You saunter into the next pavilion to see a seemingly endless series of words and numbers being displayed on the walls. You read this explanation on the central table:

The last element in a series may be called the *ultimate* element. The *penultimate* element is next-to last. So, by extension, the *N-ultimate* element is the Nth element from the end.

Write a program to find the N-ultimate element in a series.

Input

Each line of input starts with an integer N, followed by a series of N or more words/numbers/strings, terminated with a $ symbol. The input ends with the number zero and a $ symbol.

```
4 PROXIMATE DISTANT EXTREME FARTHEST ULTIMATE $
6 999 0 426 123 1337 31415 1414 5 321 $
2 WHO WHAT WHEN WHERE WHY HOW $
3 RED GREEN BLUE YELLOW ORANGE PURPLE BLACK WHITE $
7 GARCIA WANG ZHANG LI SMITH MULLER GONZALEZ SMIRNOV NGUYEN HERNANDEZ $
0 $
```

Output

For each line of input the program must print the N-ultimate word.

```
DISTANT
123
WHY
PURPLE
LI
```