

The bored tourist

Assignment 2

Computer Programming

Due date: 12 October, 2018

Problem Statement: Tourist always comes first in whatever contest he takes part in. He got so bored by that, he decided to come up with his own programming contests which could be challenging for him also. He gathered N programmers and decided to take part in Q contests. For each contest, he gathers some programmers and decided to make teams of 2 programmers whose sum of rating is equal to his rating for that contest. A programmer can be in multiple teams. Each match between tourist and pair of programmers is called as a showdown. As tourist is busy, help him to find how many showdowns he will have in each of the contests. Once a showdown is over, tourist will take on a different pair.

Input

First line: N - number of elements and Q - number of contests.

Second line contains N integers denoting the rating of programmers.

Next Q lines consist of three integers - l , r and x . Tourist includes programmers from index l to r in the contest and has rating x for that contest only. (He can have different ratings for different contests)

Note: There won't be more than 10^3 programmers with the same rating.

Output

Q lines where each line contains the total number of showdowns tourist can have in that contest.

Constraints

$$1 \leq N \leq 10^6$$

$$1 \leq Q \leq 10^4$$

$$1 \leq \text{Rating of each programmer} \leq 10^3$$

$$1 \leq l \leq r \leq N$$

$$1 \leq x \leq 2 * 10^3$$

There won't be more than 10^3 programmers with the same rating.

Time Limit: 1 sec

Memory Limit: 256 MB

Sample Test Case

Input	Output
5 3	3
1 2 3 2 1	1
1 5 4	2
1 2 3	
1 4 3	

Explanation

For the first contest, tourist considers all the programmers and tries to find the pair of programmers with sum of rating equal to his rating i.e. 4.

Possible pairs:

1st and 3rd programmer (1,3),

2nd and 4th programmer (2,2),

3rd and 5th programmer (3,1),