Mash

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	512 megabytes

Nikuniku designs a new programming language with only two kinds of instructions. Initially, we can consider the program as a queue P containing of n instructions. The program will need another queue of Q to run. Initially, you copy all instructions from P and add them to the back of the queue Q in order. Afterward, each time Q will pop the instruction in the front and run it. Now we give the format and usage of the two instructions:

- `echo c`: Output a lower-case character c;
- `cp m`: Copy the first m instructions from P and add them to the back of the queue Q in order. It is guaranteed $1 \leq m \leq n$ here.

Now you need to simulate the process after running k instructions from the queue. Specifically, please compute the string outputted by the program.

Input

The first line has two integers, n and k ($1 \leq n, k \leq 10^5$).

For the following n lines, each line contains an instruction in the format of s and t separated by one space. s will be either "`echo`" or "`cp`". If s is "`echo`", t will be a single lower-case character. Otherwise, t will be an integer between 1 and n.

Output

Output the result string in one line for the first k instructions. If the program terminates with less than k instructions run, output the result for all instructions.

Examples

standard input	standard output
2 20 echo a cp 2	aaaaaaaaaa
3 18 echo a cp 2 echo b	abaaaaaaaa
4 40 echo a cp 2 echo b cp 4	abaabaaabaaaabaaaaab
5 50 echo a cp 2 echo b cp 5 cp 5	abaababaaababaababaaaa