Problem 1

Assume s is a string of lower case characters.

Write a program that counts up the number of vowels contained in the string s. Valid vowels are: 'a', 'e', 'i', 'o', and 'u'. For example, if s = 'azcbobobegghakl', your program should print:

Number of vowels: 5

Problem 2

Assume s is a string of lower case characters.

Write a program that prints the number of times the string 'bob' occurs in s. For example, if s = 'azcbobobegghakl', then your program should print

Number of times bob occurs is: 2

Problem 3

(Optional)

Assume s is a string of lower case characters.

Write a program that prints the longest substring of s in which the letters occur in alphabetical order. For example, if s = 'azcbobobegghakl', then your program should print

Longest substring in alphabetical order is: beggh

In the case of ties, print the first substring. For example, if s = 'abcbcd', then your program should print

Longest substring in alphabetical order is: abc

Note: This problem may be challenging. We encourage you to work smart. If you've spent more than a few hours on this problem, we suggest that you move on to a different part of the course. If you have time, come back to this problem after you've had a break and cleared your head.