

## 2. JAVA PROGRAM-BALANCED BRACKET

Write a function that accepts a string consisting entirely of brackets ({}()) and returns whether it is balanced. Every "opening" bracket must be followed by a closing bracket of the same type. There can also be nested brackets, which adhere to the same rule.

f('(){}{({})}{{()}}') // true

f('(){}{}') // false

```
import java.util.Stack;

public class Main {

public static void main(String[] args) {

    System.out.println(is_parentheses_balanced("(){}{({})}{{()}}"));

}

public static boolean matchingPair(char open , char close){

    if ( open == '(' && close == ' '){

        return true;

    }

    if ( open == '[' && close == ' '){

        return true;

    }

    else{

        return false;

    }

}

}

public static boolean is_parentheses_balanced(String equation){

    char[] c = equation.toCharArray();
```

```

Stack <Character> myStack= new Stack <Character> ();
for (int i = 0; i < c.length; i++){
    if(c[i]=='(' || c[i] == '[' ){
        myStack.push(c[i]);
    }
    else if (c[i]== ')' || c[i]==']'){
        if(matchingPeer(myStack.peek(),c[i]) == true){
            myStack.pop();
        } else {
            return false;
        }
    }
}
if(myStack.isEmpty()){
    return true;
}
else {
    return false;
}

}

}

```

**Output:**

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onlinegdb.com/online\_c\_compiler

Language: Java

Main.java

```
1 import java.util.Stack;
2 public class Main {
3     public static void main(String[] args) {
4         System.out.println(is_parentheses_balanced("(){}<([)]>[(){}]]"));
5     }
6     public static boolean matchingPeer(char open, char close){
7         if ( open == '(' && close == ')'){
8             return true;
9         }
10        if ( open == '[' && close == ']'){
```

input

true

...Program finished with exit code 0  
Press ENTER to exit console.

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