to the web server. JavaScript has extensive support for form validation in HTML. Yet, W3C introduced client-side validation in HTML5 that does not require server-side scripting nor JavaScript.

#### Here are few sample examples:

Preventing users from entering invalid email format:



 $Preventing\ users\ from\ entering\ invalid\ zip\ code\ format$ 



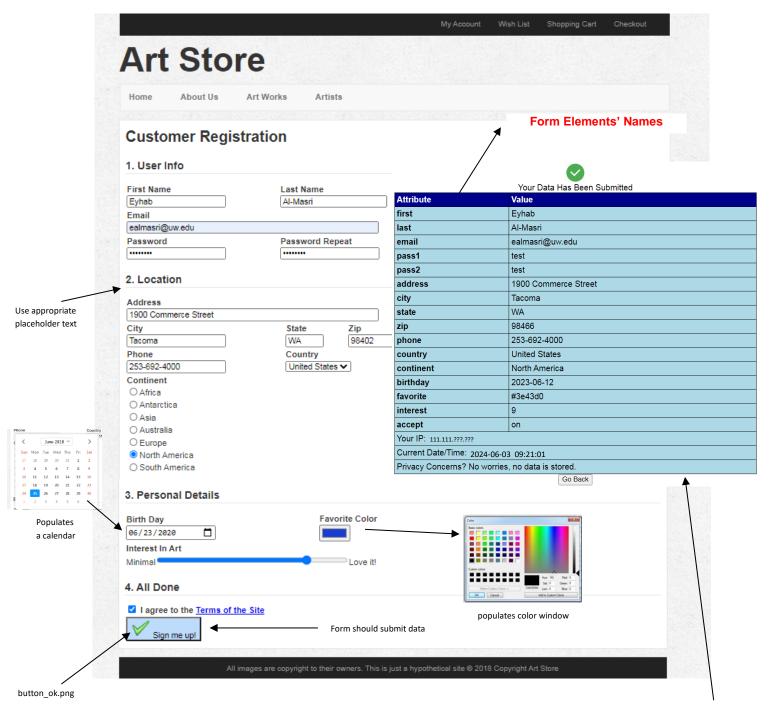
Preventing users from entering invalid phone format (NNN-NNN-NNNN):



#### Some Helpful Links:

- The W3C HTML5 recommendation documentation: https://www.w3.org/TR/html52/sec-forms.html#sec-forms
- Below is a tutorial on HTML5 form input validation that you may find useful. https://html5-tutorial.net/form-validation/how-validation-works/
- The following link provides the browsers that support HTML5 form validation.
  <a href="https://caniuse.com/#feat=form-validation">https://caniuse.com/#feat=form-validation</a>
- Regular Expression Library (helpful to generate regular expression patterns online where you can search for a pattern (e.g. phone) and it will provide suggestions on using the regex pattern <a href="http://regexlib.com/">http://regexlib.com/</a>

## Mockup for pageTwo.html web page



<u>Troubleshooting Tip 1</u>: The sample output from submitting the form should contain attribute names that correspond to the form element names on pageTwo.html. If you receive the following message after submitting the form, this is likely due to having a form element that is **missing** a required value or maps the **form element's name incorrectly** (i.e., typo).

no data was sent. Check your form. Go Back

Troubleshooting Tip 2: In the preceding example, the value sent for the field 'continent' is "North America". This is because the value of the radio button for selecting "North America" in pageTwo.html has been designed to send the textual value "North America." You, as the designer, must determine what string values to pass for this field (such as north\_america, etc.). However, sending complete raw data as "North America" reduces future server-side data processing because we can use the value as-is.