ENG TECH 1PR3 Programming Principles
String manipulation

Lab 05

Be sure to assign all input to appropriate variables. Do NOT use the control name directly in the calculations. Instead, assign the value of a control to a variable and use the variable in the calculations. Assign the result of the calculations to an appropriate form control. Ensure the forms are well-behaved. A form must contain an Exit button, sensible tabbing and alt-shortcuts where appropriate.

1. **Product Code Validation**: Create an application that will validate a product code. The user will type a product code, and the application will list the error(s) in the product code or will indicate that the code is valid. A valid product code conforms to the following rules:

    (a) At least 7 characters, and no more than 12 characters
    (b) The first character must be A, M or P, either upper case or lower case
    (c) All other characters must be numeric (0 through 9)

2. **Phone Number Validation**: Create an application that will validate a phone number. A valid phone number is of the form `(yxx) xxx-xxx`, where $0 \le x \le 9$ and $0 < y \le 9$. The user will type a phone number in a textbox control, and click the Validate button. If the phone number is valid or invalid, you application must display an appropriate message accordingly.

Submitting the Lab

In order for your Lab/Assignment to be eligible for grading you must submit the following:

- The code must contain your Full Name and Student ID in a comment block at the top of each form module.
- A .zip compressed file containing the entire VB.NET project to AVENUE. Use .zip compression only (no RAR, TAR etc). If there is more than one project, create a separate .zip file for each individual project. Be sure to add all project files and folders to the .zip file. If the compressed file is missing files/folders such that the project will not open or run, the lab/assignment will receive a grade of 0.
- A Word .doc (or .docx) file containing:
    - A cover page that includes your name, Student ID, and MAC ID
    - The form code (event and other subprocedures and functions) including programmer's block
    - Screen captures of the form showing sample input and output.

Upload the Word file and .zip file(s) **separately** to the appropriate assignment drop-box on AVENUE.

Labs and assignments will not be accepted for evaluation if any of the above items are omitted and will result in a grade of 0.