Assignment 2 – Programming Fundamentals

This assignment covers programming skills covered during recent weeks of class and gives you a chance to practice and apply these concepts. The assignment includes a flowcharting component – you may use any software you like to create your flowcharts. Options include http://draw.io, Microsoft Visio, or even Microsoft Word.

The assignment counts for 25% of your final grade.

Due Date: Thursday, Monday December 3 @ 9:00am

Submission Details via Blackboard:
- Upload a flowchart document in *.png* or *.pdf* format
- Link to your *Private* GitHub Repository that contains your *entire* Visual Studio solution. Be sure to invite me – ifotn – as a collaborator to your repository or else I won't be able to access your work.
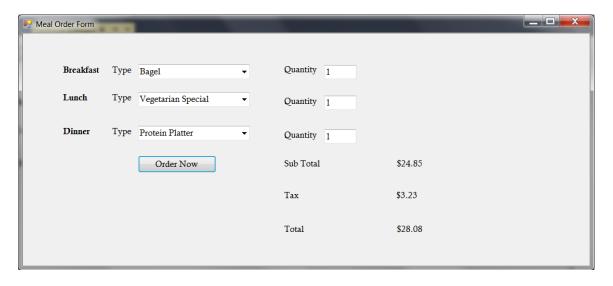
All work **must be your own.** There will be a zero tolerance policy for any infractions of the academic honesty policy. Please review the "Academic misconduct" details at http://www.georgiancollege.ca/admissions/policies-procedures/ to ensure you understand the policy.
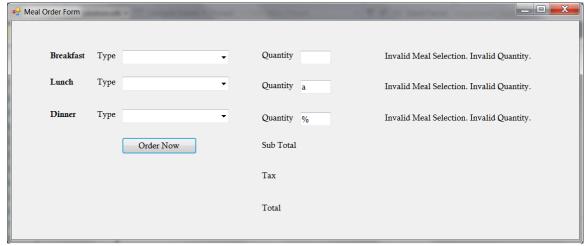
The Application Requirements:

1. The application will simulate a very simple Meal Plan Order Form that will allow users to pre-order 3 meals for a day. For each meal, you need a ComboBox with the options **Bagel**, **Vegetarian Special**, **Protein Platter** and a TextBox for Quantity.

2. When the user clicks the Order Now button, the application must:
   - validate all user inputs to ensure all meals have a selected option (check that the SelectedIndex property of each ComboBox is greater than -1)
   - validate only numbers are entered in the quantity TextBoxes
   - calculate and display the order subtotal, tax, and total cost using Labels.

3. The price of each meal depends on which option the user selects. The prices are as follows:
   - Bagel – 3.95
   - Vegetarian Special = 10.95
   - Protein Platter = 11.95

4. You must:
   - Use a loop to loop through the meal, determine the cost of each (the price times the quantity), and calculate and display the order subtotal in a Label
   - Calculate and display the tax in a Label (subtotal * 13%)

- Calculate and display in a Label the order total (subtotal + tax)

An example of running the program is shown below.

Evaluation Method
Your work will be evaluated separately on the following criteria:

Evaluation Criteria (max 28 marks + 2 possible bonus marks)

Criteria	Level 1	Level 2	Level 3	Level 4	Marks
Flowchart	- Little or no diagram	- Some attempt to create flowchart	- Mostly complete, flowchart	- Complete, accurate flowchart	**2**
Form Inputs	- No inputs	- Some correct inputs / some meaningful names assigned	- Most correct inputs / some meaningful names assigned	- All correct inputs with descriptive names used	**2**
Input Validation	No validation	Some validation	Most validation	Validation Complete	**6**
Decision Structures / Calculations	- No decisions / calculations	- Decisions / calculation started	- Mostly correct decision / calculation	- Complete accurate decision & calculation	**6**
Outputs	- No outputs	- Some attempt to display outputs	- Outputs mostly complete	- Complete outputs	**4**
Code Commenting	- No comments	- Some attempt to explain code	- Most sections clearly explained	- All sections clearly explained	**2**
Version Control	Not implemented	Some use of GitHub	2 or 3 commits made to GitHub	Min 2 commits to private repo; ifotn as collaborator	**6**
*** WILD-CARD BONUS ***				- Up to 2 bonus marks for additional working functionality of your choosing	**2**