

# L17: Palindrome Partitioning | Leetcode | Recursion | C++ | Java

## Day9 (Recursion):

### 1. Combination sum-1

[https://www.youtube.com/watch?v=OyZFFqQtu98&list=PLgUwDviBIf0p4ozDR\\_kJJkONnb1wdx2Ma&index=49](https://www.youtube.com/watch?v=OyZFFqQtu98&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=49)

### 2. Combination sum-2

[https://www.youtube.com/watch?v=G1fRTGRxXU8&list=PLgUwDviBIf0p4ozDR\\_kJJkONnb1wdx2Ma&index=50](https://www.youtube.com/watch?v=G1fRTGRxXU8&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=50)

### 3. Palindrome Partitioning

### 4. Subset Sum-1

### 5. Subset Sum-2

### 6. K-th permutation Sequence

## Day10: (Backtracking)

### 1. N queens Problem

### 2. Sudoku

### 3. M coloring Problem (Graph prob)

### 4. Rat in a Maze

### 5. Print all Permutations of a string/array

### 6. Word Break (print all ways)

## Day11: (Divide and Conquer)

### 1. 1/N-th root of an integer (use binary search) (square root, cube root, ..)

### 2. Matrix Median

### 3. Find the element that appears once in sorted array, and rest element appears twice

### (Binary search)

### 4. Search element in a sorted and rotated array/ find pivot where it is rotated

## 131. Palindrome Partitioning

Medium

👍 3029

💬 97

♡ Add to List

🔗 Share

Given a string `s`, partition `s` such that every substring of the partition is a **palindrome**. Return all possible palindrome partitioning of `s`.

A **palindrome** string is a string that reads the same backward as forward.

**Example 1:**

Input: `s = "aab"`

Output: `[["a","a","b"],["aa","b"]]`

**Example 2:**

Input: `s = "a"`

Output: `[["a"]]`

**Constraints:**

- `1 <= s.length <= 16`
- `s` contains only lowercase English letters.

Accepted 295,647

Submissions 569,013

## 131. Palindrome Partitioning

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## 17. Palindrome Partitioning | Leetcode | Recursion | C++ | Java

Medium

3029

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Share

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Example 2:

Input: `s = "a"`

Output: `[["a"]]`

Constraints:

- `1 <= s.length <= 16`
- `s` contains only lowercase English letters.

TUF

Accepted 215,647 / 563,013



"a|<sub>0</sub> b b" →

"aa|bb"

