Lab: Basic JavaScript Programming

GEOG 319/658   **Exercise #4**   **FALL 2014**

Basic JavaScript Programming

Due: Wednesday, October 1

A. Write functions for latitude/longitude unit conversions

Download the file *DmsDdConversionTemplate.html* from Blackboard and implement the functions MDS2DD() and DD2DMS() in the HTML file.

Function *DMS2DD(degrees, minutes, seconds* **)** should convert the degree, minute, and second components of a **positive** latitude/longitude coordinate (for example, 40 37 24) to decimal degrees and return the value.

Function *DD2DMS(decimalDegrees)* should convert a **positive** latitude/longitude coordinate in decimal degree into degrees, minutes, and seconds components and return the values (Hint: you can use the Math. floor() function to get whole degrees and minutes).

Test and debug the HTML file to make sure that the two functions calculate correct results.

B. Write functions for generating random integer numbers and finding the minimum number

Download file SortRandomNumbersTemplate.html and implement the functions GenerateRandomNumbers() and FindMinValue () in the HTML file.

Function *GenerateRandomNumbers(n, min, max)* **should** generate and return *n* random integer numbers between *min* and *max* .

Function *FindMinValue(data)* should find and return the minimum value in the *data* Array.

Test and debug the HTML file to make sure that the two functions calculate correct results.

You are required to provide thorough documentation for both of the above HTML files. Your program also should exhibit a structure that makes it easy to read the code. As we discussed in class, this will include indentation where appropriate and lining up the various tags in the HTML files.

When you have finished the assignment, post the URLs for each program to this Google worksheet . Hand in a printed copy of all computer code.