package com;

//importing the packages

import java.util.\*;

public class Valid\_Parentheses {

// function to check if brackets are balanced

static boolean areBracketsBalanced(String expr)

{

// Using ArrayDeque is faster than using Stack class

Deque<Character> stack

= new ArrayDeque<Character>();

// Traversing the Expression

for (int i = 0; i < expr.length(); i++)

{

char x = expr.charAt(i);

if (x == '(' || x == '[' || x == '{')

{

// Push the element in the stack

stack.push(x);

continue;

}

if (stack.isEmpty())

return false;

char check;

switch (x) {

case ')':

check = stack.pop();

if (check == '{' || check == '[')

return false;

break;

case '}':

check = stack.pop();

if (check == '(' || check == '[')

return false;

break;

case ']':

check = stack.pop();

if (check == '(' || check == '{')

return false;

break;

}

}

// Check Empty Stack

return (stack.isEmpty());

}

// Driver code

public static void main(String[] args)

{

String expr = "([{}])";

// Function call

if (areBracketsBalanced(expr))

System.out.println("Balanced ");

else

System.out.println("Not Balanced ");

}

}