**Parenthesis Checker**

Given an expression string **x**. Examine whether the pairs and the orders of {,},(,),[,] are correct in exp.  
For example, the function should return 'true' for exp = [()]{}{[()()]()} and 'false' for exp = [(]).

**Note:**The drive code prints "balanced" if function return true, otherwise it prints "not balanced".

**Example 1:**

**Input**:

{([])}

**Output**:

true

**Explanation**:

{ ( [ ] ) }. Same colored brackets can form

balanced pairs, with 0 number of

unbalanced bracket.

**Example 2:**

**Input**:

()

**Output**:

true

**Explanation**:

(). Same bracket can form balanced pairs,

and here only 1 type of bracket is

present and in balanced way.

**Example 3:**

**Input**:

([]

**Output**:

false

**Explanation**:

([]. Here square bracket is balanced but

the small bracket is not balanced and

Hence , the output will be unbalanced.

**Expected Time Complexity**: O(|x|)  
**Expected Auixilliary Space**: O(|x|)  
  
**Constraints:**  
1 ≤ |x| ≤ 32000

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import java.util.\*;

import java.io.\*;

import java.lang.\*;

class Driverclass

{

public static void main(String args[])

{

Scanner sc = new Scanner(System.in);

//Reading total number of testcases

int t= sc.nextInt();

while(t-- >0)

{

//reading the string

String st = sc.next();

//calling ispar method of Paranthesis class

//and printing "balanced" if it returns true

//else printing "not balanced"

if(new Solution().ispar(st) == true)

System.out.println("balanced");

else

System.out.println("not balanced");

}

}

}

class Solution

{

//Function to check if brackets are balanced or not.

static boolean ispar(String x)

{

Stack<Character> arr = new Stack<Character>();

for (char c : x.toCharArray()) {

if (c == '(')

arr.push(')');

else if (c == '{')

arr.push('}');

else if (c == '[')

arr.push(']');

else if (arr.isEmpty() || arr.pop() != c)

return false;

}

return arr.isEmpty();

}

}