Palindromic Cricketer

IPL-5 is going to be special. A lot of new players are going to play. Some of them have palindromic names. A palindromic name reads same when read from either ends.

Input

N(<50), number of players. Next N lines contains names of players. Names would be a character sequence of 50 or less characters in lowercase letters.

Output

The output should consist of N lines. For every player output "Palindromic Name", if the name is palindromic or "Not Palindromic Name", if it is not in these lines .

Example

Input:

3
nitin
aaditya
gaga
sandesh

 Output:

Palindromic Name
Not Palindromic Name
Palindromic Name
Not Palindromic Name