

COMP 6651: Algorithm Design Techniques

Fall 2016: Programming Assignment 1

Due: October 2, 2016 at midnight

1 Problem

Your task is to write a program that can unscramble words.

2 Input

The input file contains two parts, separated by "—". The first part is a set of dictionary words which are on separate lines. In the second part of the file, is a set of *jumbled words* which may or may not be anagrams of the dictionary words. We reach the end of file when we come across "—" for the second time. The dictionary words and jumbled words are distinct and can only contain lowercase letters. Each word's length varies from 3 to 30 characters. The words are *not* sorted alphabetically.

3 Output

For each jumbled word in the second part of an input file, output all the possible anagrams present in the dictionary. Each possible anagram should be on a new line. If there is no anagram for a particular jumbled word you should mention "No Answer Found". After every set of anagrams for a particular jumbled word, print a line containing nineteen "-" characters as a separator.

4 Example

Sample Input

```
people
from
all
over
the
world
love
animals
cats
```

dogs
morf
form
lla
—

mfor
ghjk
eolv
lal
drlow
—

Sample Output

form
from
morf
—

No Answer Found
—

love
—

all
lla
—

world
—

5 Requirements

For the constraints given above, your program should run in 3 seconds. You must submit source code for a program written in C#/C++/Java on the Electronic Assignment System. Some test cases will be provided on the course website. You should verify if your program works on the test cases before submitting. You should read input from an input file and write the output in a different file. Your code will also be tested on some larger input files which are not given to you.

6 Programmer-on-duty

There will be a programmer-on-duty, Tejas Puranik, available to help you with the assignment on Wednesdays 6pm to 9pm in H841.