

Assignment 3 – Control Statements II

Due Wednesday, May 29, 2013

For this assignment, please note that **NO jQuery** may be used. You must write everything in core JavaScript

- 1) Write a script that finds the smallest of several non-negative integers. Assume that the first value read specifies the number of values to be input from the user
- 2) Write a script that calculates the product of the off integers fr0m 1 to 15, then outputs HTML5 text that displays the results.
- 3) One interesting application of computers is drawing graphs and bar charts (sometimes called histograms). Write a script that reads five numbers between 1 and 30. For each number read, output HTML5 text that displays a line containing the same number of adjacent asterisks. For example you're your program reads the number 7, it should output HTML5 text that displays `*****`
- 4) Write a script that uses repetition and switch structures to print the song "The Twelve Days of Christmas". You can find the words at: www.santas.net/twelvedaysofchristmas.htm
- 5) A mail-order house sells five different products whose retail prices are as follows: product 1 = \$2.98; product 2 = \$4.50; product 3 = \$9.98; product 4 = \$4.49; product 5 = \$6.87. Write a script that reads a series of pairs of numbers as follows:
 - a. Product number
 - b. Quantity sold

Your program should use switch statements to determine each product's retail price and should calculate and output HTML5 that displays the total value of all the products sold last week. Use a prompt dialog to obtain the product number and quantity from the user. Use a sentinel-controlled loop to determine when the program should stop looping and display the final results.

- 6) Factorials are used frequently in probability problems. The factorial of a positive integer (written $n!$) n is equal to the product of the positive integers from 1 to n . Write an application that evaluates the factorials of the integers from 1 to 5. Display the results in tabular format.
- 7) Write an application that reads three nonzero integers and determines and prints whether they could represent the sides of a right triangle (remember that $a^2 + b^2 = c^2$)
- 8) Write an application that estimates the value of the mathematical constant e by using the formula:
 - a. $e = 1 + 1/1! + 1/2! + 1/3! + 1/4!$
- 9) Write an application that computes the value of e^x by using the formula:
 - a. $e^x = 1 + x/1! + x^2/2! + x^3/3! + x^4/4! + \dots$