

VBA Assignment #2

Objectives: The proficient student will demonstrate understanding of programming by...

- ...writing subroutines and functions within VBA.
- ...combining prior knowledge, logic, and reasoning to develop an algorithm to solve a problem.

Directions:

- This is an **independent** assignment. You may **not** work with others. You may **not** look at anyone else's code or logic. You may use code that we developed in class as a group.
- Create a program that will encrypt a passage of text using a shift cipher.
 - Example: encrypting "dog" with a shift of 2 would result in "fqi".
 - Input: Via an input box or similar method.
 - Text to be encrypted.
 - Amount that the text will be shifted.
 - Output:
 - The output will be placed in Excel.
 - Each letter will be placed in a different cell. Place the output in a 20 column by n row array.
- Other things to include
 - Use a function to make all character lower case and remove all non-alphabetic characters.
 - Make a comment at the beginning of your code that you are the author.
 - Include many comments to document your code.
 - Make sure when encrypting something like "z" with a shift of 2 the result is "b".
 - Appropriately format your code (use of tab).
- Optional features
 - Output on a separate worksheet the total number of each letter of the encrypted text. So, there will be 26 cells with numbers.
 - Instead of having an input box for the plaintext, have a dialog box pop up so that will allow you to open a text file as the input.
- Turning in
 - In your H:\ drive, place your file in the "SRT 2 Turn In" folder
 - Filename: *YourLastName_YourFirstName_Subroutine.xlsm*
 - Place your file in the above mentioned folder, before class on _____.

Grading:

- Correctly turned in. *1 point*
- Correctly handles input. *5 points*
- Appropriate use of comments and formatting (use of tab) are in the code. *4 points*
- Has a function to remove formatting for the plaintext. *2 points*
- Switches between ASCII characters and ASCII number appropriately. *3 points*
- Implements the appropriate mathematics to shift the alphabet. *5 points*
- Outputs in a 20 x n array. *5 points*
- Properly encrypts the passage. *5 points*
- Additional credit is awarded according to the sophistication of the optional feature.