Dana Spears
Unit 6 Assignment
CIS 81 – Javascript and Dynamic HTML
Summer 2016

Chapter 5:

Part 1:

1. **Create GitHub Account (see Unit6 Repository)**
2. **Create a Unit6 Public GitHub Repository (see Unit6 Repository)**

Part 2:

Complete GitHub Tutorial Step 1 - 5
Include screenshot of your Hello-World Repository from the GitHub Website. **(see Unit6 Repository)**

Part 3:

Chapter 5 Exercises: 3, 5, 7, 14
*Write an individual HTML or JS file per exercise.

3. Write a function that returns the average of all of the items in an array.
For example, average([4, 5, 7, 2]) should return 4.5.

Call: average([4, 5, 7, 2])

File: avrg.js

```
function average(var1) {
var sum = 0;
var avrg = 0;

for (var i = 0; i < var1.length; i += 1) {
    sum += parseInt( var1[i], 10 );
  }
avrg = sum/var1.length;
alert(avrg);
}
```

5. Write a function that accepts two numbers and returns a random number between the two values.

Call: randy(10,20);

File: randy.js

```
function randy(var2, var1) {
  var r = Math.floor((Math.random() * (var1-var2+1) + var2));
  alert(r);
}
```

7. Write a function that returns the number of zeros in a given array. For example, the call numberOfZeros([4, 0, false, 5, 0]) should return 2.

Call: numberOfZeros([4,false,0,5,0]);

File: js.noz

```
function numberOfZeros(var1) {
   var noz = 0;
   for (var i = 0, n = var1.length; i < n; i += 1) {
        if (var1[i] === 0) {
        noz += 1;
        }
  }
   alert("The number of zeros is " + noz);
}
```

14. Search for and read a couple articles on refactoring. Explain the concept in your own words.

Refactoring is restructuring code internally to make it more efficient and improve the design without affecting or changing the behavior of the code externally. This is often achieved through making small transformations that alone would seem almost pointless, but taken together; a series of small code transformations would result in an overall improved code. The improved code minimizes bugs and has cleaner hierarchy scheme, typically eliminating redundant or unnecessary code and moving code processes to different modules making the code more efficient overall.

Sources: Martin Fowler, ***Refactoring: Improving the Design of Existing Code;*** **James Shore,** ***The Art of Agile Development: Refactoring.***