Introduction to Visual Basic II

Topics

- Get familiar with the VS Express 2013 environment
- String and number variables
- Assignment statements
- Evaluating expressions
- User input: strings and numbers
- Using `FormatCurrency` function
- New material for students to learn via online resources: Using format strings in Visual Basic

Video rental store

5. Use **File Explorer** to navigate to the folder containing your final version of your project `VideoRentalStore_Part3` in your lab folder. Copy and paste this project in the same folder, and then right-click on the copy to rename it as `VideoRentalStore_Part5`. Launch VS Express and use it to open the project `VideoRentalStore_Part5`.

   Now change your `VideoRentalStore_Part5` to use format strings in Visual Basic to produce an itemized receipt, containing the same information as the last part, but formatted EXACTLY like the following example.

```
Customer name: Mary Smith
Rental period: 5 days

Regular videos (5 @ $2.50)    $1.85
Premium videos (3 @ $5.25)
----------------------------------
Subtotal                      $5.45
Tax                           $0.38
Total                         $5.83
```

   Consider using a format string variable to space your output appropriately. Be sure to set the font of your output text box to `Courier New` in order for output to display properly. An example of how to declare and use a format string follows.

```
' The following format string variable displays two strings where the format
' for each is described by two comma-separated numbers enclosed between {x,y}
' where x describes which string is being formatted (0 is first string, 1 is
' second string, etc.) and y represents the number of characters allocated to
' the string (in the following example, we're using 10 characters). Note that
' a negative value indicates align left
Dim fmtStr As String = "{0,-10}{1,10}" & vbNewLine

' In the first example, we're displaying string "CSCI 130" in 10 characters
' left-justified and string "1:00pm" also in 10 characters but
' right-justified
outResults.AppendText(String.Format(fmtStr, "CSCI 130", "1:00pm"))
outResults.AppendText(String.Format(fmtStr, "CSCI 130L", "11:20am"))
```

   The above code will produce the following output:

```
CSCI 130       1:00pm
CSCI 130L     11:20am
```

When done, save and close project `VideoRentalStore_Part5`.

Part 5 (80/100): A successful `VideoRentalStore_Part5` program:

- produces an itemized receipt formatted EXACTLY as shown in the previous example
- must also have successfully completed Part 1

6. Use **File Explorer** to navigate to the folder containing your final version of your project `VideoRentalStore_Part5` in your lab folder. Copy and paste this project in the same folder, and then right-click on the copy to rename it as `VideoRentalStore_Part6`. Launch VS Express and use it to open the project `VideoRentalStore_Part6`.

   Enhance your program to allow users to purchase the following additional items during checkout: *candy* @ $1.50, *popcorn* @ $5.00 a bag, and *soda* @ $2.25.

When done, save and close project `VideoRentalStore_Part6`.

Part 6 (85/100): A successful `VideoRentalStore_Part6` program:

- allows user to input number of candy, popcorn and soda units purchased and produces an itemized receipt formatted EXACTLY as shown in the previous example
- must also have successfully completed Part 1

7. Use **File Explorer** to navigate to the folder containing your final version of your project `VideoRentalStore_Part6` in your lab folder. Copy and paste this project in the same folder, and then right-click on the copy to rename it as `VideoRentalStore_Part7`. Launch VS Express and use it to open the project `VideoRentalStore_Part7`.

   Enhance your program again so that the number of *sodas* purchased is not input via a textbox, but instead is controlled by the number of times that a button is pressed.

```
"TODO: guide students to add to a running total each time that the "
"soda button is pressed. And fix the following paragraph."
```

   Keep in mind that since the running total needs to be accessed by several subroutines on this form, that variable needs to be declared as a form-level (i.e. global) variable, available to all of the subroutines on this form. If you use the variable name, runningTotal, it should be declared near the top of the form just below the class statement and above any subroutines. Recall that form-level variables must be declared here to be available to all of the subroutines on this form. Subroutine (i.e. local) variables are declared within each subroutine. Only declare variables as form-level if they need to be accessed by more than one subroutine.

When done, save and close project `VideoRentalStore_Part8`.

Part 7 (90/100): A successful `VideoRentalStore_Part7` program:

- allows user to press a soda button to indicate the sale of a soda item, instead of inputting the count of sodas via a text box
- produces an itemized receipt formatted EXACTLY as shown in the previous example
- must also have successfully completed Part 1

8. Use **File Explorer** to navigate to the folder containing your final version of your project `VideoRentalStore_Part7` in your lab folder. Copy and paste this project in the same folder, and then right-click on the copy to rename it as `VideoRentalStore_Part8`. Launch VS Express and use it to open the project `VideoRentalStore_Part8`.

   Complete your program by changing it so that every item is sold by pressing a button instead of inputting a count into a text box. Effectively, you will create a digital cash register where the buttons serve to "ring up" a customer. Your program should include buttons that correspond to each of the items for sale.

When done, save and close project `VideoRentalStore_Part8`.

Part 8 (100/100): A successful `VideoRentalStore_Part8` program:

- allows user to "ring up" a customer by pressing buttons indicating the the sale of an item
- produces an itemized receipt formatted EXACTLY as shown in the previous example
- must also have successfully completed Part 1

Submission Instructions

Your `M:\CS130\Labs\Lab03_YourLastName_YourFirstName` folder should contain your solutions to this and Tuesday's lab.

To submit your work, copy this folder and paste it to `N:/Handins/CS130/Lab03` PRIOR to the end of lab today. Late submissions won't be accepted and will receive a grade of 0 instead.