IST 256
Lab Week 7, Part 2 – February 25, 2009

1. Writing an Application with a General Procedure
Start a new project and name it something like SalesProc (for sales with procedures).

This application will be similar to the TestProc3 example discussed in class. In this lab, you are going to extend the ComputePrice procedure to have a discount amount.

Make the Form

Create a user interface that assumes that the user can buy two different types of items, books and magazines. In addition to the items having different prices, they may also have different discount amounts if you buy 3 or more. Create a form for the user interface that looks something like this:

Enter Number Books at $20 |_____|
(Get 10% off for 3 or more!)
          |__Compute Book Total __| |_____|

Enter Number Mags at $3 |_____|
(Get 5% off for 3 or more!)
          |__Compute Mags Total __| |_____|

                    |__Checkout __| Total: |_____|
                                                                                    |_Close_|

To write the program, you can modify the TestProc3 program with the ComputePrice procedure and the code for the two Buttons.

Change the Compute Price Procedure

At the top of your program, right after the line that says Public Class Form1, put the procedure to compute the total price for either books or magazines. This procedure will be a modification of the ComputePrice procedure in TestProc3 because it must not only multiply the number of items times the unit price to get the total price, but it must **also compute the discount**. If you keep the name ComputePrice, the **procedure heading** should have the form:

Private Sub ComputePrice(<put formal parameters here>)
The procedure should take as parameters **(read these carefully!):**
          A ByRef parameter that is the going to be the resulting total price (single)
          A ByVal parameter that is the number of units bought (integer)
          A ByVal parameter that is the price per unit (single)
          A ByVal parameter that is the discount rate (single)

Try to pick good variable names for the formal parameters in the heading of the procedure, in particular pick a variable name for the new ByVal parameter that is the discount rate.

Now the **body of the procedure** will compute the total price as before, but it will add code that also computes the possible discount. The rule for the discount is that if the number of items is greater than or equal to 3, an amount which is the discount rate multiplied by the total price is set to be the new total price.

Change the Button Procedure for Books

Now you must modify the code for the Button that computes book total prices. Look at how the ComputePrice is called by the old program. Notice that you must add an additional parameter to match the new ComputePrice function. What should this parameter be? It should be the value of the discount rate for books.

Change the Button Procedure for Magazines

The Button that computes magazine total prices must be modified in a similar fashion to pass the discount rate for magazines.

Test your program to make sure that it works.

Values of parameters for the procedure calls:

Suppose that the user types in **3 for the number of books** in TextBox1. Show here the values of the actual parameters in the call in Button1 to ComputePrice:

ComputePrice parameters in Button1:

Ref:	Val:	Val:	Val:

Suppose that the user types in **5 for the number of magazines** in TextBox3. Show here the values of the actual parameters in the call in Button2 to ComputePrice:

ComputePrice parameters in Button2:

Ref:	Val:	Val:	Val:

Print this program and hand it in with today's lab sheet and Monday's lab and program to complete your lab work for Week 7.