Day 8: Dictionaries and Maps ☆

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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

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

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`.
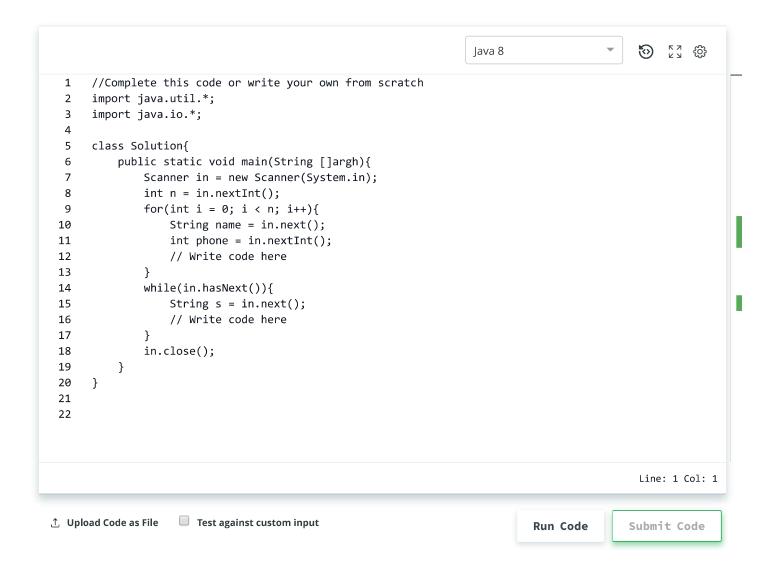
Query 0: `sam`

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`.

Java 8

```
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();
19       }
20   }
21
22
```

Line: 1 Col: 1

⬆ Upload Code as File   ☐ Test against custom input   **Run Code**   **Submit Code**

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