American Computer Science League

PROBLEM: A book cipher is a method of encoding and decoding a message where the sender and the receiver both use the same text. The sender's message is encoded by replacing each alphanumeric character in the message to be sent with the location of that character in the text using an "*s.w.c*" string representing the number of the sentence in the text (*s*), the number of the word in that sentence (*w*), and the number of the character in that word (*c*), all indexed starting with 1. The receiver decodes the encoded message by locating the characters in the text specified by each "*s.w.c*" string.

In this program, you will be given the text and the encoded message to be decoded. The text will use the following restrictions:

- A word contains only alphanumeric characters
- All words are separated by a single space or any non-alphanumeric character(s)
- Sentences are terminated with a period, question mark, or exclamation point and sentences are separated by exactly two spaces
- Any keyboard character can appear in the text

The encoded message will contain multiple "*s.w.c*" strings, each separated by a single space. Create a decoded message by finding each character in the text. If an "*s.w.c*" string doesn't refer to an alphanumeric character in the text, use a space in the decoded message.

EXAMPLE:
Input:
```
ACSL, or the American Computer Science League, is an international
computer science competition among more than 300 schools.  Originally
founded in 1978 as the Rhode Island Computer Science League, it then
became the New England Computer Science League.  With countrywide and
worldwide participants, it became the American Computer Science
League.  It has been in continuous existence since 1978.  Each yearly
competition consists of 4 regular-season contests.  All students at
each school may compete but the team score is the sum of the best 3
or 5 top scores.  Each contest consists of two parts: a written
section (called shorts) and a programming section. Written topics
tested include what does this program do, digital electronics,
Boolean algebra, computer numbering systems, recursive functions,
data structures (primarily dealing with heaps, binary search trees,
stacks, and queues), Lisp programming, regular expressions and Finite
State Automata, bit string flicking, graph theory, assembly language
programming, and prefix/infix/postfix notation.
```

```
3.5.1 8.21.9 1.10.8 2.7.2 7.15.6 5.4.3 4.10.3 6.18.1
```
Output:
```
python 3
```
Explanation:

The first encoded string "3.5.1" tells you to find the 3rd sentence, the 5th word in that sentence which is "participants", and then the first character in that word which is the lowercase letter 'p'. All others are done in a similar fashion. The string "4.10.3" is a space because there are only 8 words in the 4th sentence.

INPUT: Input a string representing the text to be used in the decoding and another string representing the encoded message to be decoded. The first string will be no more than 2000 characters and the second string will be no longer than 200 characters.

OUTPUT: Output the decoded message as a string of characters.

SAMPLE INPUT:

1. ACSL, or the American Computer Science League, is an international computer science competition among more than 300 schools. Originally founded in 1978 as the Rhode Island Computer Science League, it then became the New England Computer Science League. With countrywide and worldwide participants, it became the American Computer Science League. It has been in continuous existence since 1978. Each yearly competition consists of 4 regular-season contests. All students at each school may compete but the team score is the sum of the best 3 or 5 top scores. Each contest consists of two parts: a written section (called shorts) and a programming section. Written topics tested include what does this program do, digital electronics, Boolean algebra, computer numbering systems, recursive functions, data structures (primarily dealing with heaps, binary search trees, stacks, and queues), Lisp programming, regular expressions and Finite State Automata, bit string flicking, graph theory, assembly programming and prefix/postfix/infix notation.
   ```
   3.5.1 8.21.9 1.10.8 2.7.2 7.15.6 5.4.3 4.10.3 6.18.1
   ```

2. To be or not to be, that is the question - a quote by
   William Shakespeare. 2B or not 2B - a hexadecimal
   equivalent! How would you write it?
   2.1.2 1.3.1 1.4.2 2.7.7 1.12.5 2.5.1 2.3.1 1.16.2 1.14.5
   1.10.4 4.1.1 1.14.6 2.7.7 3.2.1 1.14.6 3.3.1 1.15.6 3.3.4
   1.1.1 1.15.10 2.7.3 1.10.3

3. Various programming languages are: Java, Python, Visual
   BASIC, C++, Lisp, C#, FORTRAN, R, SQL. Javascript is the
   language of the Internet! HTML stands for Hypertext Markup
   Language and is not really a coding language! There are
   over 300 languages. Which one do you like best?
   2.1.1 1.2.6 2.1.3 1.3.6 1.11.3 2.1.8 2.2.2 4.6.1 3.2.2
   4.1.2 2.6.3 5.3.3 3.13.1 3.13.6 3.6.3 3.12.6 3.5.5 1.5.4
   3.6.4 3.4.4 6.1.2 5.2.1 3.3.1 1.13.6 1.12.6 1.6.1 3.14.1
   1.9.1 1.14.1

4. Four score and seven years ago our fathers brought forth on
   this continent, a new nation, conceived in Liberty, and
   dedicated to the proposition that all men are created
   equal. Now we are engaged in a great civil war, testing
   whether that nation, or any nation so conceived and so
   dedicated, can long endure. We are met on a great
   battle-field of that war. We have come to dedicate a
   portion of that field, as a final resting place for those
   who here gave their lives that that nation might live. It
   is altogether fitting and proper that we should do this.
   This was written by Abraham Lincoln on 11/19/1863!
   2.1.1 1.2.3 8.6.3 6.9.1 1.31.1 1.8.7 5.6.1 1.13.7 1.15.2
   2.18.1 2.12.2 8.10.4 6.7.1 4.8.2 7.4.1 1.16.2 3.8.4 4.10.4
   3.12.1 1.21.7 2.5.1 6.5.7 1.13.7

5. There are 10 kinds of people in the world: those who know
   binary and those who don't! Thus learn binary.
   1.12.4 2.1.2 2.2.3 1.18.1 3.1.4 1.2.1 1.9.3 1.10.5 1.20.1
   1.13.6 1.16.3 2.1.3

SAMPLE OUTPUT:

```
1. python 3
2. Boolean is always True
3. Java is the language of AP CS
4. No 1 speech of all time
5. what are you
```