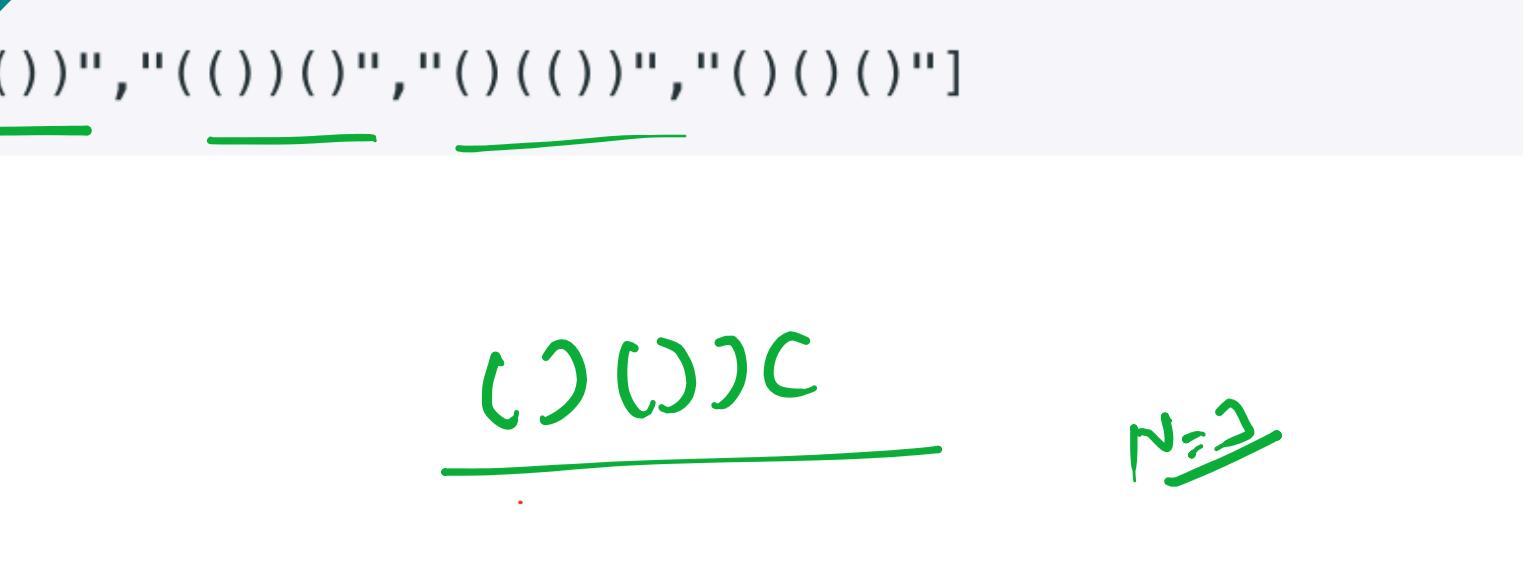


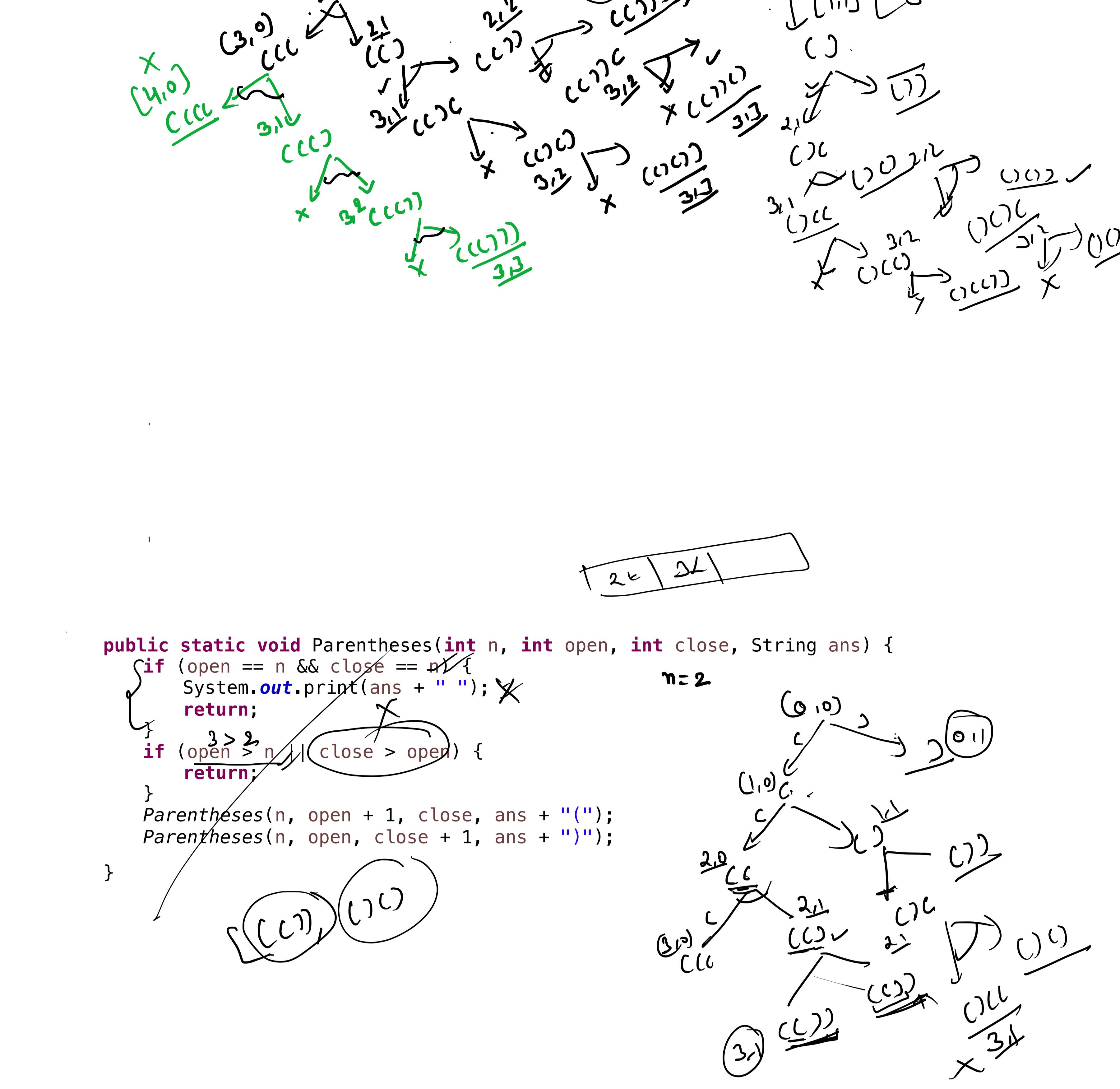
Given  $n$  pairs of parentheses, write a function to generate all combinations of well-formed parentheses.

