Problem 5: Finding Dessert

Time Limit: 1s
Memory Limit: 128MB

After eating all that food, you're felling like you need something sweet. After a bit of research, you are able to find a list of N dessert shops. Each shop has a name, A_i, and a sweetness level of S_i. You are then given Q queries, each containing a sweetness level X. For each query, you must output the name of the dessert shop with the closest sweetness level to X. If there is a tie, output the dessert shop that comes first in the input.

Constraints

$1 \leq N \leq 1\,000$
$1 \leq Q \leq 1\,000$
$1 \leq |A_i| \leq 30$
$1 \leq S_i \leq 1\,000\,000$
$1 \leq X \leq 1\,000\,000$

A_i will only contain lowercase letters.

Input Specification

The first line of input will contain the integers N and Q. The next N lines will contain the string A_i and the integer S_i each. The next Q lines will contain the integer X.

Output Specification

Output Q lines, the answer to each query.

Sample Input

```
5 3
ichi 100
ni 200
san 300
yon 400
go 500
150
220
550
```

Sample Output

```
ichi
ni
go
```

Explanation

There are 2 dessert shops with a sweetness level that is closest to 150, ichi and ni. Since ichi comes before ni we output ichi.