

Dictionary

You are asked to make a program to help find the location of a word in a dictionary using binary search. The given words are sorted alphabetically in ascending order.

Format Input

The first line of the input is contains an integer N, which denotes the amount of words that will be stored in the dictionary. Then, followed by an integer X, which denotes the number of words contained in one page. Then, followed by N lines of sorted words S. Finally, the last input is F, that represents the word the user wants to find in the dictionary.

Format Output

The output for this problem is R, which indicates which page of the dictionary the word F is found on. Don't forget to add a new line at the end.

• If F is not found in the dictionary, R = 0.

Constraints

- $1 \le N \le 100$
- 1 < X < N

Sample Input 1 (standard input)

10
3
am
encouraged
equally
expanded
got
inquiry
lots
passed
successful

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COMP6047 – Algorithm and Programming



	SCHOOL OF COMPUTER SCIENCE
tea	
expanded	
Sample Output 1 (standard output)	
2	
Sample Input 2 (standard input)	
10	
3	
am	
encouraged equally	
expanded	
got	
inquiry	
lots	
passed	
successful	
tea	
aet	
Sample Output 2 (standard output)	
,	
0	

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Dictionary

Anda diminta untuk membuat sebuah program untuk mencari lokasi kata pada sebuah dictionary dengan menggunakan metode binary search. Kata-kata yang diinput harus diurutkan secara alfabet dari terkecil hingga terbesar (A ke Z).

Format Input

Input pada baris pertama adalah sebuah angka N, yang menunjukan berapa kata yang akan disimpan ke dalam dictionary. Kemudian, diikuti dengan angka X, yang menunjukan berapa jumlah kata-kata yang terdapat pada satu halaman. Selanjutnya akan diisi dengan kata-kata S yang sudah diurutkan, sebanyak N kali. Lalu, diakhiri dengan kata F, yang mewakili kata yang ingin dicari di dalam dictionary.

Format Output

Output untuk soal ini ialah R, yang menunjukan di halaman mana kata F ditemukan dalam dictionary. Jangan lupa untuk menambahkan baris baru di akhir output.

• Jika kata F tidak ditemukan di dalam dictionary, nilai R=0.

Constraints

- $1 \le N \le 100$
- $1 \le X \le N$

Sample Input 1 (standard input)

```
10
3
am
encouraged
equally
expanded
got
inquiry
lots
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```

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	SCHOOL OF COMPUTER SCIENCE
successful	
tea	
expanded	
Sample Output 1 (standard output)	
2	
Sample Input 2 (standard input)	
Sample Input 2 (standard input)	
10	
3	
am	
encouraged	
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inquiry	
lots	
passed	
successful	
tea	
aet	
Sample Output 2 (standard output)	
0	

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