Example 1:

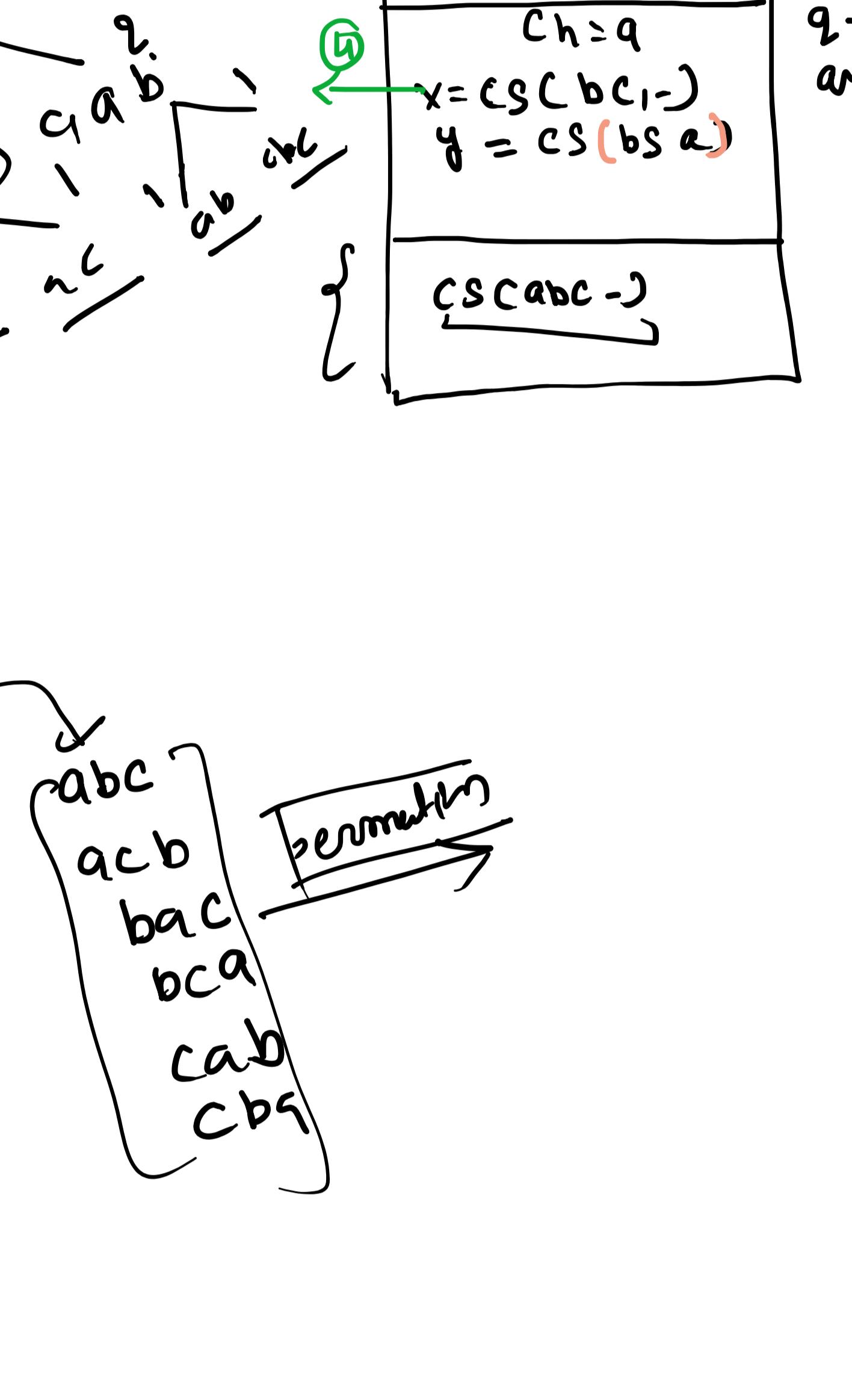
Input:  $n = 3$   
Output: ["((()))", "(()())", "(())()", "()(())", "()()()"]



$\rightarrow$  open  
 $\leftarrow$  close

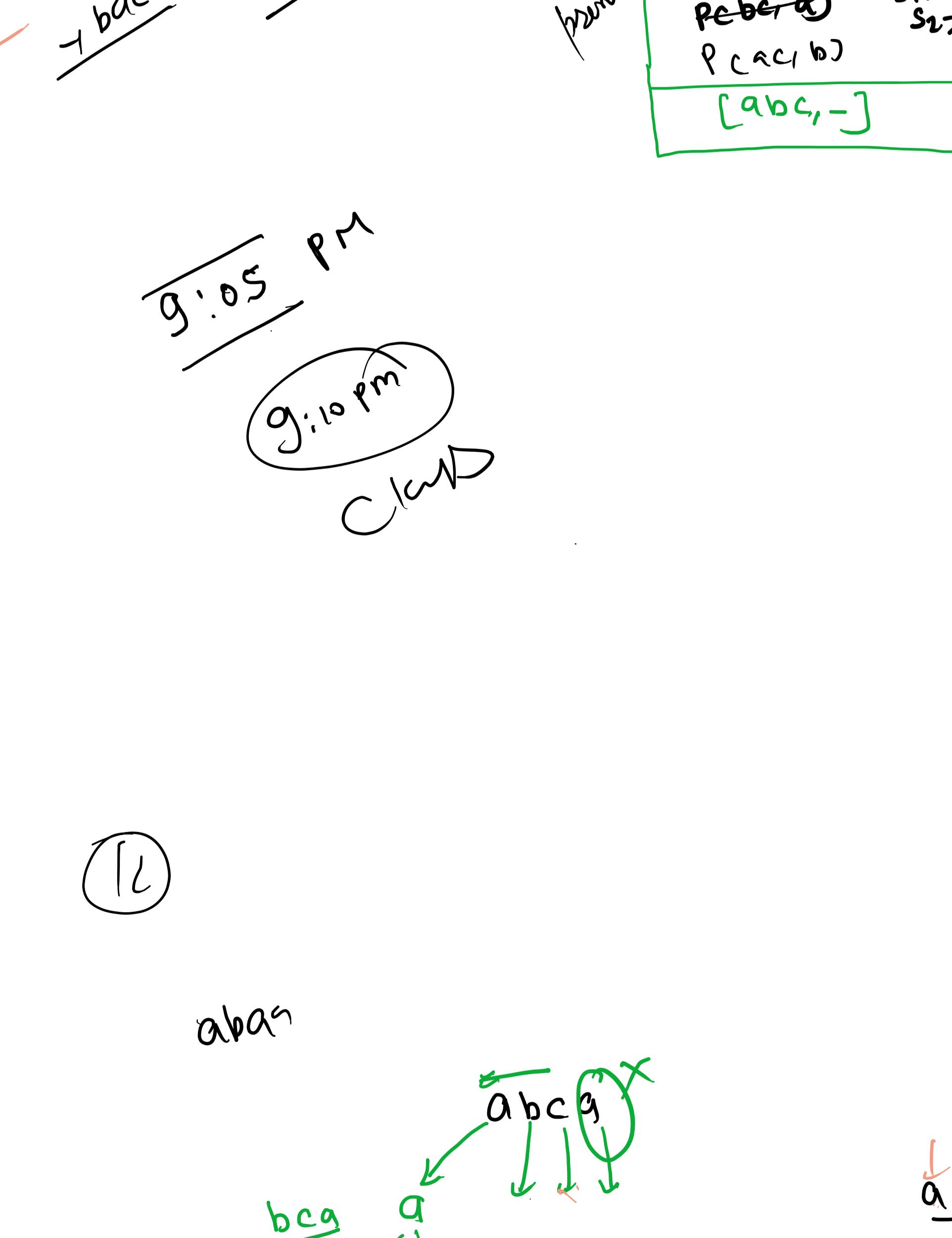
