**Java Hashset**

<https://www.hackerrank.com/challenges/java-hashset/problem>

In computer science, a set is an abstract data type that can store certain values, without any particular order, and no repeated values (Wikipedia). {1,2,3} is an example of a set, but {1,2,2} is not a set. Today you will learn how to use sets in java by solving this problem.

You are given n pairs of strings. Two pairs (a,b) and (c,d) are identical if a = c and b = d. That also implies (a,b) is not same as (b,a). After taking each pair as input, you need to print number of unique pairs you currently have.

Complete the code in the editor to solve this problem.

**Input Format**

In the first line, there will be an integer T denoting number of pairs. Each of the next T lines will contain two strings separated by a single space.

**Constraints:**

* 1 <= T <= 100000
* Length of each string is atmost 5 and will consist lower case letters only.

**Output Format**

Print T lines. In the ith line, print number of unique pairs you have after taking ith pair as input.

**Sample Input**

5

john tom

john mary

john tom

mary anna

mary anna

**Sample Output**

1

2

2

3

3

**Explanation**

* After taking the first input, you have only one pair: (john,tom)
* After taking the second input, you have two pairs: (john, tom) and (john, mary)
* After taking the third input, you still have two unique pairs.
* After taking the fourth input, you have three unique pairs: (john,tom), (john, mary) and (mary, anna)
* After taking the fifth input, you still have three unique pairs.