

ITEC 109: Problem Solving and Programming

Homework 1

>>>>>> Due Date: Friday, October 12th 10:00 PM via D2L <<<<<<

In doing this homework, remember to abide by the RU Honor Code.

Problem 1

4 points

After reading about how online information on facebook can get you in trouble, you and your friends decide to implement a simple cipher to obscure what is written on your walls.

The cipher you have decided to use consists of the following rules:

1. You must enter 3 words, one at a time.
2. Vowels are substituted using a specific substitution, listed below.
3. When the words are printed out, the order of the words is changed.
4. The first and the last words to be outputted are printed in upper case letters, and the middle word in lower case letters.

Vowel substitution:

In order to obscure the words entered, whenever a particular vowel is encountered, replace it with the digit in the second column.

A or a	5
E or e	9
I or i	2
O or o	1
U or u	3

Figure 1. Substitution table

Order of words:

The program should print out the second word first, the last word second, and first word last.

Examples:

Case 1 Input:

Hello

Howdy

Hi

Case 1 Output:

H1WDY

h2

H9LL1

Case 2 Input:

Check

This

Out

Case 2 Output:

TH2S

13t

CH9CK

Hints:

1. Read in the strings and print them out to make sure they are stored correctly.
2. Choose to either substitute vowels or do the upper / lower case operations on the words first.
3. Write the code to implement your choice from #2.
4. Output the words in the correct order.
5. Come see me in office hours if you are having trouble completing this.

After you are finished writing and testing your program, log into D2L and submit the python file under the homework 1 assignment. You can demo the homework the day after it is due, or it will be graded automatically. If you choose not to demo your homework you cannot contest the grade you receive.

Grading rubric

1 point – Compiles and asks for three words one after the other

1 point – Substitutes vowels correctly

1 point – Reorders words in the correct manner

1 point – Properly transforms words into upper and lower case correctly