

Assignment 8

(Use event object and event delegation in JavaScript)

(Total: 100 points)

Learning Objectives

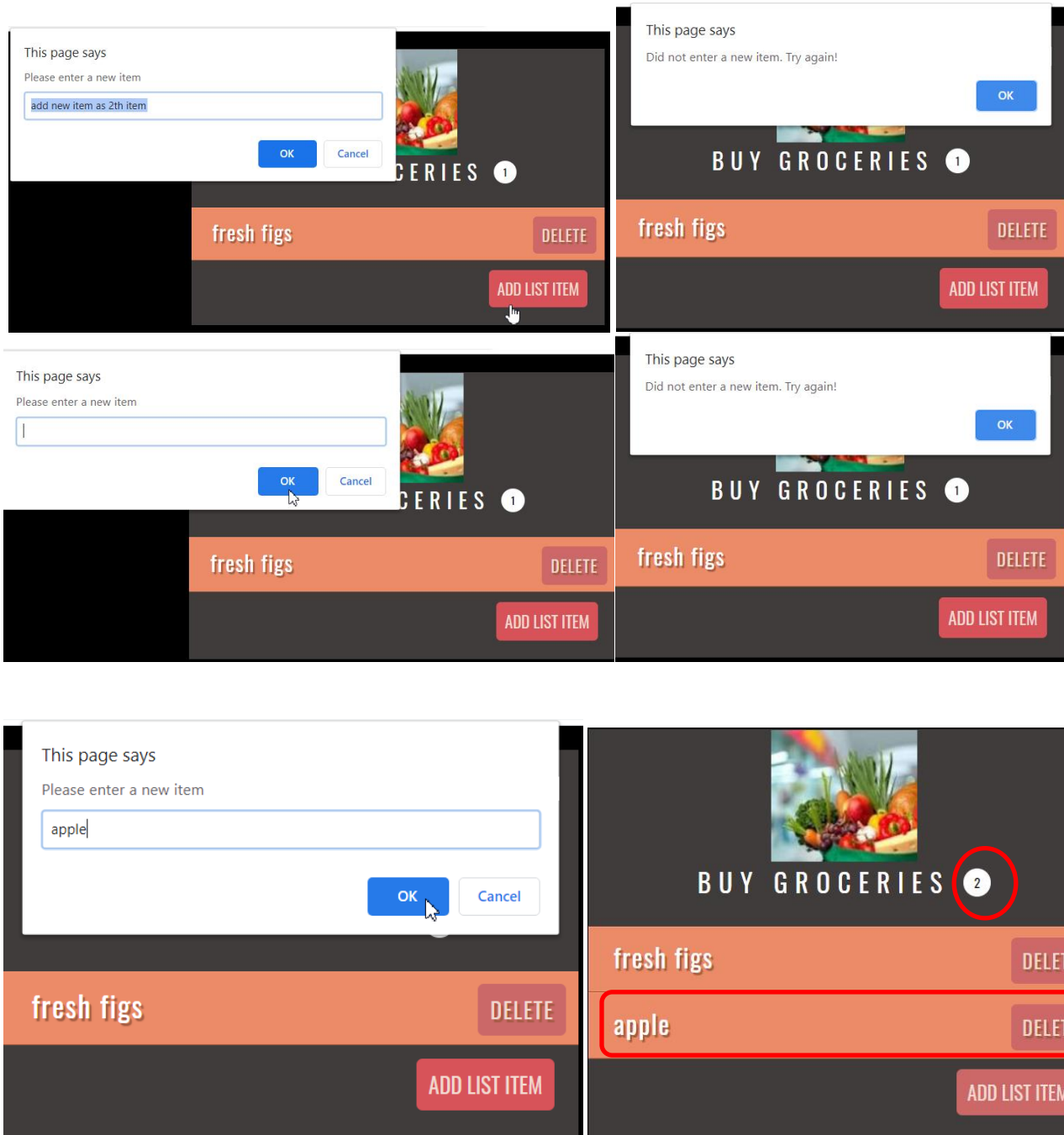
- Hands-on practice on how to use event object in JavaScript.
- Hands-on practice on defining event handler functions, registering event handler/adding event listener.
- Hands-on practice on how to use event delegation to response to the event fires on the elements that are added in the future.

Complete your assignment

Download the zip file named “CS381_A8.zip” and then unzip the zip file. In the unzipped folder (by default with name “CS381_A8”), you will find files: [grocery.html](#), [grocery.js \(in JS folder\)](#), and [main.css \(in CSS folder\)](#). Add JavaScript code in the “[grocery.js](#)” to complete the following steps (See in Lecture 5.2 ppts, sample code, and hands-on practices about how to add a list item, how to remove a list item, and how to apply event delegation):

Step-1: [30pts] Add js code to complete the function named ***addItem***, which will be used as event handler to add a new item to the grocery list when each time “ADD LIST ITEM” button is clicked by user. In ***addItem*** function:

