World Environment Day in same country

June 5 is the World Environment Day. A specialty of this day is that each year a different country is the home of the events of this Day. We know the following about the events: the year, the place and the motto. There were years without a motto – and sometimes even the place of the event went unrecorded. Our data are messed up (not in chronological order), but one year appears only once in the list.

Write a program that gives how many times it happened that a country was the home of the events more than once.

Input

The input consists of 3 parts. The first part contains the list of countries: first, the cound of countries ($1 \leq N \leq 20$), then the name of the countries (can be more than one word, eg. "United Kingdom") in the next N lines. The second part contains the count of events ($1 \leq E \leq 40$); then come the description of the events. Each event is given in 3 lines: The first line is the year ($1900 \leq Y \leq 2010$), and the second line is the ID of the country from the first part ($1 \leq ID \leq N$). If we do not know the country, there is 0 in the second line. The third line is a sentence, but it can be empty if there was no motto. The last part contains only one line: two years ($1900 \leq year_1 \leq year_2 \leq 2010$).

Output

The first line of the *standard output* should contain the count of countries in which the event was held more than once (anonymous countries do not count).

Example

Input	Output
6	0
Algeria	
Thailand	
Norway	
United Kingdom	
Russia	
Kenya	
5	
1988	
2	
1986	
0	
2006	
1	
Deserts and …	
1994	
4	

```
2007
3
Melting ice
2007 2007
```

Limits

Time limit: 0.1 second

Memory limit: 32 MB

Evaluation: In 40% of tests, the count of data is ≤ 20