Day 8: Dictionaries and Maps

by Shafaet

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

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

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`.

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Current Buffer (saved locally, editable) Java 7

```
1  //Complete this code or write your own from scratch
2  import java.util.*;
3  import java.io.*;
4
5  class Solution{
6      public static void main(String []argh){
7          Scanner in = new Scanner(System.in);
8          int n = in.nextInt();
9          for(int i = 0; i < n; i++){
10             String name = in.next();
11             int phone = in.nextInt();
12             // Write code here
13         }
14         while(in.hasNext()){
15             String s = in.next();
16             // Write code here
17         }
18         in.close();
```

```
    }
}

```

Line: 1 Col: 1

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