Day 8: Dictionaries and Maps

Objective

Today, we're learning about Key-Value pair mappings using a *Map* or *Dictionary* data structure. Check out the Tutorial tab for learning materials and an instructional video!

Task

Given N names and phone numbers, assemble a phone book that maps friends' names to their respective phone numbers. You will then be given an unknown number of names to query your phone book for; for each $name$ queried, print the associated entry from your phone book (in the form `name=phoneNumber`) or `Not found` if there is no entry for $name$.

Note: Your phone book should be a Dictionary/Map/HashMap data structure.

Input Format

The first line contains an integer, N, denoting the number of entries in the phone book.
Each of the N subsequent lines describes an entry in the form of 2 space-separated values on a single line. The first value is a friend's $name$, and the second value is an 8-digit $phone\ number$.

After the N lines of phone book entries, there are an unknown number of lines of queries. Each line (query) contains a $name$ to look up, and you must continue reading lines until there is no more input.

Note: Names consist of lowercase English letters and are *first names* only.

Constraints

- $1 \leq N \leq 10^5$
- $1 \leq queries \leq 10^5$

Output Format

On a new line for each query, print `Not found` if the name has no corresponding entry in the phone book; otherwise, print the full $name$ and $phoneNumber$ in the format `name=phoneNumber`.

Sample Input

```
3
sam 99912222
tom 11122222
harry 12299933
sam
edward
harry
```

Sample Output

```
sam=99912222
Not found
harry=12299933
```

Explanation

$N = 3$

We add the N subsequent *(Key,Value)* pairs to our map so it looks like this:

$$phoneBook = \{(sam, 99912222), (tom, 11122222), (harry, 12299933)\}$$

We then process each query and print **Key=Value** if the queried Key is found in the map, or **Not found** otherwise.

Query 0: **sam**
Sam is one of the keys in our dictionary, so we print **sam=99912222**.

Query 1: **edward**
Edward is not one of the keys in our dictionary, so we print **Not found**.

Query 2: **harry**
Harry is one of the keys in our dictionary, so we print **harry=12299933**.