Homework Assignment 5
Magnetic Poetry
Due Monday, 4/17, 11:00pm

Objective
To gain a better understanding of the HTML, CSS, JavaScript, and event handling and also basic usage of permanent storage in a web application.

Description
The assignment is to write a page that will simulate the "magnetic poetry" that is sold in many bookstores. The background color of the page must be black. A series of bold faced, black lettered words should appear in white rectangular boxes. The words should start out together on the page and the user of the page must be able to drag and drop them around the page to create sentences. The page should also contain a single text box and a button with the label "Add Word". When the user types some text in the box and clicks the button, a new "magnetic" word should appear on the board. The board will also contain an icon for a trash can. When the user drags and drops a word on the trash can icon, the word is removed from the board. When the page is closed all words must be written to permanent storage including their positions on the screen and restored when the page is reloaded. All the dom manipulation and event handling must be done using jQuery.

1. Create a single html page named poetry-<userid>.html

2. All formatting should be done using CSS properties in an external file.

3. All Javascript should be put in a separate file

4. Use a Button element (with type=button) to represent each word.

5. Set the CSS position of the words to absolute.

6. You will need to trap the mousedown, mousemove and mouseup events on the document object.

    1. mousedown:

        1. Get a reference to the target

        2. If the target is a button

            1. Save a reference to the button in a global variable

            2. Calculate and save the x and y offsets within the button of the mouse cursor

    2. mousemove:

        1. If the button reference isn't null

            1. move the button to its new position by changing its top and left styles

3. mouseup

    1. Set the button reference to null

7. To move the words around you'll need to use the clientX and clientY properties of the event and the offsetTop and offsetLeft properties of the button objects.

8. Initialize the puzzle with a set of words that appear next to each other in a row near the top of the page. These should be hard coded as html button elements.

9. When you type some text in the text box and click Add Word, the new button should appear near the upper left corner of the screen and the text box should be blanked.

10. Once you have buttons being created and dragged around:

11. Place a trash can icon near the top of the screen. Trap the drop event onto the icon and remove the dropped button from the dom.

12. Trap the page unload event.

13. Select all the words on the page and write them to permanent storage, including the text on the button and the x and y coordinates.

14. When the page is reloaded, read the list of words from storage and recreate the buttons in the positions they were last found.

15. Make sure you have a comment in each file with your name, etc.

16. Zip and upload to Coursesite.