Featured Products

An e-commerce site tracks the purchases made each day. The product that is purchased the most one day is the featured product for the following day. If there is a tie for the product purchased most frequently, those product names are ordered alphabetically ascending and the last name in the list is chosen.

**Example**

products *= [‘redShirt’, ‘greenPants’, ‘redShirt’, ‘orangeShoes’, ‘blackPants’, ‘blackPants’]*

* *greenPants* and *orangeShoes* were purchased once.
* *redShirt* and *blackPants* were each purchased *2* times on the given day.
* After ordering the products alphabetically ascending, *redShirt* is the last product listed.
* *redShirt*is the featured product for the following day.

**Function Description**

Complete the function *featuredProduct* in the editor below.

*featuredProduct* has the following parameter(s):

    string *products[n]:*  an array of strings where each represents a purchased product

Returns:

    string: the name of the featured product

**Constraints**

* *1 ≤ n ≤ 104*

Input Format For Custom Testing

Input from stdin will be processed as follows and passed to the function:

The first line contains an integer *n*, the number of elements in *products*.

Each of the *n* subsequent lines contains a string that describes *products[i]* where *0 ≤ i < n*.

Sample Case 0

**Sample Input**

STDIN     Function

-----     -----

10 →  products[] size n = 10

yellowShirt →  products = ['yellowShirt', 'redHat', 'blackShirt', 'bluePants', 'redHat',\

redHat                       'pinkHat', 'blackShirt', 'yellowShirt', 'greenPants', 'greenPants']

blackShirt

bluePants

redHat

pinkHat

blackShirt

yellowShirt

greenPants

greenPants

**Sample Output**

yellowShirt

**Explanation**

* *pinkHat*and*yellowPants*were each purchased*1*time*.*
* *yellowShirt, blackShirt, redHat,*and*greenPants*were each purchased*2*times*.*
* *yellowShirt* is the last product listed after ordering the products alphabetically ascending: *blackShirt, greenPants, redHat, yellowShirt*
* *yellowShirt is the featured product.*

Sample Case 1

**Sample Input**

STDIN     Function

-----     -----

8 →  products[] size n = 8

greenShirt →  products = ['greenShirt', 'bluePants', 'redShirt', 'blackShoes', 'redPants', 'redPants', 'whiteShirt', 'redShirt']

bluePants

redShirt

blackShoes

redPants

redPants

whiteShirt

redShirt

**Sample Output**

redShirt

**Explanation**

* *greenShirt, bluePants, blackShoes,*and*whiteShirt*were each purchased*1*time*.*
* *redShirt*and*redPants*were each purchased*2*times*.*
* *redShirt* is the last product listed after ordering the products alphabetically ascending: *redPants, redShirt.*
* *redShirt* is the featured product for the following day.

import java.io.\*;

import java.math.\*;

import java.security.\*;

import java.text.\*;

import java.util.\*;

import java.util.concurrent.\*;

import java.util.function.\*;

import java.util.regex.\*;

import java.util.stream.\*;

import static java.util.stream.Collectors.joining;

import static java.util.stream.Collectors.toList;

class Result {

/\*

\* Complete the 'featuredProduct' function below.

\*

\* The function is expected to return a STRING.

\* The function accepts STRING\_ARRAY products as parameter.

\*/

public static String featuredProduct(List<String> products) {

// Write your code here

}

}

public class Solution {

public static void main(String[] args) throws IOException {

BufferedReader bufferedReader = new BufferedReader(new InputStreamReader(System.in));

BufferedWriter bufferedWriter = new BufferedWriter(new FileWriter(System.getenv("OUTPUT\_PATH")));

int productsCount = Integer.parseInt(bufferedReader.readLine().trim());

List<String> products = IntStream.range(0, productsCount).mapToObj(i -> {

try {

return bufferedReader.readLine();

} catch (IOException ex) {

throw new RuntimeException(ex);

}

})

.collect(toList());

String result = Result.featuredProduct(products);

bufferedWriter.write(result);

bufferedWriter.newLine();

bufferedReader.close();

bufferedWriter.close();

}

}

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