

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 on a new line in the form `name=phoneNumber`; if an entry for *name* is not found, print `Not found` instead.

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 alphabetic letters and are first names only.

Constraints

- $1 \leq n \leq 10^5$
- $1 \leq \text{queries} \leq 10^5$

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

We add the following $n = 3$ (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; otherwise, we print Not found.

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.