DOUGLAS COLLEGE

**COMMERCE AND BUSINESS ADMINISTRATION**
**COURSE OUTLINE AND SCHEDULE**

**CSIS 3380-001: ADVANCED WEB PROGRAMMING WITH JAVASCRIPT & AJAX**

# Assignment 1, Fall Semester 2018

**Due Date: Sunday, October 7, by 11:59 PM**

## Instructions

Please begin by creating a folder for the assignment files. Name the folder as follows: *YourNameCSIS3380-AS1*. Make sure that you replace "*YourName*" part of the folder with your actual name). **Please do not try to modify the HTML template provided. If there's any error, please let me know. Thank you!**

***Note: The assignment is to be completed individually. Any form of cheating or sharing of work may have serious consequences***.

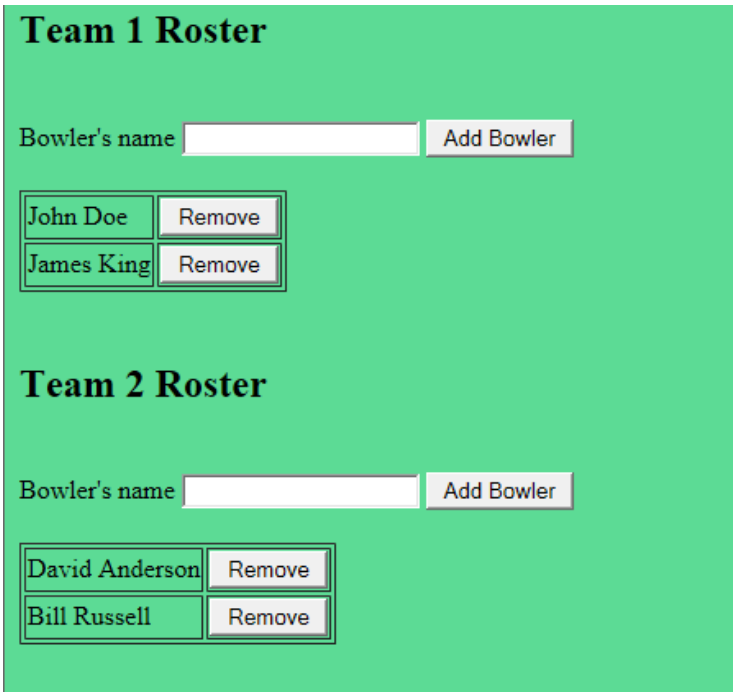
## Description

One of the most powerful uses of JavaScript on the web is to modify page content based on external events, such as clicks or other user interactions. JavaScript treats the contents/elements of an HTML document as a set of related components, which are referred to as objects. In this assignment, you will use JavaScript to reference some of the fundamental properties and methods of objects in the browser and in a document to increase a web page's interactivity.

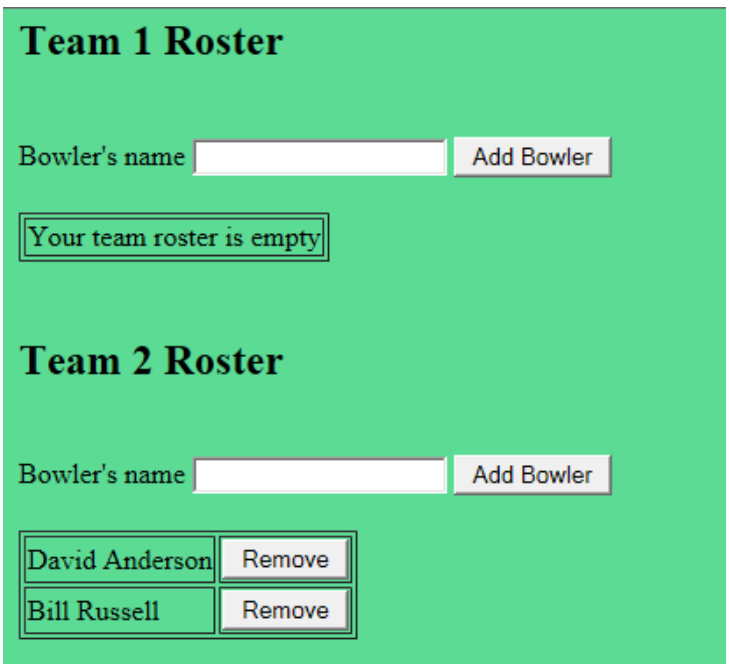
**You are provided with an HTML page template that you should use to accomplish the tasks below. Please use one external JavaScript file called "*as1_script.js*" for all code for the three questions below**.

1. Using *Table, TableRow*, and *TableCell* objects, develop a JavaScript app that dynamically generates the rosters for two teams of the bowling league as team member names are entered. For each team, create two functions that add and remove bowlers. Call these functions *addTeam1Bowler(), removeTeam1Bowler(), addTeam2Bowler()*, and *removeTeam2Bowler()*, respectively.

Each team has a form for users to enter the names of team members and click an "Add Bowler" button. The *Add Bowler* button should call either *addTeam1Bowler()* or *addTeam2Bowler()* when clicked (depending on whether members for team 1 or team 2 are being added). The exhibit on page 2 shows two bowlers added to each team roster.




When the dynamic table that lists the names of the bowling team members in individual rows in generated, each row should also contain a "Remove" button that removes a bowler's name from the list when clicked. This button should call either *removeTeam1Bowler()* or *removeTeam2Bowler()* depending whether it is team 1 or team 2 bowler being removed, respectively. Also include the text "*Your team roster is empty.*" if no bowlers have been entered or if all bowler names have been removed. The exhibit below is for when Team 1 bowlers have been removed.



2. Implement a JavaScript function called *changePageColor()* that will change the page's background color dynamically and randomly based on an array of the following seven colors: "#5CDB95", "#AFD275", "#66FCF1", "#A8D0E6", "#F5E6CC", "#FAED26", and "#86C232". (Hint: to choose a color at random from the list above, you'll need to create an array and also use a random number generator).

Please use the *setInterval()* function to dynamically set the page background color by repeatedly executing the *changePageColor()* function every 10 seconds (i.e., 10000 milliseconds). **Note**: you will need to call the setInterval function using a different set of <script> tags from those used to link to the ***as1_script.js*** file in order for it to work.

3. You are supplied a text file called "*Bowling-Slogans.txt*" that contains 25 bowling slogans. Covert the text file into an array and thereafter create a function called *displayBowlingSlogans()* that will dynamically pick **four** unique (i.e., non-repeating) slogans at random to display. The four slogans displayed should be changed after every 7.5 seconds (i.e., after every 7500 milliseconds). Please use the *setInterval()* function to repeatedly execute the *displayBowlingSlogans()* function after every 7500 milliseconds. **Note**: again, you will need to call the setInterval function using a different set of <script> tags from those used to link to the ***as1_script.js*** file in order for it to work.

4. When the page loads initially, an image of a pinball is displayed (ball0.png). In the Images folder, there are eight pinball images (ball0.png to ball7.png). Implement a JavaScript app that will animate these images. Begin by loading and caching the images. To do so, define a *pinBall* array that will hold (cache) the loaded images.

Thereafter, create a function called *spinPinBalls()* that will animate the images. Please use the *setInterval()* function to repeatedly execute the *spinPinBalls()* function after every 150 milliseconds. **Note**: again, you will need to call the setInterval function using a different set of <script> tags from those used to link to the ***as1_script.js*** file in order for it to work.

**Submission**
***Compress/zip your assignment 1 folder and upload it to the Blackboard.***