## D-query

## English

## Vietnamese

Given a sequence of $n$ numbers $a_{1}, a_{2}, \ldots, a_{n}$ and a number of d-queries. A d-query is a pair ( $\mathrm{i}, \mathrm{j}$ ) $(1 \leq i \leq j \leq n)$. For each d-query ( $i, j$ ), you have to return the number of distinct elements in the subsequence $a_{i}, a_{i+1}, \ldots, a_{j}$.

## Input

- Line 1: $\mathrm{n}(1 \leq \mathrm{n} \leq 30000)$.
- Line 2: $n$ numbers $a_{1}, a_{2}, \ldots, a_{n}\left(1 \leq a_{i} \leq 10^{6}\right)$.
- Line 3: $\mathrm{q}(1 \leq \mathrm{q} \leq 200000)$, the number of d-queries.
- In the next q lines, each line contains 2 numbers $i, j$ representing a d-query $(1 \leq i \leq j \leq n)$.


## Output

- For each d-query ( $\mathrm{i}, \mathrm{j}$ ), print the number of distinct elements in the subsequence $\mathrm{a}_{\mathrm{i}}, \mathrm{a}_{\mathrm{i}+1}, \ldots$, $a_{j}$ in a single line.


## Example

## Input

5
11213
3
15
24
35

## Output

3
2
3

