

# Day 29: Look at Everything We've Learned!

Welcome to Day 29! Check out the tutorial on [programming language fundamentals](#), or just jump right into the problem. Congratulations on finishing the series, and good luck!

Suppose you have some string  $S$  having length  $N$  that is indexed from  $0$  to  $N-1$ . You also have some string  $R$  that is *the reverse* of string  $S$ .  $S$  is *funny* if the condition  $|S_i - S_{i-1}| = |R_i - R_{i-1}|$  is true for every  $i$  from  $1$  to  $N-1$ .

**Note:** For some string  $str$ ,  $str_i$  denotes the [ASCII](#) value of the  $i^{\text{th}}$   $0$ -indexed character in  $str$ . The *absolute value* of some integer,  $x$ , is written as  $|x|$ .

## Input Format

The first line contains an integer,  $T$  (the number of test cases).  
The  $T$  subsequent lines each contain one string  $S$ .

## Constraints

$1 \leq T \leq 10$   
 $2 \leq \text{length of } S \leq 10000$

## Output Format

For each string  $S$ , print whether it is **Funny** or **Not Funny** on a new line (i.e.: the  $i^{\text{th}}$  line of output should be the answer for input string  $S_i$ ).

## Sample Input

```
2
acxz
bcxz
```

## Sample Output

```
Funny
Not Funny
```

## Explanation

*Test Case 0:*  $S = \text{"acxz"}$   
 $|c-a| = 2 = |x-z|$   
 $|x-c| = 21 = |c-x|$   
 $|z-x| = 2 = |a-c|$   
We print **Funny**.  
  
*Test Case 1:*  $S = \text{"bcxz"}$   
 $|c-b| = 1$ , but  $|x-z| = 2$   
We stop evaluating the string (as  $|c-b| \neq |x-z|$ ), and print **Not Funny**.

