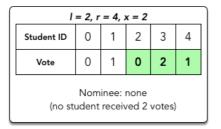
Nominating Group Leaders



HackerLand University's t teachers choose study group leaders according to the following rules:

- Each teacher teaches a class of n students who have unique ID numbers from 0 to n-1. Each student i in the class casts a single vote, v_i , to nominate student v_i to be a group leader.
- Each class has g study groups. Each group consists of students with IDs in the inclusive interval [l, r], and the student who gets exactly x votes from the group is nominated. If more than one student receives x votes, the teacher selects the student with the smallest ID.

For example, consider the following class with g=2 groups:



I = 1, r = 3, x = 1								
Student ID	0	1	2	3	4			
Vote	0	1	4	0	3			
Nominee: 0 (the smallest ID to receive 1 vote)								

Given the class details for t teachers, print the ID for each study group's nominee on a new line. If no student in some [l,r] interval receives exactly x votes, print -1 instead.

Input Format

The first line contains an integer, t, denoting the number of teachers and classes. The subsequent lines describe each class in the following format:

- 1. The first line contains an integer, n, denoting the number of students in the class.
- 2. The second line contains n space-separated integers describing the respective values of $v_0, v_1, \cdots, v_{n-1}$, where each v_i is the student ID that student i voted for.
- 3. The third line contains an integer, g, denoting the number of groups in the class.
- 4. Each of the g subsequent lines contains three space-separated integers describing the respective values of l, r, and x for a group.

Constraints

- 1 < t < 5
- $1 \le n, g \le 10^5$
- 0 < l < r < n 1
- $0 < v_i < n-1$
- 1 < x < n
- ullet The sum of n and the sum of g over all test cases won't exceed $3 imes 10^5$.

Scoring

- ullet For 20% of the maximum score, $1 \leq n,g \leq 2 imes 10^4$
- ullet For 100% of the maximum score, $1 \leq n,g \leq 10^5$

Output Format

For each [l,r] group, print the nominee ID (i.e., the student who receives exactly \boldsymbol{x} votes from the group); if more than one such student exists, choose the smallest ID. If no student receives \boldsymbol{x} votes, print -1 instead.

Sample Input 0

```
2
5
01403
2
041
242
5
43000
2
011
243
```

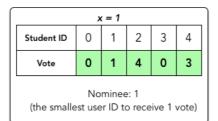
Sample Output 0

```
1
-1
3
0
```

Explanation 0

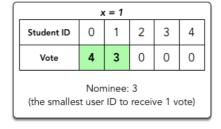
We want to find the group leader nominees for the groups in t=2 classes:

1. The diagram below depicts the votes for the first class' g=2 groups:



Γ.	x = 2							
	Student ID	0	1	2	3	4		
	Vote	0	1	4	0	3		
	Nominee: none (no student received 2 votes)							

- 1. Student IDs ${\bf 1}, {\bf 3}$, and ${\bf 4}$ receive ${\bf x}={\bf 1}$ vote from students in the inclusive range between ${\bf l}={\bf 0}$ and ${\bf r}={\bf 4}$, so we print the smallest of these user IDs, ${\bf 1}$, on a new line.
- 2. No student receives x=2 votes from the students in the inclusive range betwen l=2 and r=4, so we print -1 on a new line.
- 2. The diagram below depicts the votes for the second class' g=2 groups:



x = 3						
Student ID	0	1	2	3	4	
Vote	4	3	0	0	0	
Nominee: 0 (the smallest user ID to receive 3 votes)						

- 1. Student IDs $\bf 3$ and $\bf 4$ receive x=1 vote from students in the inclusive range between l=0 and r=1, so we print the smallest of these user IDs, $\bf 3$, on a new line.
- 2. Student ID 0 receives x=3 votes from students in the inclusive range between l=2 and r=4 , so we print 0 on a new line.