JavaScript Lab 1

Due Thurs, Oct 31

Note: You may choose to work alone on the lab, but if you choose, you can work with partners for these problems. If you choose to work with a partner, make sure you put BOTH names on the problems. Make a folder, 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 URLs on sakai. Only one partner should submit, but if one partner fails to submit, both partners are responsible.

Hints for when things don't work:

- DON'T COPY FROM THE POWERPOINTS OR THE HANDOUTS!
- 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.
- If nothing is working, there's probably a typo you'll have to find.
  - Look for capital letters where there should be a small one, and vice versa
  - Look for missing " " (if you open it, you must close it)
  - Same with { and }
  - Same with (and) – for every one of the first, you must have one of the second.
- Finally, make sure your html is valid (again, if you opened a tag, you should close it)

Problems:

1. (8 pts) Write a web page with a javaScript that uses the prompt to get the user to input their first name and then their year of birth. Calculate how old they are and write it to the web page (assume everyone was born on the first day of January of this year)
2. (10 pts pts) Write a web page with a javaScript that uses a prompt to ask the user what theme they want. If they choose "Halloween", write a paragraph that has a style. The style should have a black background and an orange font color. If they choose "valentine", the style should have a pink background with a white font. If they choose "thanksgiving" the style should have an orange background with a brown font color. (Feel free to pick your own themes and colors).
3. (15 pts)Write a web page with a javaScript that uses a prompt to ask the user their weight in pounds. It uses a second prompt to ask the user to enter their height in inches. It uses a third variable to hold the user's bmi, calculated as follows: weight multiplied by 703, divided by height times height. Once you have a variable holding the bmi, use it to give feedback:
   If the bmi is 30 or greater, the script should write a paragraph that says, "Your weight is considered to be unhealthy." Otherwise if the bmi is 25 or greater, write a paragraph that says, "You are currently considered to be overweight." Otherwise if the bmi is 18.5 or over, write a paragraph that says, "Your weight is considered normal and healthy". Otherwise, write a paragraph that says, "You are considered underweight.
4. (7 pts)Write a javaScript that generates a random number between 1 and 6. It uses that random number in a document.write to write a header of that size (e.g., <h1>,<h2>, etc.))
5. (10 pts)Write a javaScript that generates a random number between 1 and 300 for the width. It then generates a second random number between 1 and 300 (for height). It then uses

document.write to put an image on the web page, with the width being the random number generated for width, and the height being the random number generated for height.

6. (10 pts)Write a javaScript that generates a random number between 1 and 6. If the number was a 1, use document.write to place an image on the page of a die (singular of dice) with one dot on it. If the number was a 2, display an image of a die with 2 dots, etc.

7. (20 pts) Simple Rock/Paper/Scissors. Use the prompt box to ask the user, "Pick 0 for Rock, 1 for Paper, or 2 for Scissors (you'll have to use ParseInt on this one). Then generate a random number between 0 and 3 (remember, when we generate a random number it goes up to but not including 3). Okay, here's the part I always get confused. Rock (0) beats Scissors (2), paper(1) beats rock (0), and scissors(2) beats paper(1). So you must write out who won by checking your answer against the computer's randomly generated answer, e.g., (&& means *and*)

    ```
    if ((myanswer == 0) && (randnum == 1) )
    {      document.write("<p>Sorry, the computer won.</p>")
    }
    …
    ```

8. (10 pts)Write a javaScript that generates a random number between 1 and 500 for the topposition. It then generates a second random number between 1 and 500 for the leftposition. It then uses document.write to put a paragraph on the page that is positioned absolutely using the topposition and the leftposition variables. (Note: go back and look at how to position a paragraph absolutely) Now use document.write to put an image in the paragraph, e.g., the html should look something like this:
    `<p style = "position: absolute; … "><img src = …></p>`

8b. (10 pts)Using the script you write in exercise 8, check to see if the the topposition is between 200 and 300 and the leftposition is between 200 and 300. If it is, use document.write to write, "You've got a hit!" Otherwise, write "You missed." (Note: I made a web page, and place an image using position: absolute; 200 pixels from the top and 300 pixels from the left. That way one image appeared on top of the other image when I had a hit, and didn't otherwise.)