



# Drone Navigation

Problem

Submissions

Leaderboard

In a farm land, drones are currently being used to monitor crop health, assist in planning irrigation schedules, apply fertilizers, estimate yield data, carry out soil health scans, and provide valuable data for weather analysis. Generally, they navigate through farmland while mapping and inspecting areas in the farmland and taking high resolution imagery. But, currently, its navigation system is corrupted and needs to be fixed in order to navigate from a starting point to a specific destination point in the farmland. You can assume that a farmland can be represented as a 2-D plane. The drone will navigate from one point to another using a list of orders which can be represented as a string  $S$ . That string  $S$  will consist of 4 directions for navigation  $R$ (Right),  $L$ (Left),  $U$ (Up) and  $D$ (Down). The system reads  $S$  from left to right. Suppose the drone is at a point  $(x, y)$  and current order is  $S_i$ :

- if  $S_i = U$ , drone moves to  $(x, y + 1)$ ;
- if  $S_i = D$ , drone moves to  $(x, y - 1)$ ;
- if  $S_i = R$ , drone moves to  $(x + 1, y)$ ;
- if  $S_i = L$ , drone moves to  $(x - 1, y)$ .

Since string  $S$  could be corrupted, there is a possibility that the drone won't reach the destination point in the end using the orders represented by that string  $S$ . Fortunately, the navigation system of the drone can delete some orders from  $S$  but it can't change their positions in  $S$ . Can the drone delete several orders (possibly, zero) from  $S$  in such a way, that it can reach the specified destination point after the system processes all orders? You can also assume that the starting point of the drone is  $(0, 0)$ .

## Input Format

- The first line contains a single integer  $T$  which denotes the number of test cases.
- Each test case consists of two lines. The first line in each test case contains two integers  $P_x$  and  $P_y$  - the coordinates of destination points in the farmland.
- The second line contains the string  $S$  which denotes the list of orders given to drone.

## Constraints

- $1 \leq T \leq 1000$
- $-10^5 \leq P_x, P_y \leq 10^5$ ;  $(P_x, P_y) \neq (0, 0)$
- $1 \leq |s| \leq 10^5$ ;  $|s|$  is the length of string
- It is guaranteed that the sum of  $|s|$  over all test cases does not exceed  $10^5$ .

## Output Format

For each test case, print "**YES**" if you can delete several orders (possibly, zero) from  $S$  in such a way that drone can reach the destination point. Otherwise, print "**NO**".

## Sample Input 0

```
6
10 5
```

```
RRRRRRRRUUUUU
1 1
UDDDRLLL
-3 -5
LDLDDDDR
1 2
LLLLUU
3 -2
RDULRLDR
-1 6
RUDUUUUUR
```

### Sample Output 0

```
YES
YES
YES
NO
YES
NO
```

### Explanation 0

In the first case, you don't need to modify *S*, since the given *S* will bring the drone to destination point. In the second case, you can delete orders *s*<sub>2</sub>, *s*<sub>3</sub>, *s*<sub>4</sub>, *s*<sub>6</sub>, *s*<sub>7</sub> and *s*<sub>8</sub>, so *S* becomes equal to "UR". In the third test case, you have to delete order *s*<sub>9</sub>, otherwise, drone won't finish in the destination point

[f](#) [t](#) [in](#)

Contest ends in 2 hours

Submissions: 194

Max Score: 100


Difficulty: Easy

Rate This Challenge:

☆☆☆☆☆

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Current Buffer (saved locally, editable)  

C++14  

```
1 #include <cmath>
2 #include <cstdio>
3 #include <vector>
4 #include <iostream>
5 #include <algorithm>
6 using namespace std;
7
8
9 int main() {
10     /* Enter your code here. Read input from STDIN. Print output to STDOUT */
11     return 0;
12 }
13
```

Line: 1 Col: 1

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