→

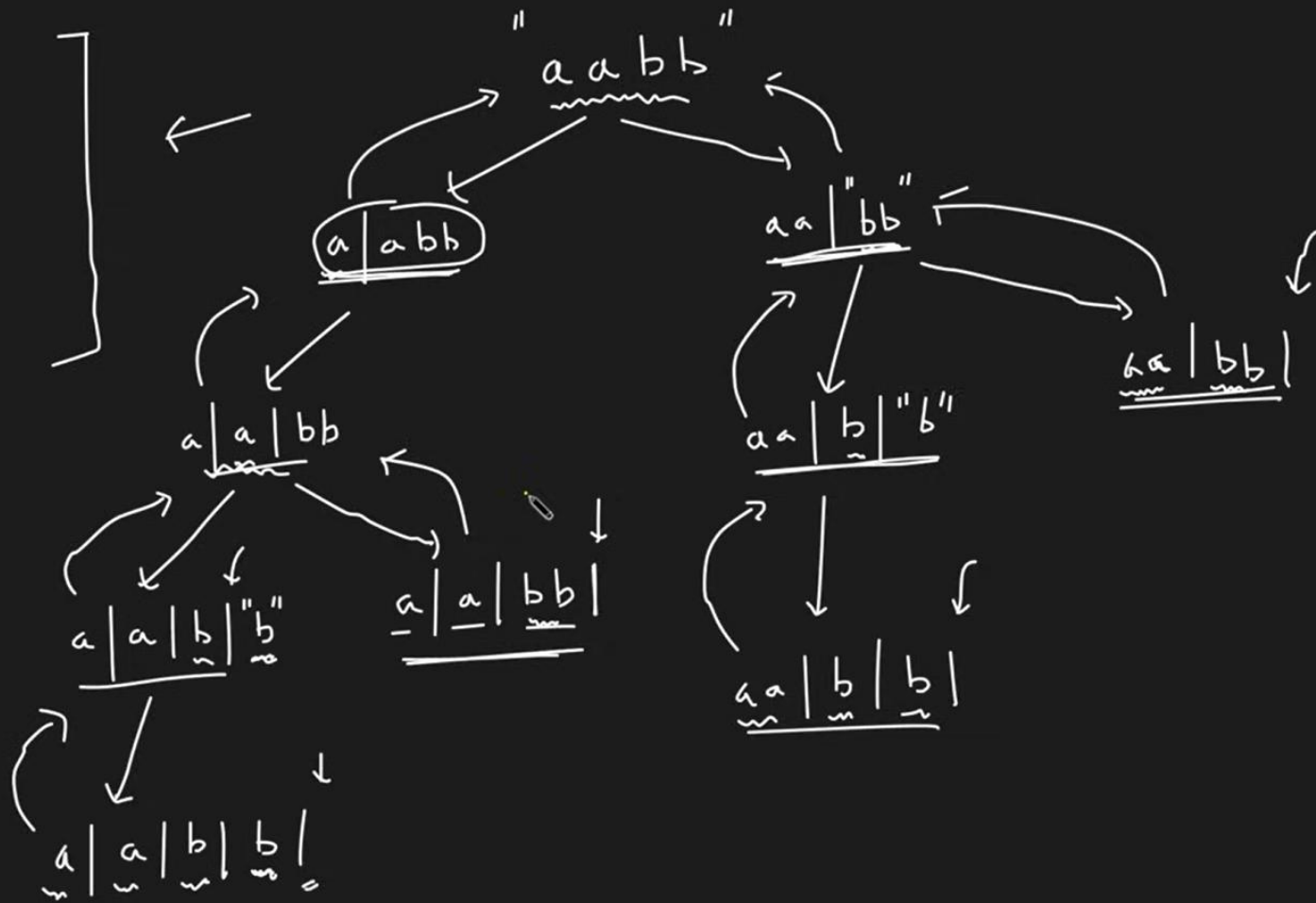
<u>{ a, a, b, b }</u>	✓
<u>{ a, a, b, b }</u>	✓
<u>{ aa, b, b }</u>	✓
<u>{ aa, bb }</u>	✓

