Problem 2 - Vacations

Vacations Inc offers packaged tours to various destinations in the world. Every year, it picks one destination - so in some year tourists might get to visit the moon, while in another year they might be stuck visiting Dommasandra. Vacations Inc has released the list of destinations for the next N years, and is offering discounts for tourists buying all packaged tours in any period of consecutive years. You are considering various possibilities of buying packages from year i to year j inclusive, and for each possibility, you would like to know the number of distinct destinations offered between year i and year j.

Input format

- Line 1 : N, the number of years. Years are numbered from 1 to N.
- Line 2 : N space-separated integers, the destinations from year 1 to year N.
- Line 3 : Q, the number of queries that follow.
- Line 4 to Line $Q + 3$: Each line contains two space-separated integers, i and j with $1 \leq i \leq j \leq N$.

Output format

Q lines of output, each with an answer to the query, in the order in which the queries appear in the input - the answer to the query i j is the number of distinct destinations offered between year i and year j inclusive.

Test data

Each destination is an integer between 1 and 10^6 inclusive.

- Subtask 1 (20 marks) : $1 \leq N, Q \leq 1000$.
- Subtask 2 (80 marks) : $1 \leq Q \leq 200000$ and $1 \leq N \leq 30000$.

Sample input

```
5
1 1 2 1 3
3
1 5
2 4
3 5
```

Sample output

```
3
2
3
```

Limits

- *Memory limit* : 128 MB
- *Time limit* : 4s