Laboratory 3 – COP2500

Introduction: The goal of this assignment is to allow you to use JavaScript operators, become familiar with converting algorithms to JavaScript, employ the Math.round () function.

Procedures:
PART 1:

1. Open Notepad on your computer, found by clicking Start/Programs/Accessories.
2. Using your text editor create a new document named "cop2500lab3.html". Do not close out the window until after the lab instructor has had time to verify your work.
3. Convert the following two algorithms into JavaScript code within your singleHTML document. Your final web page should display the algorithm title, the input and the output. The specific format you use to display the results is up to you, but it should be clear what the input and output means (in other words, don't just list rows of numbers without words or labels describing them). A simple way to display output is using document.write(), which was covered in the last lab session. The first algorithm, Fahrenheit to Celsius Conversion, converts three temperatures given in Fahrenheit to Centigrade. The second algorithm, PriceCalc(), computes sales tax and total price for a product.

Fahrenheit to Celsius Conversion

Section	Pseudocode	Comments
INPUT:	var far1, far2, far3;	
OTHER VARIABLES:	var cent1, cent2, cent3;	We'll use these variables to store the results.
INITIALIZATION:	far1 = 32; far2 = 78; far3 = 212;	Storing initial values for the Fahrenheit temps in memory.

COMPUTATION:	cent1 = 5 * (far1 - 32) / 9;
	cent2 = 5 * (far2 - 32) / 9;
	cent3 = 5 * (far3 - 32) / 9;
		Converting F - C using the standard formula.
		Notice how annoying this repetition is - imagine doing 1,000,000.

OUTPUT:	display cent1, cent2 and cent3	Observe that the algorithm doesn't say anything about the display format. You take care of that when you write the JavaScript.

PriceCalc()

Section		Pseudocode
INPUT:	var subtotal;	
OTHER	var taxrate;	Why do you think taxrate is not an input variable? Could it be? Should it be?
VARIABLES:	Var salestax; var total;	
INITIALIZATION:	taxrate = 0.06; subtotal = 57.24;	

COMPUTATION:	salestax = subtotal * taxrate;
	salestax = Math.round(salestax * 100);
	salestax = salestax / 100; total = subtotal + salestax;
		If you are unsure of what the middle two lines are doing, try leaving them out and running the code.
		Math.round ()
		is one of hundreds of functions
		JavaScript provides to you.

OUTPUT:	display the total and subtotal;	Note we aren't returning the tax rate or amount of tax.

4. Open a browser and verify that the file displays properly. Keep this window open until the instructor has had time to verify your work. In order to obtain full credit for this lab, you need upload your assignment into the drop box.