

Description

Given a string containing three types of parenthesis : (), [], { }, write a program to check whether the string contains a valid sequence of parentheses.

Input

Input Format

Input contains one line which is the string with parentheses whose validity you have to check

Constraints

length of string <= 1000

Output

Output Format

Print "balanced" (without quotes) if it has a sequence of valid parentheses, otherwise print "unbalanced" (without quotes)

Sample Input 1

```
((((((((((((((((((
```

Sample Output 1

```
balanced
```

Sample Input 2

```
[one[two[three[four[five[six[seven[eight[nine[ten]]]]]]]]]
```

Sample Output 2

```
balanced
```

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```
1
2 function runProgram(input) {
3     // var input = `{ } [ ] ( )`;
4     var input=input.split("\n");
5     var str=input[0];
6     var stack=[];
7     for (let i = 0; i < str.length; i++) {
8         var ch=str.charAt(i);
9         if(ch=="(" || ch=="[" || ch==""){
10             stack.push(ch)
11         } else {
12             if(ch == ")" && stack[stack.length-1] == "(") {
13                 stack.pop()
14             } else if (ch == "]" && stack[stack.length-1] == "[") {
15                 stack.pop()
16             } else {
17                 stack.push(ch)
18             }
19         }
20     }
21     if(stack.length == 0) {
22         console.log("balanced");
23     } else {
24         console.log("unbalanced");
25     }
26 }
```



```
19     console.log("unbalanced")
20     return;
21   }
22 }
23 }
24 if(stack.length== 0){
25     console.log("balanced")
26 }
27 else{
28     console.log("unbalanced")
29 }
30 }
31
32 if (process.env.USER === "") {
33     runProgram(``);
34 } else {
35     process.stdin.resume();
36     process.stdin.setEncoding("ascii");
37     let read = "";
38     process.stdin.on("data", function (input) {
39         read += input;
40     });
41     process.stdin.on("end", function () {
42         read = read.replace(/\n$/, "");
43         read = read.replace(/\n$/, "");
44         runProgram(read);
45     });
46     process.on("SIGINT", function () {
47         read = read.replace(/\n$/, "");
48         runProgram(read);
49         process.exit(0);
50     });
```

☐ Test against custom input

Run Code

Submit

Compilation Succesfull

balanced

 Contest has ended