

# 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`.