

COMP 722 E-commerce Fall 2007 Programming Assignment 3

Due in the digital drop box on Fri., Sept. 28 by 11:00

1. (This problem covers material on the DOM.) Create an HTML document that initially displays just a paragraph element whose content is “Start.” When this element is clicked, its text disappears (i.e., is changed to the empty string), a short (two of three sentences) description about you appears at the top left of the screen, and a short (two of three sentences) description about A&T appears at the top somewhere to the right. The description of you moves slowly right and the description of A&T moves left at the same speed. They move across each other, and both disappear (i.e., their text becomes the empty string) when they reach the positions originally occupied by each other.

Hints: Use paragraph elements whose widths are certain percentages of the screen (see Part 3). The paragraphs’ contents should initially be empty. Use `setInterval` and `clearInterval` with a global variable. See the example program that uses `setInterval`. Note that you can use `clearInterval` in the function that is repeatedly executed by virtue of the `setInterval` call. Give values for the `id` attributes of the paragraphs and use the `getElementById` method to obtain references to the nodes corresponding to these elements. These references should be in global variables. You will have to manipulate the `innerHTML` attribute values of all three nodes. Since `setAttribute` does not work with “`inerHTML`”, you have to use constructs of the form

```
obj.innerHTML = "A string";
```

For this problem, you have to define one or two global variables whose values are changed and are assigned to the appropriate properties of objects representing paragraph elements. Use the `setProperty` method of the `style` object. You must also use one of these variables in the test that checks whether one of the paragraphs has reached its final position (and so `clearInterval` should be called).

2. (This problem also covers material on the DOM. It is a small problem intended to give you some experience with manipulating nodes in the document tree and with event listeners.) Create an HTML document whose body contains three paragraphs, with content “A”, “B”, and “Swap A and B”, respectively. Be sure to have `id` attributes for these paragraphs. After the document is loaded, it should execute a function that adds the function `swapAB` to the node for the third paragraph as a listener for `click` events. Function `swapAB` swaps the node for the paragraph with content “A” with the node for the paragraph with content “B”. Thus, when the document is loaded, the rendering is as on the left below. After the user clicks **Swap A and B**, the rendering is as on the right below. If the user clicks **Swap A and B** again, the rendering returns to the original form. Further clicking toggles the rendering between these two forms.

Hints: The paragraphs are all children of the body; `document.body` gives a reference to the node for this. Get references to the nodes for the first two paragraphs and use the `replaceChild` method of the body node. Note that the first argument of this method is the new child node and the second argument is the node it replaces. You’ll want to create an additional `Element` node as a placeholder among the children of the body. The straightforward

approach is to invoke `replaceChild` three times in a pattern reminiscent of the standard three-assignment-statement pattern for swapping the contents of two variables.

