

Homework 05: Balanced Brackets

CS 412

For this assignment, your job is to implement Java code that checks user input for balanced brackets. In particular, your code must read a single line of user input and output whether or not all the brackets (i.e., {}, (), and []) in the input are properly balanced. Your solution must ignore all non-bracket characters.

EXAMPLES:

```
Enter parantheses to check: {[()[]]}  
input = {[()[]]}, balanced = true
```

```
Enter parantheses to check: {(hello)(there)([ignore]){stuff}}  
input = {(hello)(there)([ignore]){stuff}}, balanced = true
```

```
Enter parantheses to check: {()]}  
input = {()]}}, balanced = false
```

```
Enter parantheses to check: ((())]   
input = ((()]), balanced = false
```

REQUIREMENTS:

- Must read one line of user input.
- Must output the original input.
- Must output whether or not brackets are properly balanced.
- Must only consider parentheses, square brackets, and curly braces.
- Must ignore all non-bracket characters.

HINTS:

- BufferedReader
- try / catch
- Data structure from Collections package
- String.toArray()
- for each character in char array..
- False if brackets unbalanced, True otherwise