$\{a, a, b, b\}$

$\{a, a, bb\}$

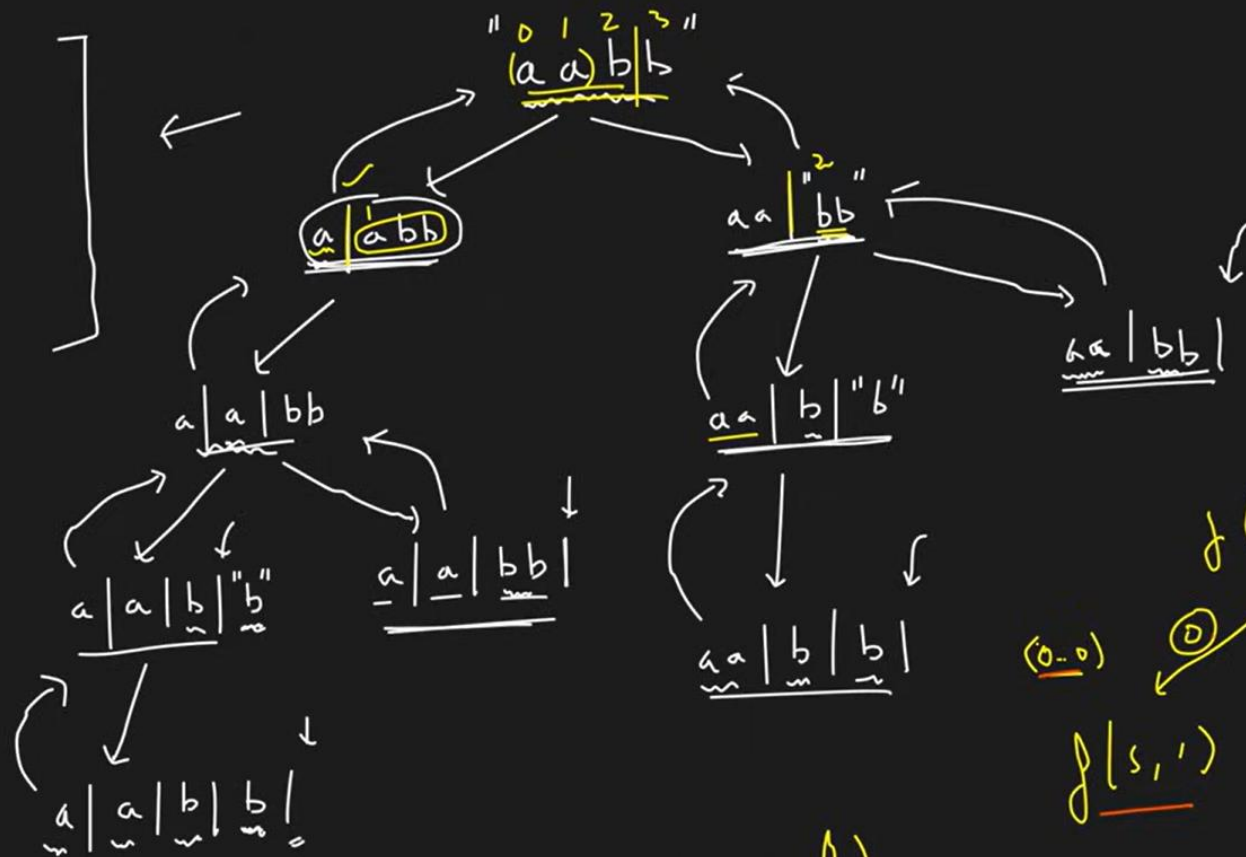
$\{aa, b, b\}$

$\{a, bb\}$

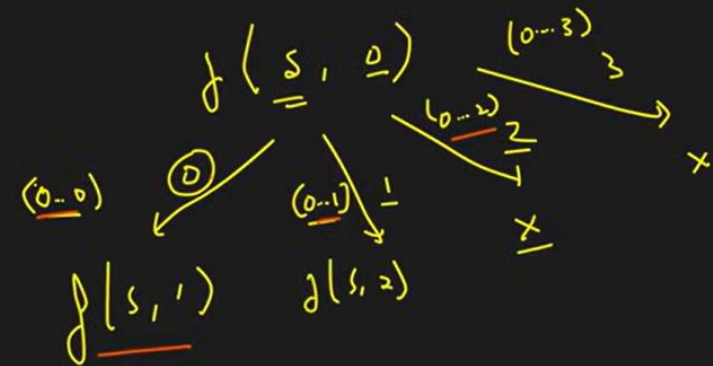


parse tree

$\{a, a, b, b\}$   
 $\{a, a, b, b\}$   
 $\{a, b, b, b\}$   
 $\{a, b, b\}$



pair from

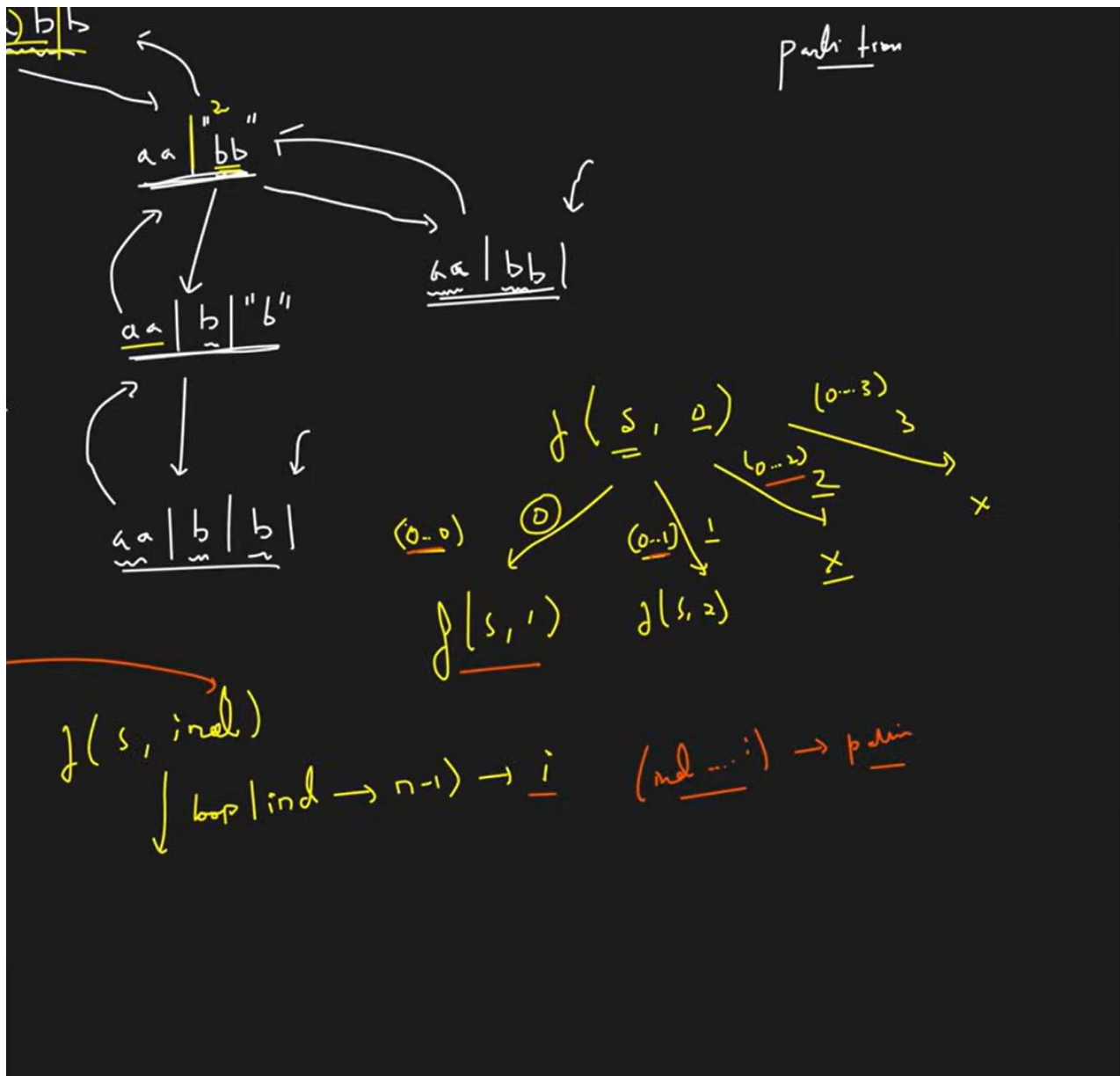


$f(s, \text{ind})$

$\text{loop ind} \rightarrow n-1 \rightarrow i$

$(\text{ind} \dots i) \rightarrow \text{pair}$

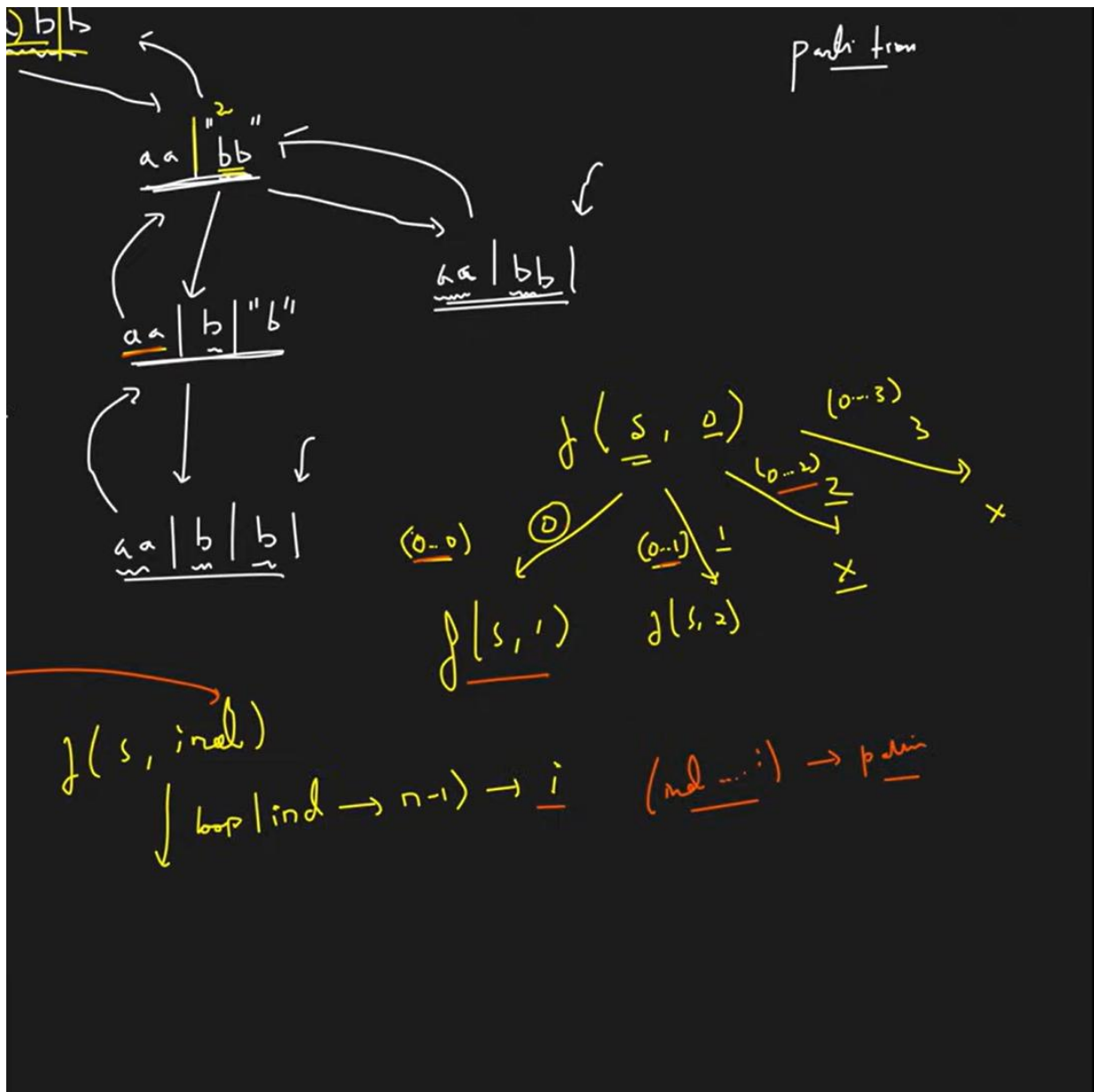




```

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i Java * Autocomplete

1 class Solution {
2     public List<List<String>> partition(String s) {
3         List<List<String>> res = new ArrayList<>();
4         List<String> path = new ArrayList<>();
5         func(0, s, path, res);
6         return res;
7     }
8
9     void func(int index, String s, List<String> path, List<List<String>> res) {
10        if(index == s.length()) {
11            res.add(new ArrayList<>(path));
12            return;
13        }
14        for(int i = index; i < s.length(); ++i) {
15            if(isPalindrome(s, index, i)) {
16                path.add(s.substring(index, i+1));
17                func(i+1, s, path, res);
18                path.remove(path.size()-1);
19            }
20        }
21    }
22
23    boolean isPalindrome(String s, int start, int end) {
24        while(start <= end) {
25            if(s.charAt(start++) != s.charAt(end--))
26                return false;
27        }
28        return true;
29    }
30 }
  
