ADA

- ETE: 50 marks
  MTE: 25 marks
  CWS: 25 marks ⟶ coding (HR)

    attendance: 5 marks   1 week

    Ass.   : 20 marks
    (HR)

Syllabus:

- Recursion

- T&S Complexity
- Sorting
- Backtracking
- Greedy
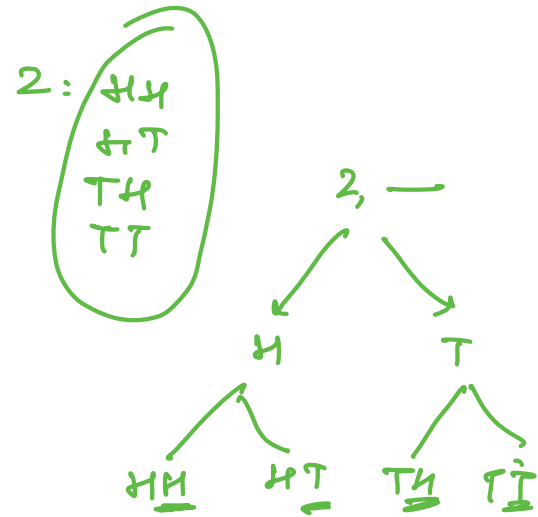- DP ⟹
- Graph

RECURSION

Subsequences

"abc"

2 . 2 . 2

$2^1 = 8$

2^3

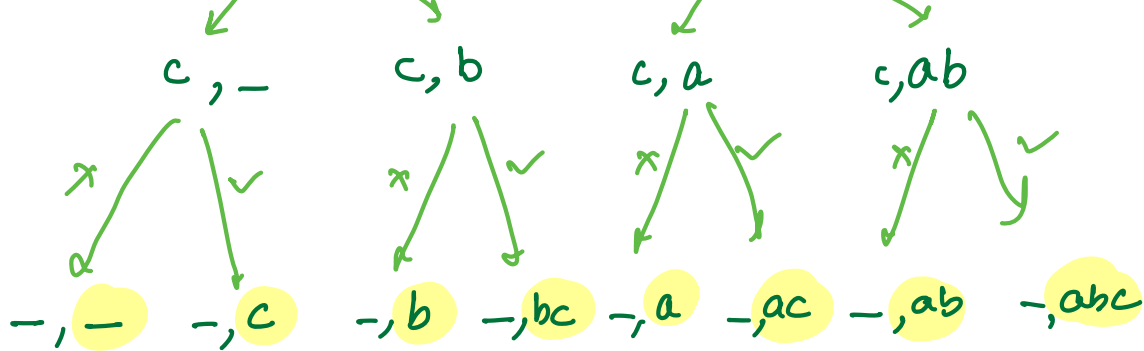2^ℓ

$\{$ ā, a, b, c, ab, ac, bc, abc $\}$ = $\underline{\underline{8}}$

ques   ans

"abc" , ___
0 1 2

✗   ✓

bc , ___   bc , a

✗   ✓   ✗   ✓

2: HH
  HT
  TH
  TT

     2, ___

   H   T

HH   HT   TH   TT

ques [0]
ques. substr (1);

$c, -$ c, b c, a c, ab

$-, -$ $-, c$ $-, b$ $-, bc$ $-, a$ $-, ac$ $-, ab$ $-, abc$

$$[\ "\ ", \ "a", \ "b", \ "c", \ "ac", \ "bc", \ "ca", \ "abc" \ ]$$

"aab"

$\bar{a}$
a
b
aa
ab
ab
aab

Permutation

abc   2!

3!

abc
acb
bac
bca
cab
cba

0 1 2
abc , ____

bc , a⁰   ac , b¹   ab , c²

c, ab   b, ac   c, ba   a, bc   b, ca   a, cb

—, abc   —, acb   —, bac   —, bca   —, cab   —, cba
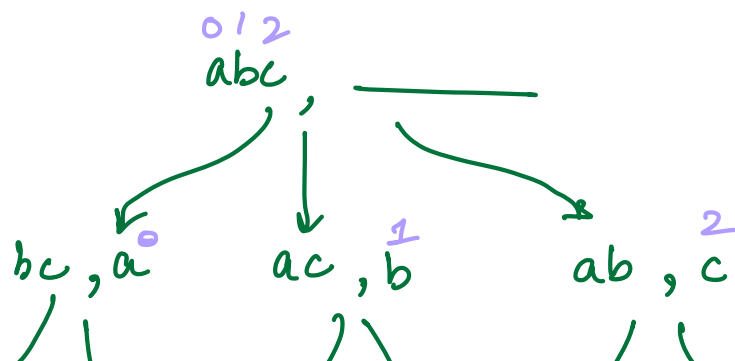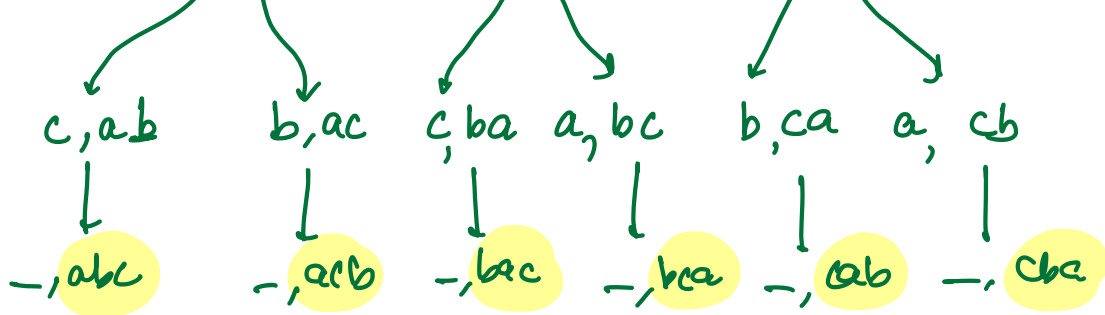
0 1 2 3 4
hello

substr(1) : ello   substr(0,2) : he

substr(4) : o   substr(0,4) : hell

iter char: 0 ——— $i-1$ (i) $i+1$ ——— last

X
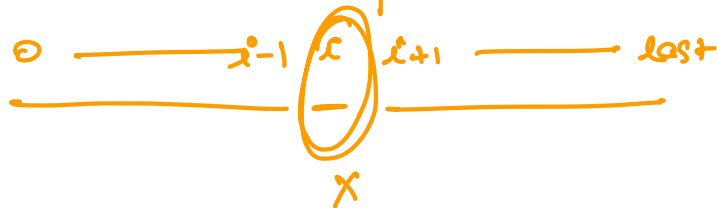
substr(0, i) + substr($i+1$)

"aab"   duplicates?