Second Year Computing

Web Programming and Databases

Lab Exercise 4

Completion Date: Friday 02/12/2021

Please save your files for this exercise sheet on your M :\WebDev folder in a subfolder called Lab4.

Task 1

Create an html file that calculates the sum of two numbers that have been entered by the user in response to prompts. (*Use parseInt to convert result of prompt from string to an integer)*

http://www.w3schools.com/jsref/jsref_parseint.asp

Display the result on the web page.

If the sum of the two numbers is greater than 100, use an alert box to indicate that the sum is greater than 100, otherwise use an alert box to indicate that the sum is less than or equal to 100.

Save the file as *sum.html* in the Lab4 folder, then open it in your browser.

Task 2

Create an html file that prompts the user for the temperature. And returns an alert which indicates what the temperature means to the user.

If the temp is

>30 degrees	alert “Very Hot!”
22 – 29 degrees	alert “T-shirt and shorts weather”
18 – 21 degrees	alert “Around room temperature”
14 - 17 degrees	alert “Long sleeve shirt and trousers”
8 - 13 Degrees	alert “Fleece jacket weather”
2 - 7 degrees	alert “Quite cold”
-10 - 1 degrees	alert “Very Very cold”
< -10 degrees	alert “Don’t go out unless you really need to!!”

(Use the if...then.. else if statement)

(*Use parseInt to convert result of prompt from string to an integer*)

Save the file as *weather.html* in the Lab4 folder, then open it in your browser.

Task 3

Create a html file that prompts the user for the Grade of a student (A, B, C, D or E) and respond with the following alerts where appropriate.

A "Good Job"
B "Pretty Good"
C "Passed"
D "Not so Good"
E "Failed"
Anything else "Unknown Grade"
(Use the switch Statement)

Save the file as *grades.html* in the Lab4 folder, then open it in your browser.

Task 4

Develop a class averaging script that will process an arbitrary number of results each time it is run. Prompt the user for each of the results until he/she types in -1. (A sentinel)

Determine the Class Average and write it to the page.

If no results are entered (first input is -1) display a message indicating that.

Save the file as *classAverage.html* in the Lab4 folder, then open it in your browser.

Task 5

Create an html file to analyse results for a class with an arbitrary number of students.

Prompt for input of results (integer between 0 and 100) until the user types in -1.

A result of 40 or greater is considered a pass, result of less than 40 is considered a fail.

Count the number of students with a valid results (0 – 100).

Display an analysis of the test results indicating

how many results were inputted

how many valid results were inputted

how many students passed

how many students failed

Save the file as *classStats.html* in the Lab4 folder, then open it in your browser.

Task 6

Define and call a function myMaxOfThree() that takes three numbers as arguments and returns the largest of them. Prompt the user for the three numbers and display the result, outside the function.. (Use if..else)

Save the file as *max3.html* in the Lab4 folder, then open it in your browser.

Task 7

Define and call a function that takes a character and returns true if it is a vowel and false otherwise.

Prompt the user for the character and display the result outside the function.

> Use the *stringName*.toUpperCase() to convert the result of the prompt to the upper case value of the input. This will simplify the if statement.
>
> Only call the function if the input is a single character. Use *stringName*.length to find the length of a string. Keep requesting the input until it is a single character.

Save the file as *vowel.html* in the Lab4 folder, then open it in your browser.

Task 8

Define and call a function to sort an array of words in alphabetical order. Then display the result on the page (outside the function). (Use ArrayName.sort)

Display the contents of the array before and after the call to the function to sort the array.

Save the file as *sort.html* in the Lab4 folder, then open it in your browser.