

BACS2023 Object-Oriented Programming Practical #5

Question 1

Write a method that finds the number of occurrences of a specified character in a string using the following header:

public static int countLetter(String str, char ch)

Write a test program that prompts the user to enter a word and a letter of the alphabet. The program should then count and display the number of occurrences of the letter in the word. A sample dialog for the program is shown below:

**Enter a word: happy
Enter the letter you want to count: p
happy contains 2p**

Question 2

Write a program that prompts the user to enter a string and then displays the string modified as follows:

- A. Convert all the characters in the string to uppercase
- B. Replace all the vowels with the lowercase letter 'x'

Here is a sample run of the program:

**Enter a string: The quick brown fox jumps over the lazy dog
Modified string: THx QxxCK BRxWN FxX JxMPS xVxR THx LxZY DxG:**

Question 3

Write a program that accepts a person name as a command line argument. The program must correct the capitalization of the name, extract the surname and display 2 lines of text. The first letter of each word must be a capital letter while the rest of the word should be lower case letters. A sample run of the program is shown below:

C:\java Q5 pETER [RYAN] Robbin Mr
To: Peter Ryan Robbin
Wishing you a Merry Christmas, Mr Ryan.

C:\java Q5 JOHN [SMITH] Mr
To: John Smith
Wishing you a Merry Christmas, Mr Smith.

C:\java Q5 [Chee] ky li Ms
To: Chee Ky Li
Wishing you a Merry Christmas, Ms Chee.

[Adapted from e-Genting Programming Competition 2014]