```



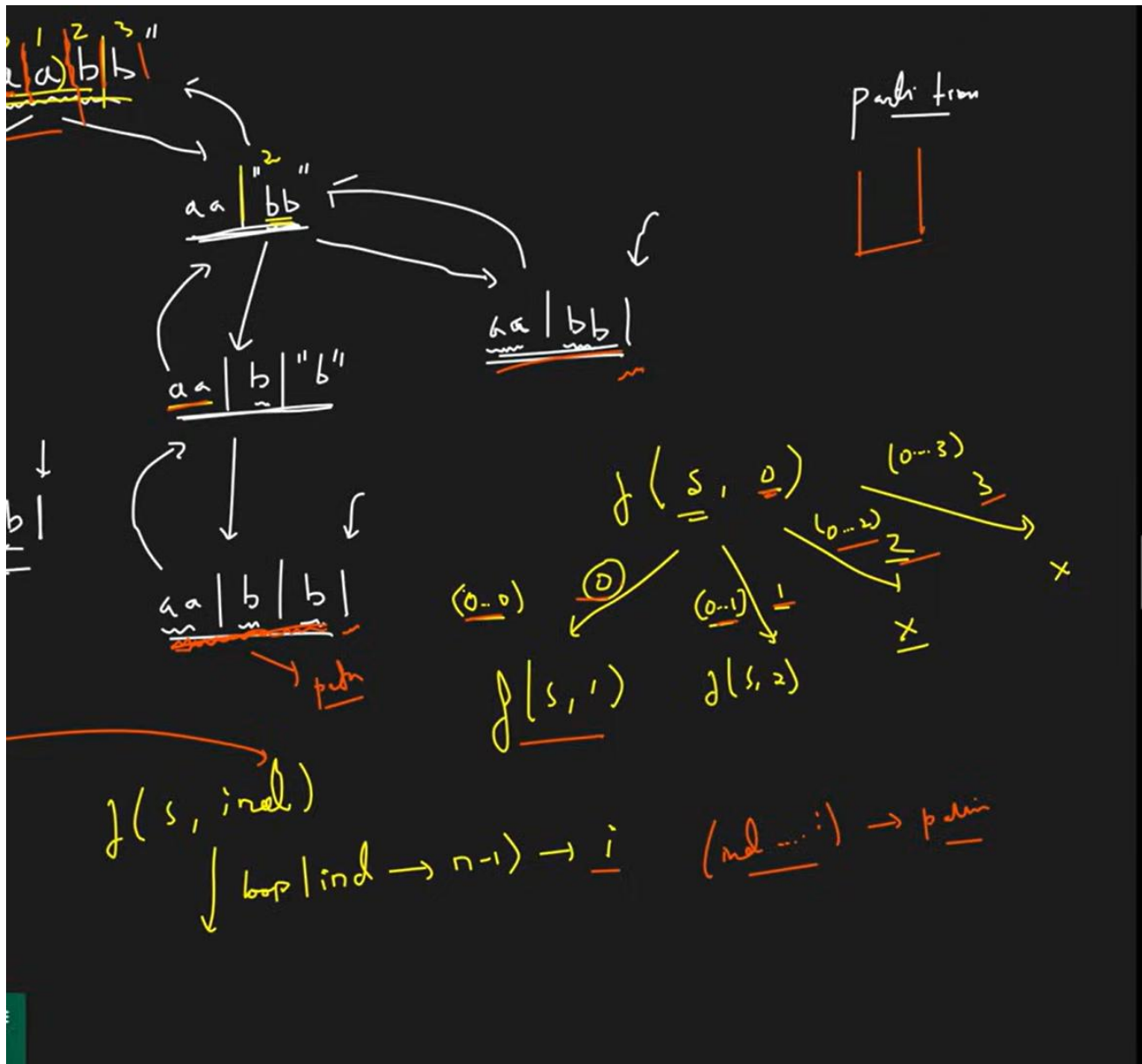
LeetCode Day 22 Problems Mock Contest - Dismiss Limited time event to win giveaway! Premium

C++ Autocomplete

```

1 class Solution {
2 public:
3     vector<vector<string>> partition(string s) {
4         vector<vector<string>> res;
5         vector<string> path;
6         func(0, s, path, res);
7         return res;
8     }
9
10    void func(int index, string s, vector<string> &path,
11              vector<vector<string>> &res) {
12        if(index == s.size()) {
13            res.push_back(path);
14            return;
15        }
16        for(int i = index; i < s.size(); ++i) {
17            if(isPalindrome(s, index, i)) {
18                path.push_back(s.substr(index, i - index + 1));
19                func(i+1, s, path, res);
20                path.pop_back();
21            }
22        }
23    }
24
25    bool isPalindrome(string s, int start, int end) {
26        while(start <= end) {
27            if(s[start++] != s[end--])
28                return false;
29        }
30        return true;
31    }
32};
  
```

TUF



LeetCode Day 22 Problems Mock Contest Discuss

Limited time event to win giveaway!

C++ Autocomplete

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