

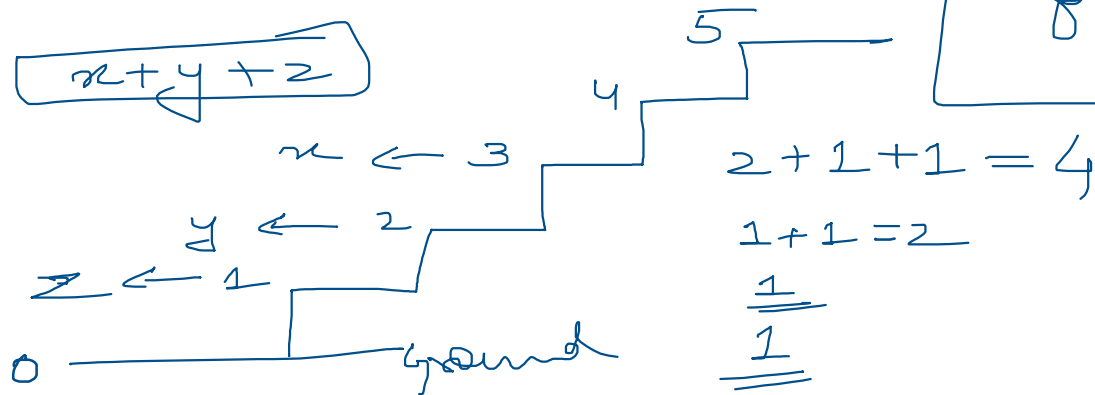
Ravi Shankar's Doubt -

>

$l \leftarrow 0$
 \downarrow
 $a \quad b \quad ?$

 $a \quad b \quad ? \quad ? \quad c$

1 Count No of ways to reach n^{th} stair



| No. of steps | No. of ways |
|-----------------------|-------------|
| for 0 \rightarrow 0 | 1 |

Level 1 \rightarrow From 0

Level 2 \rightarrow From 0 or From 1

Level 3 \rightarrow From 0 or From 1 or From 2.

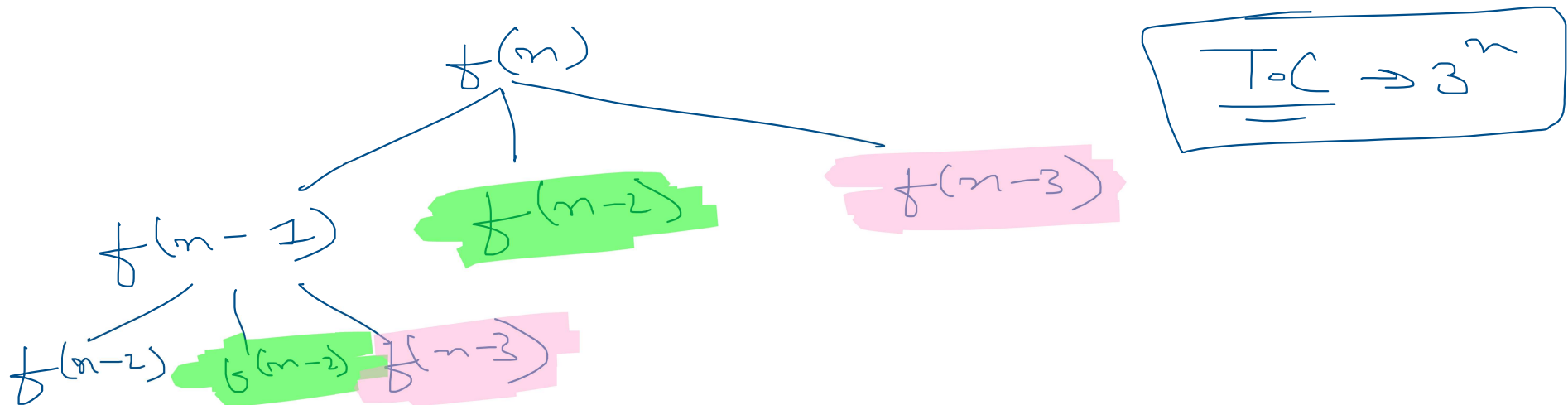
Level 4 \rightarrow From 1 or From 2 or From 3

Level $n \rightarrow$ From $(n-3)$ or From $(n-2)$ or From $(n-1)$

$$f(n) = f(n-3) + f(n-2) + f(n-1)$$

clear

Check for 2 conditions \rightarrow (a) Overlapping Sub Problems
 (b) Optimal Sub Structure



