JavaScript Practice 3
Due Thurs, Nov 13

Lab
You may work with partners for these problems. Make sure you put BOTH names on the problems. Create a folder named JSLab3, and place all of the web pages for the problems in the folder. Upload the folder with the web pages to the server, and submit the URL of the folder on sakai. Only one partner should submit, but if one partner fails to submit, both partners are responsible.

1. Make sure you review and understand the material covered in the powerpoints in class.
2. Try to implement some of the code in the powerpoints:
   a. Hints: DON’T COPY FROM THE POWERPOINTS
      i. The browser doesn’t like all of MS Office’s characters, most notably the “, the ‘, the -, the ;, and just about any other special character you might use.
   b. If nothing is working, there’s probably a typo you’ll have to find.
      i. Look for capital letters where there should be a small one, and vice versa
      ii. Look for missing “ ” (if you open it, you must close it)
      iii. Same with { and }
      iv. Same with ( and ) – for every one of the first, you must have one of the second.
   c. Finally, make sure your html is valid (again, if you opened a tag, you should close it)

Problems (100 pts):
(Note: On your web page you can have something like,

   `<img src = “cat.jpg” id = “img1” width = “300” height = “400” alt = “cute cat”>

When I refer to the image on your web page, I’m referring to the `<img...>` tag, whereas when I refer to the picture, I’m talking about what the src is set to, or “cat.jpg”)

1. (8 pts) Create a web page with an image on it of some picture of your choice (we’ll call this picture1.jpg). Create a script in the head section. In the script, write a function that uses `getElementById` to change the picture in that image to something new (picture2.jpg). Write a second function that changes the picture in that image back to the first picture (picture1.jpg). Now modify the image on the page so that when you run your mouse over it, the first function is called, and when you run your mouse off of it, the second function is called.
2. (7 pts) a. Create a web page (or modify the existing web page) with an image on it, a paragraph on it, and a button. Now add to the script (in your head section) an array of pictures and a variable initialized to -1. Next create a function that will first increase the variable by 1, then check to see if the variable is longer than the number of elements in the array, and, if so, resets the variable to 0. The function then displays the picture in the array at that variable number. Now make the button on your web page call that function (note – this is pretty much what we went over in class). Make sure that if you add pictures to your array, this function will work regardless of how many pictures you add.
2 (7 pts) b. Now add another button and another function. This function should allow you to add pictures to your array. The second button on your web page should call this second function. (again, this is pretty much what we went over in class).

2 (12 pts) c. Now, inside your script, but above your functions (either above or below the first array of pictures), create a second array. The array should hold text describing (in order) each of the pictures in the array of pictures you created. (Remember to put quotes around the text, so the array will look something like this:

```javascript
var textarray = new Array()
textarray[0] = “description of picture 0 goes here”
```

Now modify the function you wrote in 4a so that it also changes the paragraph on the web page’s text to what is in your array of text at the variable

2 (8 pts) d. Finally, modify function 4b so that when you add a picture to your picture array, you must also add text describing the picture to your text array (you’ll use two prompts for this: the first will get the new picture, and the second will get the new text).

2 (12 pts) e. Add a paragraph to the web page. Then modify function 4a so that it will tell you, “Picture 3 of 5” where 3 will be replaced with the picture’s number, and 5 will be replaced with the number of pictures in your array.

3. (12 pts) Write a web page (or modify the existing web page) with an image on it. Position the image absolutely, with the left position being at 0 px. Add a button somewhere lower in the page that calls a javascript function using onclick.

Now inside your script in the head section create a new array. This array should hold positions, formatted as: “100px” So, for instance, you’d have:

```javascript
var positionArray = new Array()
positionArray[0] = “100px”
```

Add a new count variable, just like we had for going through an array sequentially (note – if you’ve used the name ‘count’ for your variable before, you should name this variable something else. If you want to get incredibly creative and innovative, you could call it ‘count2’.)

Now create a new function. Inside the function, you should first increase the count variable. You then want to make sure that you are positioning an image absolutely. That can be done by using getElementById’s style.position property, i.e.,

```javascript
document.getElementById(“imgid”).style.position=”absolute”
```

You should then use document.getElementById’s style properties and loop through your array of positions to change the position of the left to be positionArray[count2] pixels over. (You’ll have to use say:
document.getElementById("imgid").style.left=positionArray[count2]

where “imgid” should be replaced by the id of the paragraph the image is in on the page (or the image itself, if you’ve styled the image instead of a paragraph surrounding the image).

Now when you click on the button, the image should move around the screen.

3b. (8 pts) Modify the above to loop back to the beginning of the array when you get to the end.

3c. (14 pts) Add another array of positions (again, if you’re adding another array, you can’t call it positionArray, because that name has already been used. You’ll have to come up with something else. Make sure the array is exactly the same length as the first array.

In the function, modify the code so that the image is also positioned down from the top as well as from the left, e.g.,

    document.getElementById("imgid").style.left=positionArray[count2]

    document.getElementById("imgid").style.top=positionArray2[count2]

4. (12 pts) Add comments throughout your code describing what you are doing (notes to yourself and to the TA so your code is easier to read. These notes should explain what you were trying to do throughout your code).

To Turn In:

A folder called JSLab3, containing web pages for problems 1-3 (and the corresponding images). Problem 4 should be interspersed throughout your problems 1-3.