



Problem: Week 8 - Citizen Data Analysis

Description

CITIZEN

Given a DataBase about citizen, perform queries over this DataBase.

Input

The input consists of two blocks: the first block is the DataBase and the second block is the list of queries. Two blocks are separated by a line containing a character *.

1. The first block (DataBase about citizen) consists of lines (number of lines can be upto 100000), each line is the information about a person and is under the format:

```
<code> <date_of_birth> <father_code> <mother_code> <is_alive>  
<region_code>
```

in which:

- `<code>`: the code of the person which is a string of length 7
- `<date_of_birth>`: the date of birth of the person and has the format YYYY-MM-DD (for example 1980-02-23), `<date_of_birth>` is before 3000-12-31
- `<father_code>` and `<mother_code>` is the code of father and mother: they are also strings of length 7. If the code is 0000000, then the current person does not have information about his father or mother
- `<is_alive>`: a character with two values: 'Y' means that the person is still alive, and 'N' means that the current person is died.

- `<region_code>`: the code of the region where the person lives

2. The second block is the list of queries (number of queries can be upto 100000) over the DataBase which consists of following commands:

- `NUMBER_PEOPLE`: return the number of people (number of lines of the DataBase)
- `NUMBER_PEOPLE_BORN_AT <date>`: return the number of people having date-of-birth is equal to `<date>`
- `MOST_ALIVE_ANCESTOR <code>`: find the most ancestor (farthest in term of generation distance) of the given person `<code>`. Return the generation distance between the ancestor found and the given person
- `NUMBER_PEOPLE_BORN_BETWEEN <from_date> <to_date>`: compute the number of people having date-of-birth between `<from_date>` and `<to_date>` (`<from_date>` and `<to_date>` are under the form YYYY-MM-DD, `<to_date>` is before 3000-12-31)
- `MAX_UNRELATED_PEOPLE`: find a subset of people in which two any people of the subset do not have father/mother-children and the size of the subset is maximal. Return the size of the subset found.

The second block is terminated by a line containing `***`.

Output

- Each line presents the result of the corresponding query (described above).

Example

Input

```
0000001 1920-08-10 0000000 0000000 Y 00002
0000002 1920-11-03 0000000 0000000 Y 00003
0000003 1948-02-13 0000001 0000002 Y 00005
0000004 1946-01-16 0000001 0000002 Y 00005
```

0000005 1920-11-27 0000000 0000000 Y 00005

0000006 1920-02-29 0000000 0000000 Y 00004

0000007 1948-07-18 0000005 0000006 Y 00005

0000008 1948-07-18 0000005 0000006 Y 00002

0000009 1920-03-09 0000000 0000000 Y 00005

0000010 1920-10-16 0000000 0000000 Y 00005

*

NUMBER_PEOPLE

NUMBER_PEOPLE_BORN_AT 1919-12-10

NUMBER_PEOPLE_BORN_AT 1948-07-18

MAX_UNRELATED_PEOPLE

MOST_ALIVE_ANCESTOR 0000008

MOST_ALIVE_ANCESTOR 0000001

NUMBER_PEOPLE_BORN_BETWEEN 1900-12-19 1928-11-16

NUMBER_PEOPLE_BORN_BETWEEN 1944-08-13 1977-12-15

NUMBER_PEOPLE_BORN_BETWEEN 1987-01-24 1988-06-03

Output

10

0

2

6

1

0

6

4

0

Sample TestCase

C 17



1 Write your Source code here

Source code

C 17



```
1 //C
2 #include <stdio.h>
```

```
1 #include <stdio.h>
2
3
4 int main()
5 {
6
7 }
```

SUBMIT CODE

Currently, this contest problem is not open for submissions

Or






C 17 ▼

Select file

SUBMIT

🔍 Tìm kiếm



ID	Bài tập	Trạng thái	Message	Điểm
80531e	CITIZEN_DATA_ANALYZE	Accept		250
4edac1	CITIZEN_DATA_ANALYZE	Failed		0
57ac25	CITIZEN_DATA_ANALYZE	Failed		0
0a60fa	CITIZEN_DATA_ANALYZE	Failed		0
1a27f9	CITIZEN_DATA_ANALYZE	Failed		0
<div>5 hàng ▾ < < 1-5 của 7 > > </div>				