

# Variable Sized Arrays



Consider an  $n$ -element array,  $a$ , where each index  $i$  in the array contains a reference to an array of  $k_i$  integers (where the value of  $k_i$  varies from array to array). See the *Explanation* section below for a diagram.

Given  $a$ , you must answer  $q$  queries. Each query is in the format  $i\ j$ , where  $i$  denotes an index in array  $a$  and  $j$  denotes an index in the array located at  $a[i]$ . For each query, find and print the value of element  $j$  in the array at location  $a[i]$  on a new line.

Click [here](#) to know more about how to create variable sized arrays in C++.

## Input Format

The first line contains two space-separated integers denoting the respective values of  $n$  (the number of variable-length arrays) and  $q$  (the number of queries).

Each line  $i$  of the  $n$  subsequent lines contains a space-separated sequence in the format  $k\ a[i]_0\ a[i]_1\ \dots\ a[i]_{k-1}$  describing the  $k$ -element array located at  $a[i]$ .

Each of the  $q$  subsequent lines contains two space-separated integers describing the respective values of  $i$  (an index in array  $a$ ) and  $j$  (an index in the array referenced by  $a[i]$ ) for a query.

## Constraints

- $1 \leq n \leq 10^5$
- $1 \leq q \leq 10^5$
- $1 \leq \forall k \leq 3 \cdot 10^5$
- $n \leq \sum k \leq 3 \cdot 10^5$
- $0 \leq \forall i < n$
- $0 \leq \forall j < k$
- All indices in this challenge are zero-based.
- All the given numbers are non negative and are not greater than  $10^6$

## Output Format

For each pair of  $i$  and  $j$  values (i.e., for each query), print a single integer denoting the element located at index  $j$  of the array referenced by  $a[i]$ . There should be a total of  $q$  lines of output.

## Sample Input

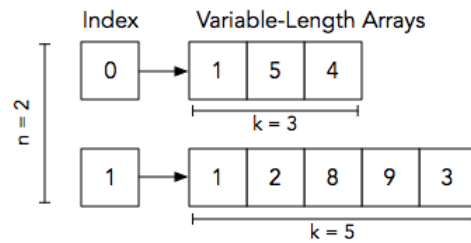
```
2 2
3 1 5 4
5 1 2 8 9 3
0 1
1 3
```

## Sample Output

```
5
9
```

## Explanation

The diagram below depicts our assembled Sample Input:



We perform the following  $q = 2$  queries:

1. Find the array located at index  $i = 0$ , which corresponds to  $a[0] = [1, 5, 4]$ . We must print the value at index  $j = 1$  of this array which, as you can see, is **5**.
2. Find the array located at index  $i = 1$ , which corresponds to  $a[1] = [1, 2, 8, 9, 3]$ . We must print the value at index  $j = 3$  of this array which, as you can see, is **9**.