2 EDIT DISTANCE

Base Condition

| S 1(m) | S 2(n) | Result- |
|--------|--------|---------|
| " " | " " | 0 |
| " " | "ab" | 2 |
| "ab" | " " | 2 |
| | | |
| | | |

```

if (m == 0) return n;
if (n == 0) return m;

```

1 a → 0

a

ab

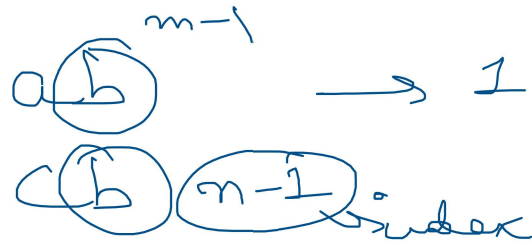
→ 0

ab

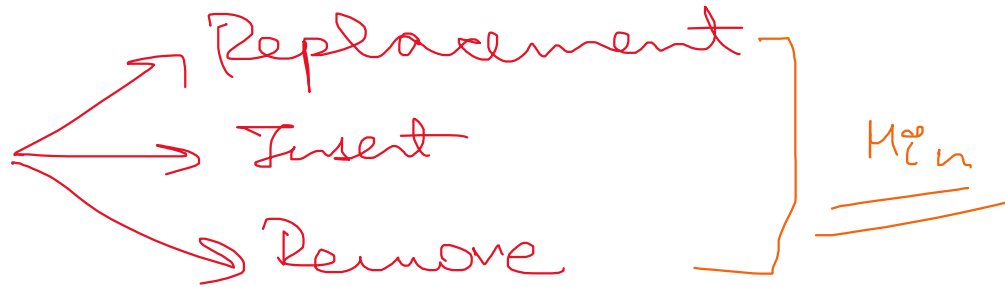
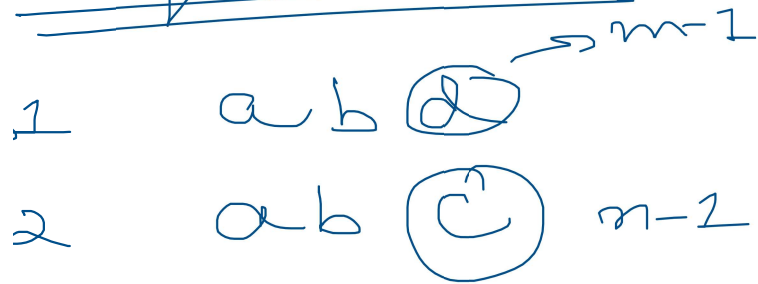
```

if (char(m-1) == char(n-1))
    return editDist(m-1, n-1);
}

```



equal Case



Operation Attempted



$\text{return } (1 + \text{edit}(m-1, n-1))$

insertion

$m-1$

1

ab@c

return(1 + edit(m, n-1))

2

ab@cⁿ⁻¹

removal

1

ab~~c~~^{m-1}

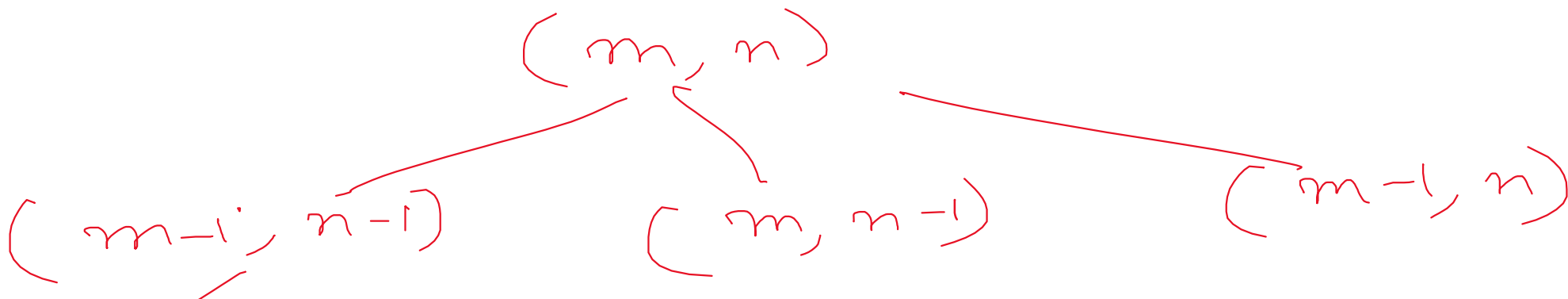
Remove Operation

1 + edit(m-1, n)

2

ab@cⁿ⁻¹

check the 2 conditions



1-2)

