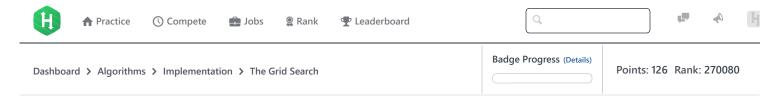
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# The Grid Search



Problem Submissions Leaderboard Discussions Editorial €

Given a 2D array of digits, try to find the occurrence of a given 2D pattern of digits. For example, consider the following 2D matrix:

Assume we need to look for the following 2D pattern:

876543 111111 111111

If we scan through the original array, we observe that the 2D pattern begins at the second row and the third column of the larger grid (the 8 in the second row and third column of the larger grid is the top-left corner of the pattern we are searching for).

So, a 2D pattern of P digits is said to be present in a larger grid G, if the latter contains a contiguous, rectangular 2D grid of digits matching with the pattern P, similar to the example shown above.

## **Input Format**

The first line contains an integer, T, which is the number of test cases. T test cases follow, each having a structure as described below: The first line contains two space-separated integers, R and C, indicating the number of rows and columns in the grid G, respectively. This is followed by R lines, each with a string of C digits, which represent the grid G.

The following line contains two space-separated integers, r and c, indicating the number of rows and columns in the pattern grid P. This is followed by r lines, each with a string of c digits, which represent the pattern P.

#### Constraints

 $1 \le T \le 5$   $1 \le R, r, C, c \le 1000$   $1 \le r \le R$  $1 \le c \le C$ 

#### **Output Format**

Display 'YES' or 'NO', depending on whether (or not) you find that the larger grid G contains the rectangular pattern P. The evaluation will be case sensitive.

# Sample Input

## **Sample Output**

YES NO

# **Explanation**

The first test in the input file is:

As one may see, the given 2D grid is indeed present in the larger grid, as marked in bold below.

The second test in the input file is:

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```
474386082879648
522356951189169
887109450487496
252802633388782
502771484966748
075975207693780
511799789562806
404007454272504
549043809916080
962410809534811
445893523733475
768705303214174
650629270887160
2 2
99
99
```

The search pattern is:

99 99

This cannot be found in the larger grid.

f y in Submissions:31127 Max Score:30 Difficulty: Medium Rate This Challenge: ☆☆☆☆☆

```
Current Buffer (saved locally, editable) &
                                                                                            Java 7
 1 ▼ import java.io.*;
   import java.util.*;
   import java.text.*;
 3
   import java.math.*;
   import java.util.regex.*;
 7 ▼ public class Solution {
 8
 9 ▼
        public static void main(String[] args) {
            Scanner in = new Scanner(System.in);
10
             int t = in.nextInt();
11
12 🔻
             for(int a0 = 0; a0 < t; a0++){
                 int R = in.nextInt();
13
                 int C = in.nextInt();
14
15 ▼
                 String[] G = new String[R];
16 ▼
                 for(int G_i=0; G_i < R; G_i++){</pre>
17 ▼
                     G[G_i] = in.next();
18
19
                 int r = in.nextInt();
                 int c = in.nextInt();
20
21 🔻
                 String[] P = new String[r];
22 ▼
                 for(int P_i=0; P_i < r; P_i++){</pre>
23 ▼
                     P[P_i] = in.next();
24
25
            }
26
        }
27
    }
28
                                                                                                                      Line: 1 Col: 1
```

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<u>♣ Upload Code as File</u> Test against custom input

Run Code

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