MARATONA DE PROGRAMAÇÃO
InterFatecs

Problema A

# Region

*Arquivo fonte:* region.{ c | cpp | java | py }
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Donald Harris is an american entrepreneur beginning business in Brazil. He is famous due to his chain of stores that provides in-person service at several addresses and makes home deliveries regardless of the purchase value.

The only restriction on his delivery system is that the address must be within a region close to one of the physical stores in his network. Upon his arrival in Brazil, he learned about the CEP code system used by the brazilian company Correios and determined that a survey be carried out to determine which CEP codes would be considered for each store.

Now that work is done and he needs a computer program that can determine whether a customer's address is within a service region or not, and you, lucky guy, have been hired to develop it.

## Input

The input consists of a test case, the first line of which contains an integer QR $(0 < QR \leq 100)$ that defines the number of regions served by a store. Next, there are QR lines containing two valid CEP codes according to the Brazilian standard. This section is not supposed to be ordered in any way.

The next line contains an integer Q $(0 < QR \leq 1000)$ that represents the number of delivery requests, followed by Q lines containing the customer's CEP code, according to the Brazilian standard. This section is also not ordered.

It is ensured that all the CEP codes in the input are in a valid format.

## Output

The program should provide information for each customer's CEP code about whether or not they are served by the delivery system.

First, the output should contain, in ascending order, the list of customer CEP codes served by the delivery system in a format consisting of the CEP code number followed by the phrase *is served by our delivery system* (in lowercase letters).

Then, the unserved CEP codes should be listed, in ascending order, in a similar format with the CEP code followed by the phrase *is not served by our delivery system* (in lowercase letters).

Don't forget the newline character at the end of each line.

**Exemplo de Entrada 1**

```
1
15510-000 15512-000
5
15509-000
15510-000
15511-000
15512-000
15513-000
```

**Exemplo de Saída 1**

```
15510-000 is served by our delivery system
15511-000 is served by our delivery system
15512-000 is served by our delivery system
15509-000 is not served by our delivery system
15513-000 is not served by our delivery system
```

**Exemplo de Entrada 2**

```
3
07503-000 07550-900
07840-500 07850-000
08200-020 08240-500
10
07520-010
07395-550
08236-200
07835-060
07921-370
12410-030
07526-490
08209-000
08541-210
07550-900
```

**Exemplo de Saída 2**

```
07520-010 is served by our delivery system
07526-490 is served by our delivery system
07550-900 is served by our delivery system
08209-000 is served by our delivery system
08236-200 is served by our delivery system
07395-550 is not served by our delivery system
07835-060 is not served by our delivery system
07921-370 is not served by our delivery system
08541-210 is not served by our delivery system
12410-030 is not served by our delivery system
```