

# Problem 3

## Course Prerequisites

*Time limit: 15 seconds*

As a student at a university, you want to choose a set of courses for the next semester. Each course may or may not have a set of prerequisite courses. Therefore, before making your final decision, you want to ensure that you have satisfied all the prerequisites required for the courses you intend to take.

For instance, suppose a student has successfully completed courses `courseA`, `courseB`, `courseC`, `courseE`, `courseG`, and `courseH`. The course she wishes to enroll in has specific prerequisites, namely `courseA`, `courseC`, and `courseG`. In this scenario, the student meets the prerequisites because she has already completed all of them - `courseA`, `courseC`, and `courseG`.

## Input:

The first line of the input contains a single integer  $m$ , the size of set A ( $1 \leq m \leq 10,000,000$ ). The second line of input contains the courses of set A separated by spaces. The third line of the input contains a single integer  $n$ , the size of set B ( $1 \leq n \leq 10,000,000$ ). The fourth line of input contains the courses of set B separated by spaces.

Note: All courses are strings.

## Output:

Output 0 if prerequisites are not satisfied, else 1 if prerequisites are satisfied.

Sample Input 1	Sample Output 1
4 CourseA CourseB CourseC CourseD CourseE 2 CourseC CourseD	1
Sample Input 2	Sample Output 2
5 CourseA CourseB CourseD CourseE CourseO CourseI 4 CourseD CourseE CourseO CourseG	0