# Happy Ladybugs

## HackerRank

Happy Ladybugs is a board game having the following properties:

- The board is represented by a string, b, of length n. The  $i^{th}$  character of the string, b[i], denotes the  $i^{th}$  cell of the board.
  - If b[i] is an underscore (i.e., []), it means the  $i^{th}$  cell of the board is empty.
  - If b[i] is an uppercase English alphabetic letter (ascii[A-Z]), it means the  $i^{th}$  cell contains a ladybug of color b[i].
  - String  $m{b}$  will not contain any other characters.
- A ladybug is *happy* only when its left or right adjacent cell (i.e.,  $b[i\pm 1]$ ) is occupied by another ladybug having the same color.
- In a single move, you can move a ladybug from its current position to any empty cell.

Given the values of n and b for g games of Happy Ladybugs, determine if it's possible to make all the ladybugs happy. For each game, return <u>YES</u> if all the ladybugs can be made happy through some number of moves. Otherwise, return <u>NO</u>.

#### Example

 $b = [YYR\_B\_BR]$ 

You can move the rightmost B and R to make  $b = [YYRRBB_{--}]$  and all the ladybugs are happy. Return YES.

#### **Function Description**

Complete the *happyLadybugs* function in the editor below.

happyLadybugs has the following parameters:

• string b: the initial positions and colors of the ladybugs

#### Returns

• *string:* either YES or NO

#### **Input Format**

The first line contains an integer g, the number of games.

The next g pairs of lines are in the following format:

- The first line contains an integer n, the number of cells on the board.
- The second line contains a string b that describes the n cells of the board.

#### Constraints

•  $1 \leq g,n \leq 100$ 

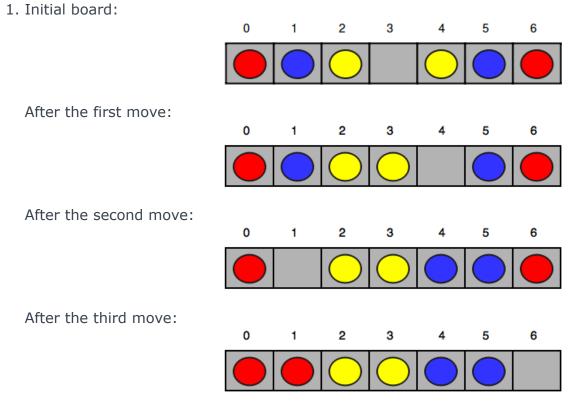
- $b[i] \in \{\_, ascii[A-Z]\}$ Sample Input 0
  - 4 7 RBY\_YBR 6 X\_Y\_X 2 6 B\_RRBR

#### Sample Output 0

YES NO YES YES

#### Explanation 0

The four games of Happy Ladybugs are explained below:



Now all the ladybugs are happy, so we print **YES** on a new line.

- 2. There is no way to make the ladybug having color  $\underline{Y}$  happy, so we print  $\underline{NO}$  on a new line.
- 3. There are no unhappy ladybugs, so we print YES on a new line.
- 4. Move the rightmost B and R to form  $b = [BBRRR\_]$ .

#### Sample Input 1

```
5
5
AABBC
7
AABBC_C
1
10
DD__FQ_QQF
6
AABCBC
```

### Sample Output 1

NO YES YES NO