

# UCF “Practice” Local Contest — Aug 31, 2019

## Spell Checker

*filename:* spell

*Difficulty Level:* Medium

*Time Limit:* 3 seconds

This question is about automatic spelling correction. Studies have shown that the majority of typing errors are caused by (let's assume the dictionary contains the word “these”):

1. Omitting one letter, e.g., the input word is “thse”.
2. Adding an extra letter, e.g., the input word is “thesce”.
3. Mistyping one letter, e.g., the input word is “thise”.
4. Transposing two adjacent letters, e.g., the input word is “tehse”.

With the aid of a dictionary, word processing systems can often detect and automatically correct these kinds of spelling errors.

### The Problem:

You are to write a program that recognizes the four kinds of errors described above.

### The Input:

The first input line contains an integer  $d$  ( $1 \leq d \leq 100$ ) indicating the number of words in the dictionary. Each of the following  $d$  input lines contains a dictionary word. Assume these words start in column 1, contain at least 1 and at most 15 lowercase letters, and contain no other characters.

Following the dictionary words (i.e., the next input line), there is an integer  $n$  ( $n \geq 1$ ) indicating the number of words to be spell checked. Each of the following  $n$  input lines contains a word. These words also start in column 1, contain at least 1 and at most 15 lowercase letters, and contain no other characters.

### The Output:

Print each input word to be spell checked. Then, if the word is in the dictionary, print CORRECT. If the word is not in the dictionary, then find each word in the dictionary (in the order provided in the dictionary) for which the given input word might be a misspelling, and print the appropriate message from the following list:

ONE LETTER OMITTED FROM *word*  
ONE LETTER ADDED TO *word*  
ONE LETTER DIFFERENT FROM *word*  
TWO LETTERS TRANSPOSED IN *word*

where *word* is a dictionary word. If the input word is not CORRECT and none of the above messages apply, then print UNKNOWN.

Note that two or more of the above messages might be applicable to an input word, and that one message might apply for more than one dictionary word. Note, however, that for a given input word and given dictionary word, at most one of the above messages apply. For each input word, you are to process the dictionary words in the order provided in the input and print all messages that are valid.

Leave a blank line after the output for each input word. Follow the format illustrated in Sample Output.

### Sample Input

### Sample Output

7	ali
ali	CORRECT
thru	
tu	thu
funfunfun	ONE LETTER OMITTED FROM thru
the	ONE LETTER ADDED TO tu
tuh	ONE LETTER DIFFERENT FROM the
th	TWO LETTERS TRANSPOSED IN tuh
3	ONE LETTER ADDED TO th
ali	
thu	orooji
orooji	UNKNOWN