Fizz Coke

Time limit: 1.0s
Java: 1.2s

Memory limit: 64M
PyPy 2: 128M
PyPy 3: 128M

As a new CS graduate, your friend has memorized the Fizz Buzz problem and has his first interview today. Unfortunately for him, the interviewer thought that Fizz Buzz was too easy. He has proposed a new version, as shown:

> You are given a number M, the number of numbers you should check divisibility by, and N, the number you should go up to.
>
> The next M lines will contain a number d_i, and its associated word w_i.
>
> Counting from 1 to N, print the associated word(s) w_i in increasing order of d_i if the current number is divisible by any of the numbers d_i; otherwise, print the current number.

Your friend is panicking because he only memorized the 3 and 5 version. He is now sitting in the washroom, asking you for help. Can you help him?

Constraints

$1 \leq d_i \leq N$

It is guaranteed that all d_i will be unique.

All words w_i are between 1 and 10 characters in length, inclusive, and only contain uppercase and lowercase letters.

Subtask 1 [10%]

$M = 2$

$M \leq N \leq 100$

All d_i will be in increasing order.

Subtask 2 [20%]

$2 \leq M \leq 10$

$M \leq N \leq 100\,000$

Subtask 3 [70%]

$2 \leq M \leq 10\,000$

$M \leq N \leq 100\,000$

Input Specification

The first line contains two space-separated integers, M and N.

The next M lines contain d_i and w_i separated by a space.

Output Specification

Print the required sequence of words and numbers, with one item on each line.

Sample Input 1

```
2 10
2 Fizz
3 Coke
```

Sample Output 1

```
1
Fizz
Coke
Fizz
5
FizzCoke
7
Fizz
Coke
Fizz
```

Sample Input 2

```
3 7
2 Fizz
6 Pepsi
3 Coke
```

Sample Output 2

```
1
Fizz
Coke
Fizz
5
FizzCokePepsi
7
```