Programming Guidelines

1. Solve one problem at a time. **DO NOT** try to get all program requirements working at the same time as you will not be able to figure out what is wrong if something does not work. Choose one condition and try to get that working first, and then choose another and so on.

↓

2. Declare variables at the beginning.

- As a general rule, declare as many variables as there are text boxes + 1 (for the result, but please do not just name it Result all the time, use a sensible name like Total, Average, Mean etc….).
  - However, you may need extra ones e.g Counter/Index for Loops.
- Put a zero in all text boxes (text properties) before running a program. This will solve problems associated with the text boxes being empty. However, you will still need to test if they are numeric to check if the user removed the zero and left it empty or they typed letters *(or vice versa if you want the user to type letters)* – If IsNumeric (txt*TextBox*Name.Text*)* =

↓

3. Store contents of text boxes in variables, **DO NOT** deal with textboxes directly (unless you are testing if a user has entered numeric data or not).

- *Variable*Name = txt*TextBox*Name.Text

↓

4. Test (e.g. Ifs) calculations **BEFORE** the calculations are actually performed otherwise if the calculation is unacceptable the calculations will have already been performed.

- If the calculation is unacceptable then you must display an error message and **Exit Sub**, otherwise an error message will be displayed but the program will continue anyway.

↓

5. Calculations go **AFTER** storing and **BEFORE** displaying.

- Otherwise you will see zero or nothing will change or you will see changes only the next time you click and the program will appear to lag behind!
- Calculations are done with variables (not directly with textboxes or labels).
- Use *Variable*Name = *Variable*Name + ? for example to “keep” a continuous variable calculation.

↓

6. Test (e.g. Ifs) variables **AFTER** calculations otherwise the variables you are testing will either be 0 or at least unchanged from a previous calculation.

- If the variable is unacceptable then you must display an error message and **Exit Sub**, otherwise an error message will be displayed but the program will continue anyway.

↓

7. Display **AFTER** calculations.

- Otherwise you will see zero or nothing will change or you will see changes only the next time you click and the program will appear to lag behind!
- Things you want to see on a form must be displayed otherwise nothing will appear to happen!
- lbl*Label*Name.Text = Variable