August 11, DP

11 August 2020 21:12

CiphersSchools

Word	Is SubString?	Is Subsequence?
ciphers	✓	✓
phals	✗	✓
pher	✓	✓
phlc	✗	✗

L.C.S

m ← S1 " " 0

n ← S2 " " 0

S1 " " 0

S2 "abc"

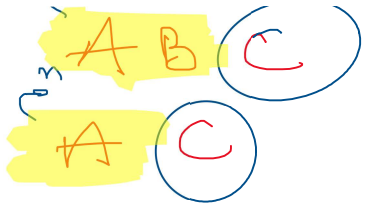
S1 "abc" 0

S2 " "

```
if(m==0 || n==0)
{ return 0;
}
```

BASE

m

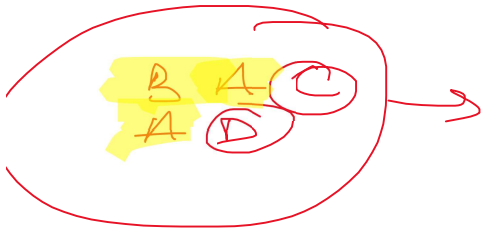


$1 + LCS(S1, S2, m-1, n-1)$

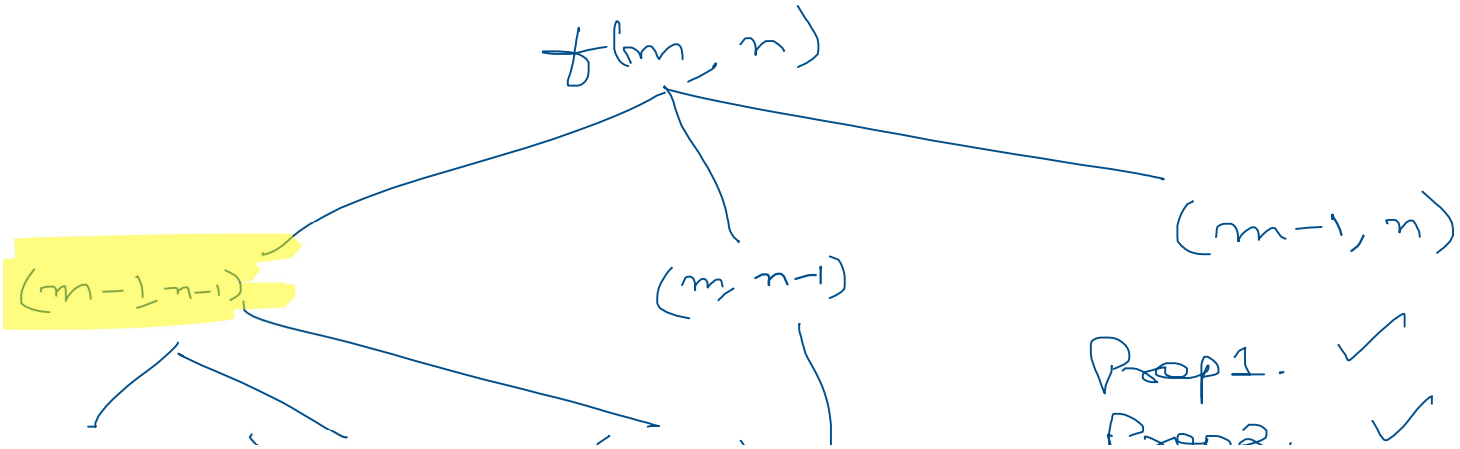
$LCS(S1, S2, m, n-1)$

$LCS(S1, S2, m-1, n)$

} Max

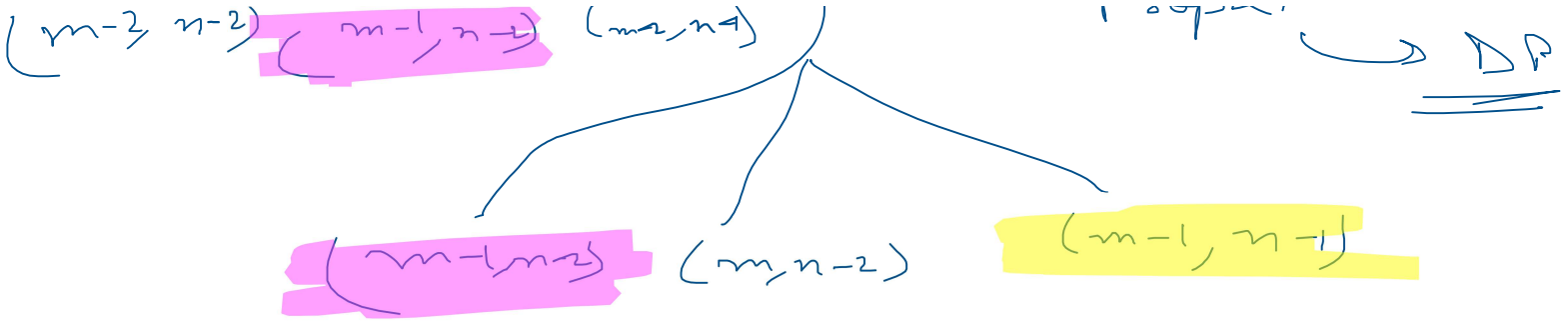


$(m-1, n-1)$ Case will be covered above



Prop 1. ✓

Prop 2. ✓



Longest Increasing Subsequence

arr[ ]	10	22	9	33	21	50	41	60	40
	10	10 22	9	10 22 33	10	10 22 33 50	10 22 33 41	10 22 33 50 60	10 22 33 40
LIS	1	2	1	3	2	4	4	5	4

Ending at any element