

COMMERCE AND BUSINESS ADMINISTRATION
CSIS 3380: ADVANCED WEB PROGRAMMING WITH JAVASCRIPT & AJAX
Assignment 1

Due date: October 5, 2021
(5 % towards your Final Grade)
(20 +20+10+10+10 = 70 Marks)

Instructions

Please begin by downloading the Assignment 1 folder. Rename the folder as: *YourName_Id*.

You are provided with an HTML template file that you should use to accomplish the following tasks. Please use the external file "as1Solution.js" for all the code for the questions below. You can use JavaScript or jQuery to accomplish the tasks.

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

1. Build a To-do list application: A simple To-do list is an application that allows the user to add a task, remove an existing task and search for a given task.

Add a task: When the user enters a new task and hits submit button, the task gets added to the end of the task list. Make sure the task is not empty or duplicate. If it is empty or duplicate, generate an "alert".

Remove a task: The user can remove any already added task from the list.

Search for a task: If the user enters a search keyword in the search box, then all the tasks containing the search keyword should show up under the Tasks.

2. Anny's Seashore Supplies rents beach equipment such as kayaks, canoes, beach chairs, and umbrellas to tourists.

- The tourist enters the name of the rental item in the textbox and clicks **Add Item Button**.

Note: If the item is blank or a duplicate item is entered, an alert should be generated and the tourist should enter a different item

- The entered item should be added to the select box with id="selectedItems"

Hint: Use createElement() of option type to create a new option element and then, append it to select box.

- The tourist can delete the item by selecting the item from select box and clicking **Delete Item Button**. The selected item should be deleted from select box.

Hint: Use select box's selectedIndex property to get the index of the selected item.

Note: If there are no items in the *select box*, and user clicks **Delete Item Button**, then, an alert should be generated with message "OOPS!!There are no items to delete"

- Tourist enters the number of minutes for rental in textbox with *id="minutes"*. Calculate the rental amount by dividing the number of minutes for the rental by 60 and then calculate the hours, extra minutes over an hour, and the total price. Note that the price is \$40 per hour plus \$1 for every extra minute.
- Multiply the amount by number of items in the select box to get the final rental amount.
- Display the final rental amount in the textbox with *id = "amount"*. The value should be displayed after Tourist enters the minutes in textbox with *id="minutes"* and clicks outside that textbox. **Hint:** Use *blur* event with *addEventListener()*.

Example:

Minutes	Items	Total Rental Amount
50	2	$\$40 * 2 = \80
105	1	$(\$40 + \$45) * 1 = \$85$
120	4	$\$80 * 4 = \$ 320$
128	3	$(\$80 + \$8)*3 = \$264$

3. You are supplied a text file called "**InspirationalQuotes.txt**" that contains 25 inspirational quotes. Copy the text file into an array and thereafter create a function called **displayQuotes()** that will dynamically pick **four quotes** at random to display. The four quotes displayed (in label with *id = "displayQuotes"*) should be changed after every 5 seconds (i.e., after every 5000 milliseconds). Please use the **setInterval()** function to repeatedly execute the **displayQuotes()** function after every 5000 milliseconds.
4. When the page loads initially, an image (shown below) is displayed (**img0.png**). In the Images folder, there are 14 such images (img0.png to img13.png). Write code that will animate these images. Begin by loading and caching the images. To do so, define an *imagearray* that will hold (cache) the loaded images.



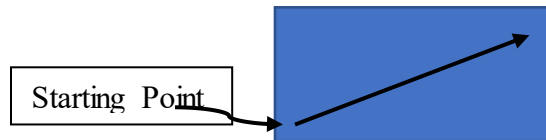
Thereafter, create a function called **animateImages()** that will animate the images. Use the **setInterval()**function to repeatedly execute the **animateImages()** function after every 150 milliseconds.

5. Create a slide show application that runs the slide show in the div with *id = "slide"* using five images (casting1.jpg, casting2.jpg, catchrelease.jpg, fish.jpg, lures.jpg). When user starts the application, it displays

a new caption and image every two seconds. The *src* attribute provides the location for the images in the slide show and *alt* attribute provides the caption for the slide. Use the *setInterval()* function to repeatedly execute the *slideShow()* function after every 2000 milliseconds.

The following two questions are for additional practice and don't carry any marks. It is optional to submit the solutions to these questions as part of Assignment 1.

6. When the page loads initially, an image of a bowling ball is displayed (bowlingball.png). Create a function *bouncingBall()* that will bounce this ball across the four sides of the browser window. Use the *setInterval()* function to repeatedly execute the *bouncingBall()* function after every 50 milliseconds.
7. When the page loads initially, a gif image of a helicopter is displayed (helicopter.gif). Create a function *movingObject()* that will move this helicopter across the diagonal direction of the browser window as shown below. When the helicopter goes out of view, it should again enter the webpage from the starting point. Use the *setInterval()* function to repeatedly execute the *movingObject()* function after every 100 milliseconds.



Submission:

Compress/zip your Assignment_1 folder and upload it to Blackboard. NO LATE SUBMISSION is allowed.