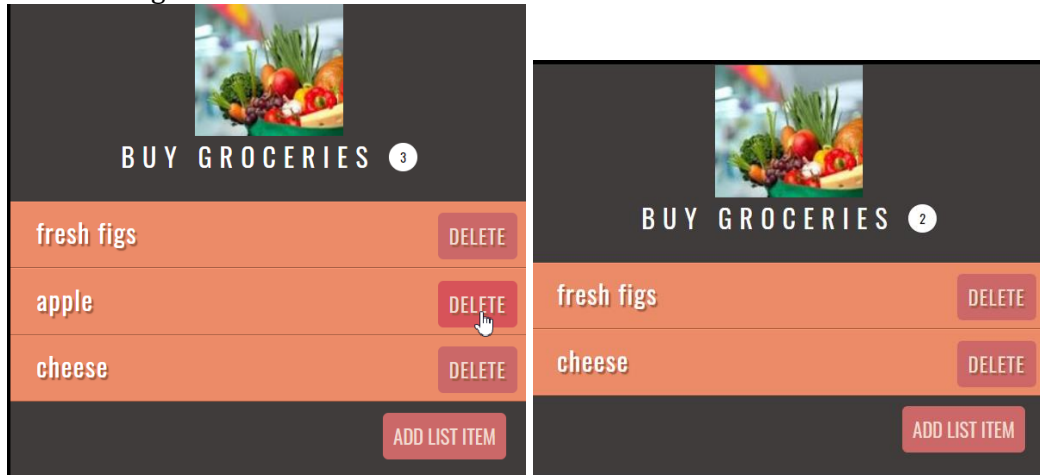
- (1) Create a prompt pop-up box by using `prompt()` method from window object. That prompt pop-up box will be used to allow users enter a new item, and then that new item will be added to the grocery list on the web page.
- (2) Add a default text in the prompt box when creating that prompt box. That default text shows: “**add new item as *n*th item**”, where *n* is equal to the number of items in the grocery list + 1 (see in the figures below). The default text will be displayed in the input box before users enter anything there.
- (3) If users click the “OK” button in the prompt box without entering new text or without removing the default text, then an alert box will pop-up and says “**Did not enter a new item. Try again!**”, and then no new item will be added. [Hint: *if the input box is empty when user clicks the ok button, then empty string will be returned from prompt() method. If user did not remove default text and enter any new text in the input box, then the default text will be returned from prompt() method after user clicks the ok button.*]
- (4) If users click the “Cancel” button in the prompt box then no new item will be added to the grocery list on the web page. [Hint: *if user clicks the “Cancel” button in the prompt box, null will be return from the prompt() method*]
- (5) If users entered a name of new item and press the OK button in the prompt box, then a new list item (i.e., a new `` element with the text content which is the name that users entered) will be added at the end in the grocery list on the web page. When adding a new item to the grocery list, should also add a “delete” button inside that new item. The delete button is structured as `Delete`. [Hint: *you may use innerHTML property to add that delete button in the new element.*]
- (6) After adding a new item to the list, update the number of groceries in the list by calling ***updateCount*** function.



Step-2: [30pts] Add js code to complete the function named **removeItem**, which will be used as event handler to delete each item (i.e., `` element) in the grocery list. When the "Delete" button next to each list item is clicked, then the grocery item will be removed. In **removeItem** function:

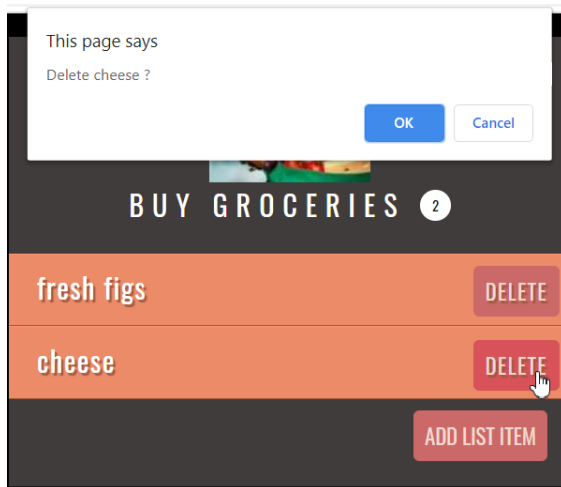
- (1) Add a parameter in the function header to reference the event object.
- (2) Set up an if statement so that only when a delete button (i.e., `<a>` element) is clicked, the related list item will be removed. In other words, when user clicks anywhere else in the grocery list, no list item will be removed.
 - a. In the if statement, use the event object to find the delete button that user clicked, and then delete the `` element which contains that delete button. [Hint: *use the relationship among DOM nodes: the `` element is the parent node of the delete button that user clicked. And then delete that `` element.*].

- b. After deleting that grocery item, the **updateCount** function is used to update the number of groceries in the list.



Step-3: [20pts] Apply event delegation by using `addEventListener()` method of the `` element so that when any of the delete buttons in the grocery list is clicked, **removeItem** function will be called as an event handler.

[5 bonus points]: revise step (2), a confirm box will pop up to display the content of the list item where the “Delete” button is clicked. If user clicks the OK button in the confirm box, then the list item will be removed; otherwise, the list item will not be removed.



Step-4 [15 points]: Test and debug your programs in web browser to make sure there is no syntax and logical errors, and everything works properly. If there are some errors that you cannot figure out, please write a notes in your program or leave a message in your dropbox.

Submit your assignment [5 points]

- After you complete, please **save and zip** the “CS381_A10” folder that including all the files, and then rename and submit the zipped file “**A8_yourLastNameFirstName.zip**”, to the assignment drop box named **Assignment-8**. **Note:** If your computer does not have the ability to “zip” (i.e., compress or uncompress) files, download and use a free zip program such as 7-Zip (<http://www.7-zip.org/>)