**The Librarian**

**Problem Description**

Each book in the library has a book code, which is a positive integer and can be used to quickly retrieve books. Each reader who borrows books has a requirement code, which is also a positive integer. If a book’s book code ends in the reader’s requirement code, then this book is what the reader needs. D has just become the librarian of the library. She knows the book codes of all the books in the library. She asks you to help her write a program that for every reader, find the book with the smallest code among the books he needs, and if there is no book he needs, print -1.

**Input**

The first line contains two positive integers, n and q, separated by a space, representing the number of books in the library and the number of readers.

The next n lines, each containing a positive integer, represent the book code of a book in the library.

The next q lines each contain two positive integers, separated by a space. The first positive integer represents the length of the reader’s requirement code, and the second positive integer represents the reader’s requirement code.

**Output**

There are q lines, each containing an integer. If the books required by the ith reader exist, find the one with the smallest book code among all the books the ith reader needs, and print that code on line i. Otherwise, print -1.

**Sample Input**

5 5

2123

1123

23

24

24

2 23

3 123

3 124

2 12

2 12

**Sample Output**

23

1123

-1

-1

-1

**Hint**

For 20% of the data, 1 ≤ n ≤ 2.

For another 20% of the data, q=1.

For another 20% of the data, the length of the requirement code is 1 for all readers.

For another 20% of the data, all the book codes are given in order from smallest to largest.

For 100% of the data, 1 ≤ n ≤ 1000, 1 ≤ q ≤ 1000, all book codes and requirement codes do not exceed 10,000,000.