

Majority Party

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There are n houses in a locality. Every house gives a vote to a single party (say, AAP). (Party is denoted by a number). You are given queries $(l$ to $r)$ and asked to find if there exists a majority party in houses numbered from l to r .

Note: A party is considered in majority if there exists a subarray of size $> (\text{size of range})/2$ in which all votes are of the same party. (In case of odd, consider floor function).

Input

First line contains number n , the number of houses in the locality.

Second line contains the n numbers denoting the party number of the vote of the i th house.

Third line contains M which is the number of queries.

M lines are given of the form l r .

Output

Output M lines containing the answer for each query in a single line.

Answer of each query is of form "yes" or "no".

Constraints

$$n \leq 10^5$$

$$a[i] \leq 10^8$$

$$m \leq 10^5$$

$$1 \leq l \leq r \leq n$$

Sample Input

```
5
2 2 2 3 3
2
2 5
2 4
```

Sample Output

no
yes