

All subsequences

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$s = \text{"abc"}$ \rightarrow $\text{"", "a", "ab", "ac", "abc", "b", "bc", "c"}$

(length of string)
2

$\rightarrow s = \text{"a"} \rightarrow \text{"", "a"}$

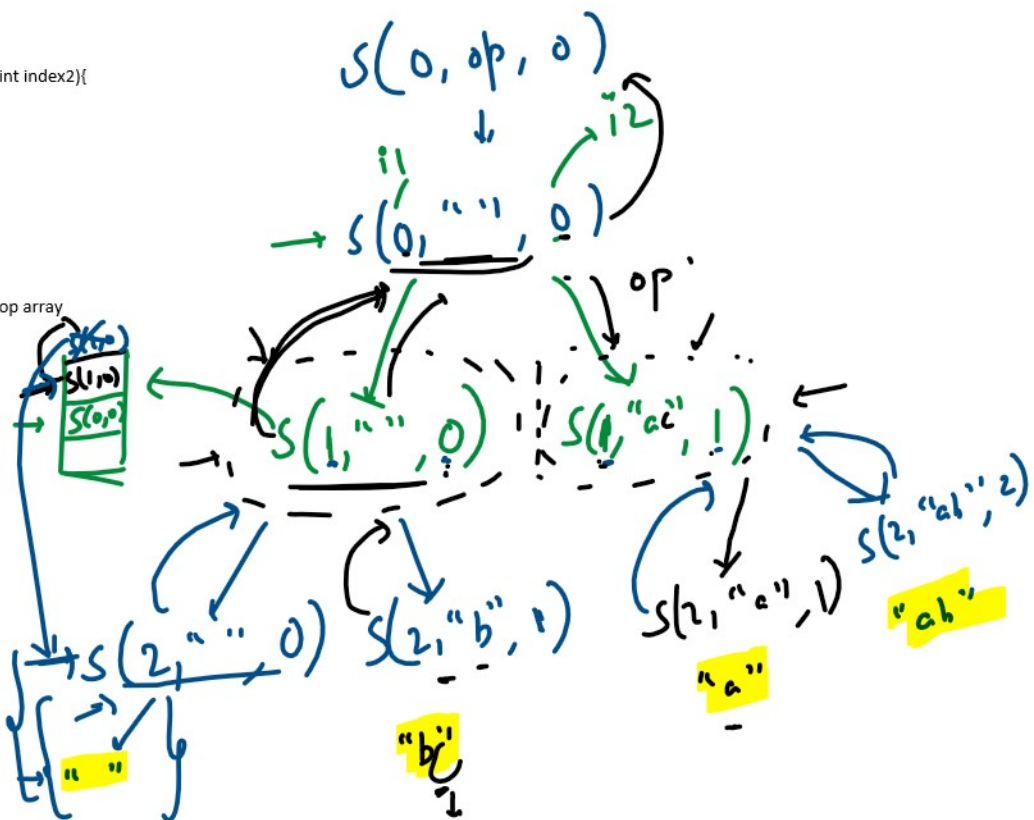
$\rightarrow s = \text{"ab"} \rightarrow \text{"", "a", "b", "ab"}$

```
void subseq(char str[], int n, int index, char op[], int index2){
    //base case
    if(index == n){
        cout<<op<<endl;
        return;
    }
    // rec case
    //this character is not a part of subseq
    subseq(str, n, index+1, op, index2);
    //this char is a part of subsequence
    // we will have to store this character into op array
    op[index2] = str[index];
    subseq(str, n, index+1, op, index2+1);
    op[index2] = '\0';
}
```

$str[] = \begin{bmatrix} a & b & \backslash 0 \end{bmatrix}$

$\rightarrow op[] = \begin{bmatrix} \backslash 0 & \backslash 0 & \backslash 0 \end{bmatrix}$

subseq
 $\rightarrow S(str, 2, 0, op, 0)$



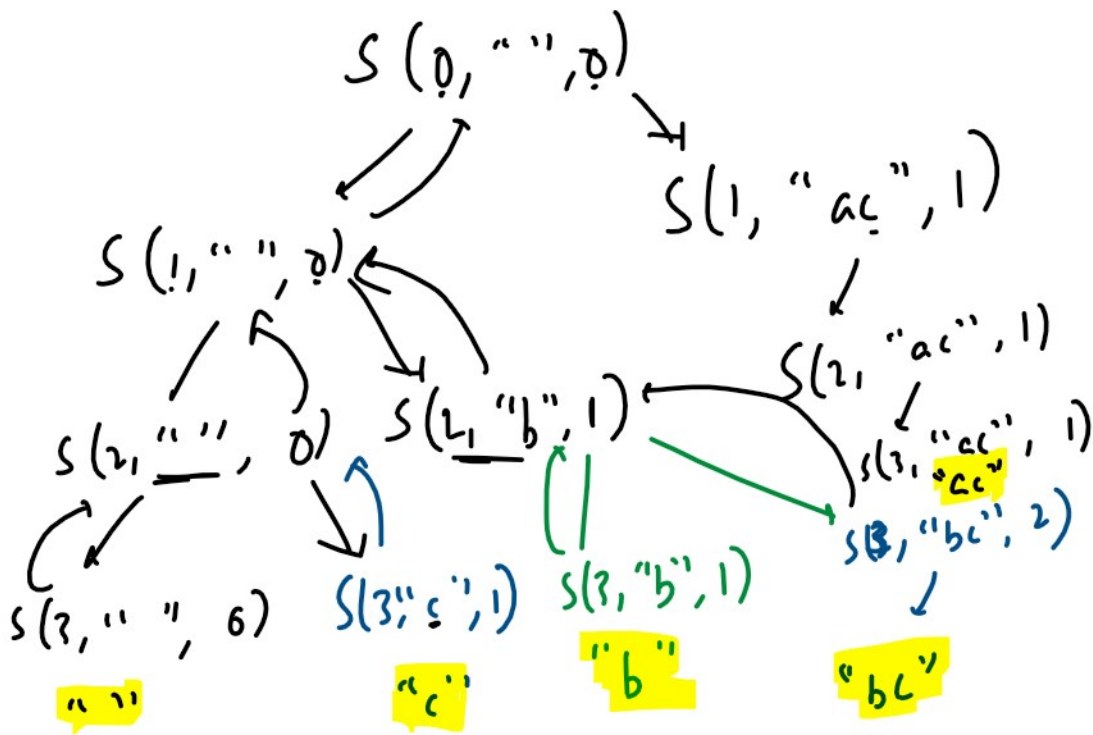
subsets $\rightarrow 2^3 \rightarrow 8$

$\begin{bmatrix} 1 & 2 & 3 \end{bmatrix} \rightarrow$ empty $\rightarrow \begin{bmatrix} 1 \end{bmatrix} \begin{bmatrix} 2 \end{bmatrix} \begin{bmatrix} 3 \end{bmatrix}$

$\begin{bmatrix} 1 & 2 \end{bmatrix} \begin{bmatrix} 1 & 3 \end{bmatrix} \begin{bmatrix} 2 & 3 \end{bmatrix}$

$\begin{bmatrix} 1 & 2 & 3 \end{bmatrix}$

$s = "abc"$



'd'	/c	'b'	'b'
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