Advanced Web Development and Web Scraping
Fall 2018
Exam I Practice

Format: the exam will be completed on pen and paper and will involve web development coding questions similar to the homeworks and to the practice problems below. You may bring 1 page of notes (front and back) to the exam. The use of computers will not be allowed.

Outline

I. **HTML - You should be able to create / modify the following elements:**
   a. Headings (h1, h2, …)
   b. Paragraphs
   c. Span
   d. Div
   e. Forms and inputs (checkboxes, textboxes, numeric inputs, submit button, and reset button)
   f. Buttons (using the button tag)
   g. Links
   h. Tables (including table rows, table headers, and table data elements)

II. **Cascading Style Sheets (CSS) – you should be able to add or modify the following styles, using *inline styles* or an internal style sheet.**
   a. Font color
   b. Background color
   c. Display (inline, block, inline-block)
   d. Position (static, fixed, absolute, relative) and location (left, right, top, bottom)
   e. Width
   f. Height
   g. Border
   h. Hover pseudoclass
   i. Properties which are provided (e.g., set the *font-family* property of the paragraph to *courier*)
   j. Inline styles applied to one or more elements, elements with classes, elements with ids, and descendent selectors

III. **Javascript**
   a. Variables, arrays, objects, for loops, if, else if, else, functions
   b. Get an element or elements by id, tag name, or class
   c. Change an element's innerHTML
   d. Set the element's inline style
   e. Change an element's class

IV. **JQuery**
    a. Get an element or elements by id, tag name, or class
    b. Set an element's onclick property
    c. Change an element's text
    d. Change an element's inline style (*css* function)
    e. Check if an element has a class
    f. Add or remove an element's class
    g. Run code when the page is *ready*

V. **Angular**
    a. ng-app
    b. ng-controller
    c. ng-model
    d. ng-bind
    e. ng-init
    f. ng-click
    g. angular expressions
    h. angular model and app.controller functions

Practice Problems

1. Create 2 side-by-side tables using the appropriate HTML and CSS. Hint: each table is inside of a *div*.

Table 1

1	2	3
4	5	6

Table 2

A	B	C
D	E	F

2. Create two numeric input boxes side by side, and an Add and Reset button. Using jQuery, when a text box gets focus (the jQuery *focus* function), change the font color to blue. When it loses focus (corresponding to the jQuery *blur* function), change the color back to black. When the user clicks add, the sum of the numbers is displayed in the form "The sum of **3** and **4** is **7**". The Reset button should reset both inputs, and the user should be prompted to enter valid numbers if the user clicks "Add" when numbers have not been entered.

3. Modify the above web page as follows. The "Add" button is removed. AngularJS is used to display the sum of the two numbers in the format above (but if numbers have not been entered in both boxes, no output is displayed).

4. Use AngularJS to complete Assignment 3, #4 (the multi-page registration site).