

Homework

1. Write a program that checks if a string that contains only brackets is balanced.

Rules

- The empty string is balanced.
- If **S** is balanced, **(• S •)** is balanced. Here • is the concatenation operator.
- If **S** and **T** are balanced, **T • S** is balanced.

2. Bonus

Write a program that checks if a string that contains different types of braces is balanced. If your program can solve this, it can also solve the first problem. The pairs of braces will we use are **{}**, **()** and **[]**.

Structure of the submission

You should submit a file named “Main.java” that reads lines from its standard input and for each line prints “Yes” if the string is balanced, “No” otherwise.

It is recommended that you use the following template.

```
import java.util.Scanner;

public class Main {
    public static void main(String[] args) {
        try (Scanner input = new Scanner(System.in)) {
            while (input.hasNextLine()) {
                var s = input.nextLine();
                System.out.println(isBalanced(s) ? "Yes" : "No");
            }
        } catch (Exception e) {
            System.out.println("Something went wrong...");
        }
    }

    public static boolean isBalanced(String s) {
        return true;
    }
}
```

Your program will be run like this.

```
$ java Main < data.txt
Yes
Yes
No
```

Here id the content of “data.txt”.

```
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```