

VIRUS DETECTION

When examining a file, a certain virus scanner looks for, among other things, occurrences of the word "virus" in the file. For example, the line

ab12\$virus23

appearing in some file would be marked as suspect, as it contains an occurrence of the string "virus". It is safer, however, to also look for what are called "scattered occurrences" of the string "virus". For example, the line

alirusv2vriiRc\$u5#us9

contains a "scattered occurrence" of the string "virus". Note that even in a "scattered occurrence" of the word the order of the letters remains the same as in the correctly spelled word "virus". Also note that capital letters may also be used.

Your task is to write a program that reads each line in a textfile called **virus.txt**, and outputs the line of text which contains either a direct occurrence of the string "virus", or a "scattered occurrence" of the string "virus", as described above.

Sample input data (virus.txt)

dsffdvi5wqdhdr
vvvvirus23e4
@#1vviwdscr32uu2ss
%%gfsd

Sample Output:

vvvvirus23e4 *** has an occurence of the string - virus ***
@#1vviwdscr32uu2ss *** has an occurence of the string - virus ***

Data Set 1 – Input

Itisveryinvigoratingtorunaroundtheskyscraper.
This line does not contain the v*i*r*u*s string. Or does it?
(^*%&V#@\$@i*)*)&R879078u*)*)*S
Nowisthetimeforallhackersandvvvviirruuusswriterstoceaseanddesist!
fajlcvjioryweoprhavkahyiesdjvoefhbg
piroutrgbsfoguofgnktnhnskhhkhkhkhbfskklhfeikbmadfgiyewt

Data Set 1 – Output (25 marks each)

Itisveryinvigoratingtorunaroundtheskyscraper. *** has an occurrence of the string - virus ***
This line does not contain the v*i*r*u*s string. Or does it? *** has an occurrence of the string - virus ***
(^*%&V#@\$@i*)*)&R879078u*)*)*S *** has an occurrence of the string - virus ***
Nowisthetimeforallhackersandvvvviirruuusswriterstoceaseanddesist! *** has an occurrence of the string - virus ***

Data Set 2 – Input

VIRUVIRVIVS
St.Jeandevirubeuf
(^*%&V#@\$@i*)*)&R879078u*)*)*S
ViRuViRs
fajlcvjioryweoprhavkahyiesdjvoefhbg
piroutrgbsfoguofgnktnhnskhhkhkhkhbfskklhfeikbmadfgiyewt

Data Set 2 – Output (35/35/30 marks)

VIRUVIRVIVS *** has an occurrence of the string - virus ***
(^*%&V#@\$@i*)*)&R879078u*)*)*S *** has an occurrence of the string - virus ***
ViRuViRs *** has an occurrence of the string - virus ***