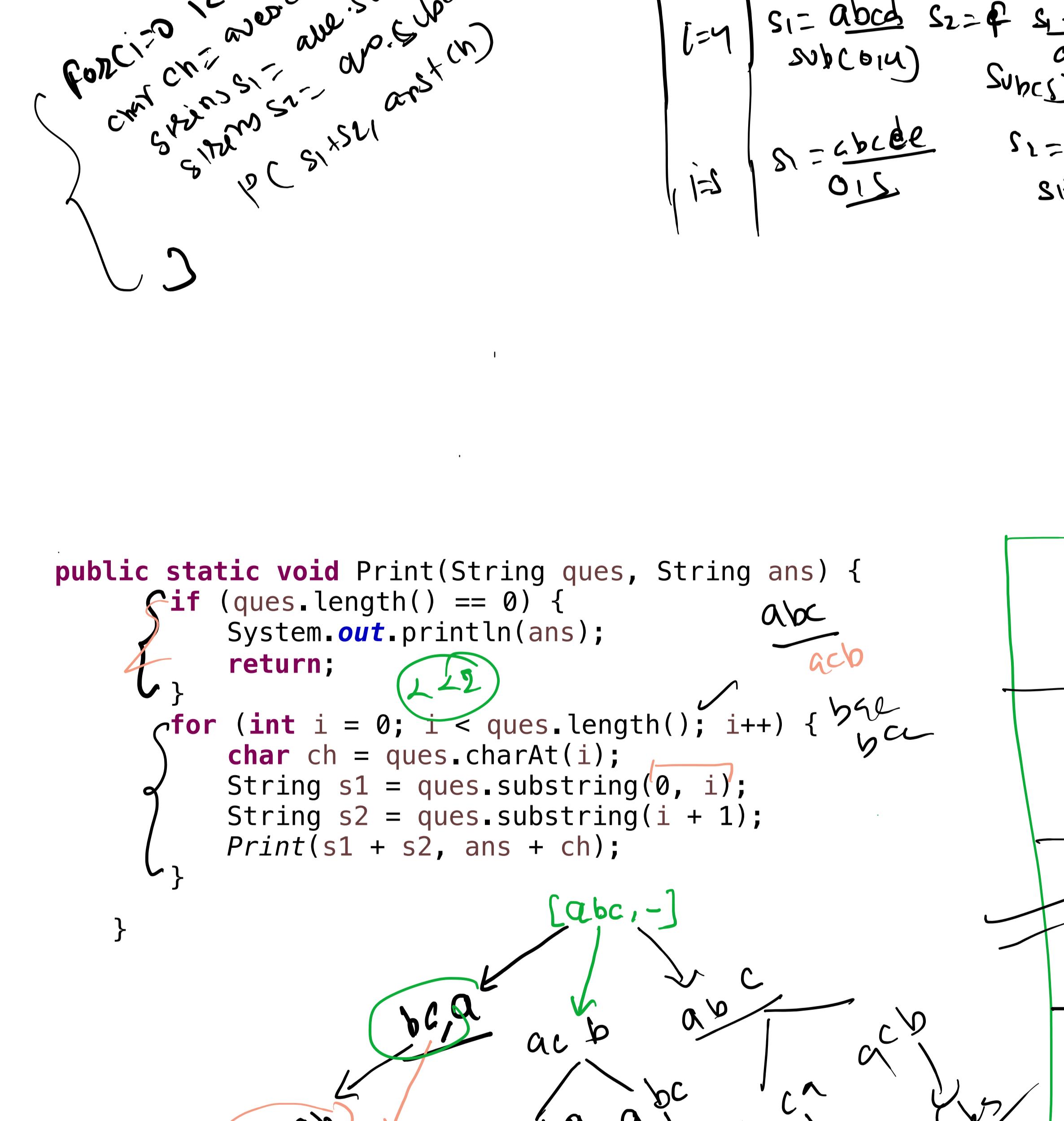
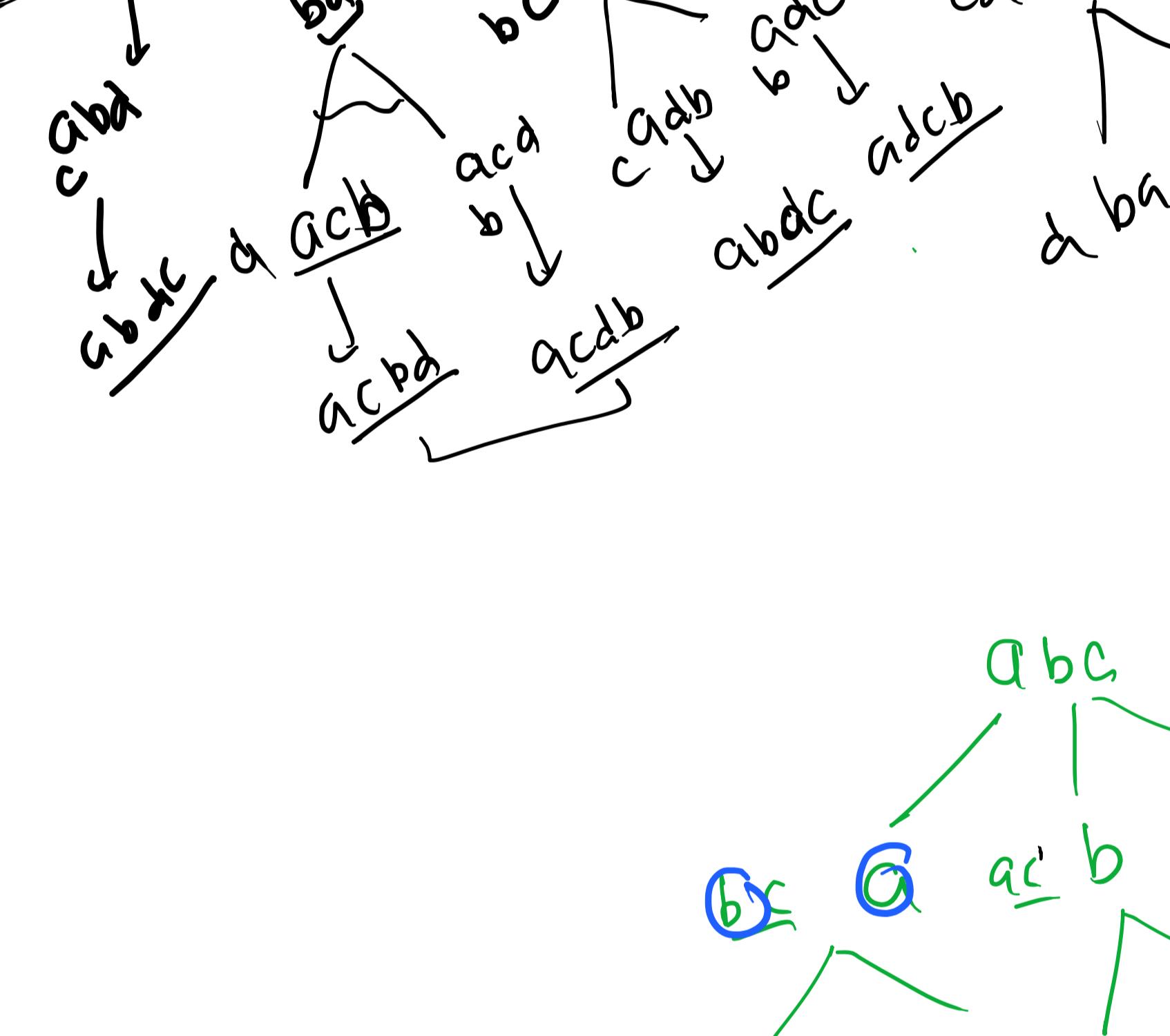
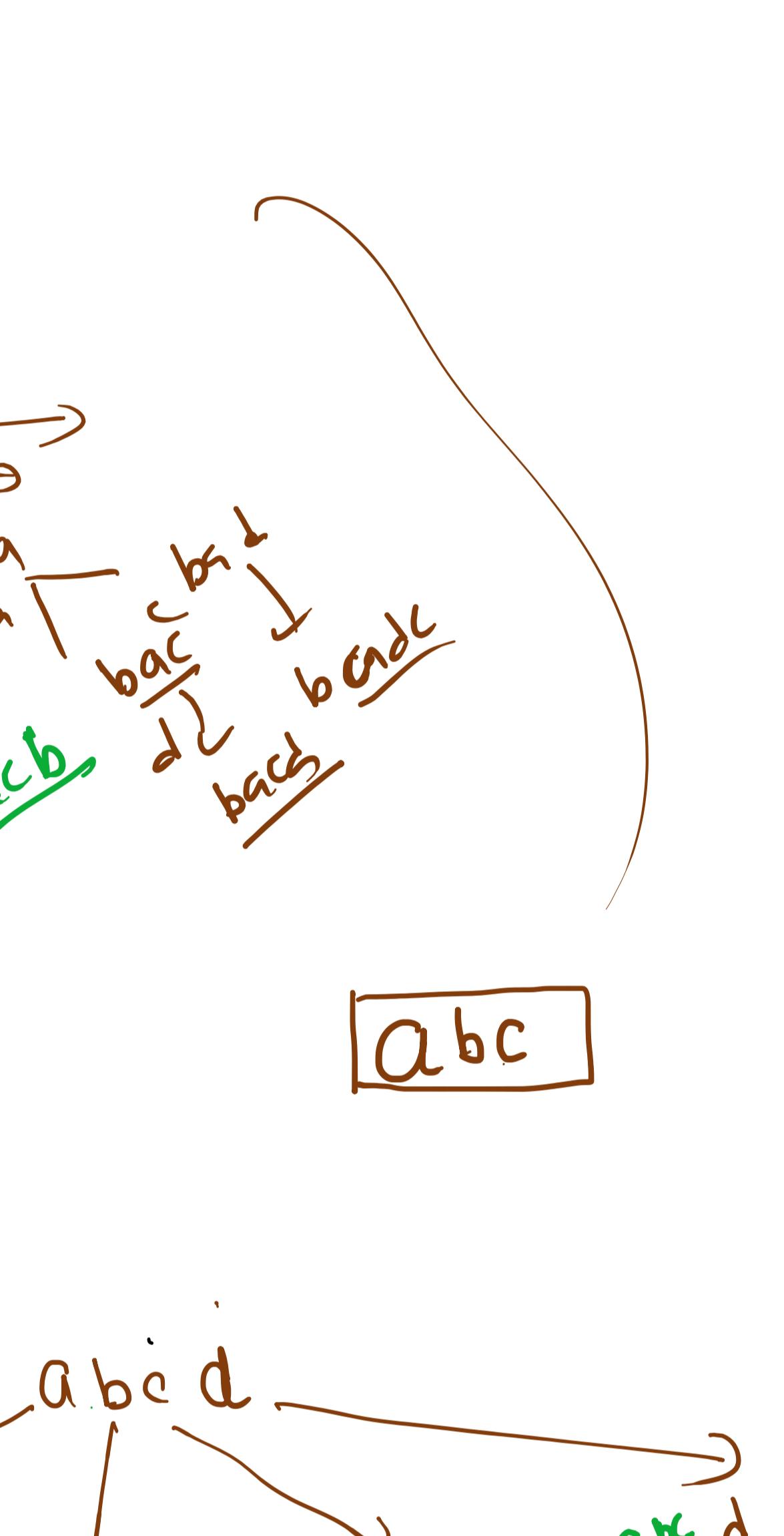


```
public static void Parentheses(int n, int open, int close, String ans) {
    if (open == n && close == n) {
        System.out.print(ans + " ");
        return;
    }
    if (open > n || close > open) {
        return;
    }
    Parentheses(n, open + 1, close, ans + "(");
    Parentheses(n, open, close + 1, ans + ")");
}
```



```
public static void main(String[] args) {
    // TODO Auto-generated method stub
    String s = "abc";
    System.out.println("\n" + CountSubsence(s, ""));
}
```

```
public static int CountSubsence(String ques, String ans) {
    if (ques.length() == 0) {
        System.out.print(ans + " ");
        return 1;
    }
    char ch = ques.charAt(0);
    int x = CountSubsence(ques.substring(1), ans);
    int y = CountSubsence(ques.substring(1), ans + ch);
    return x + y;
}
```



Permutation of abc

Counting abc