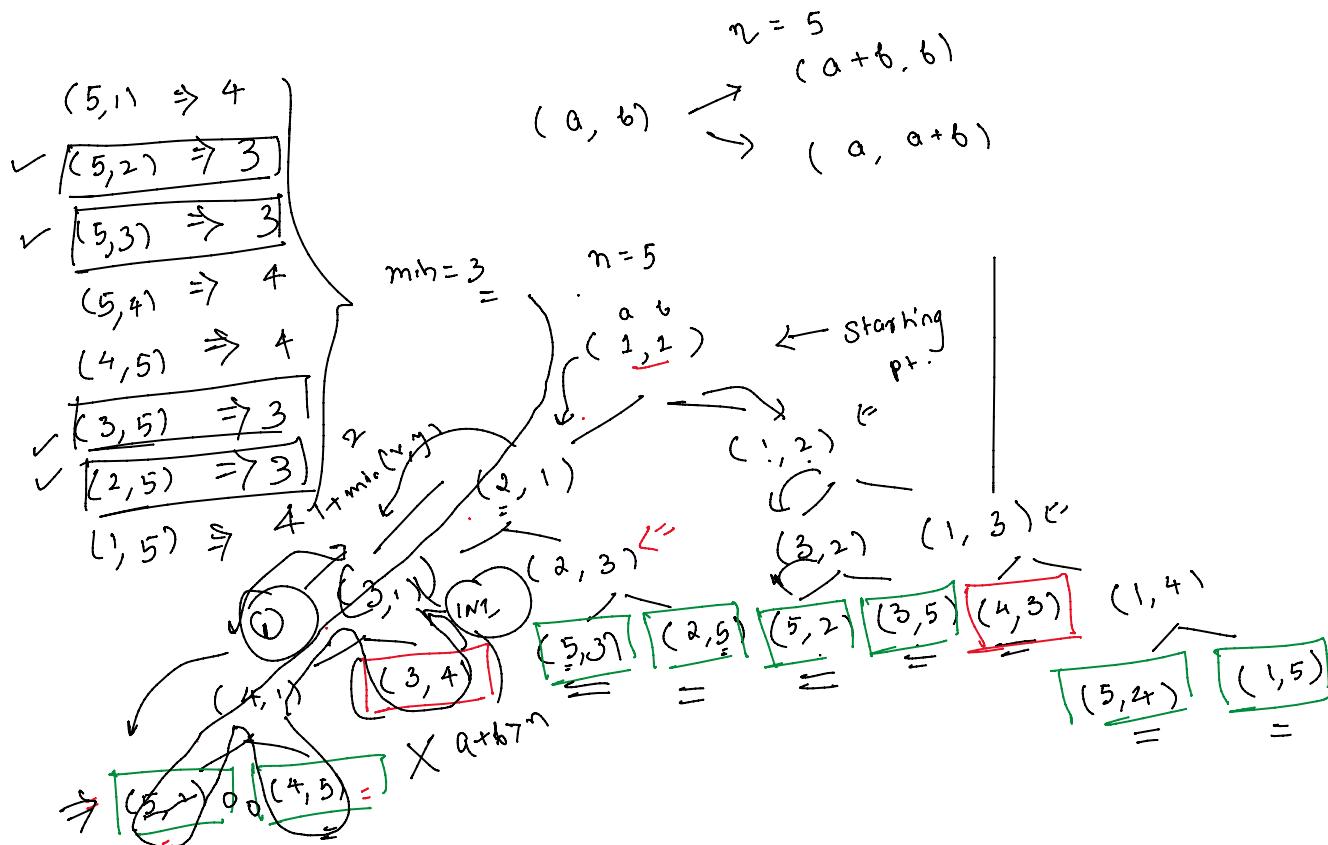


$$\begin{matrix} n = 5 \\ \boxed{k} \end{matrix}$$

$$\begin{matrix} (1, 1) \\ \boxed{=} \end{matrix} \rightarrow \begin{matrix} (5, ?) \\ or \\ (? , 5) \end{matrix}$$



$$\begin{matrix} (a, b) \\ \boxed{(1, 1)} \end{matrix} \xrightarrow{\quad} \begin{matrix} (a, a+b) \\ \boxed{(1, 2)} \end{matrix}$$

$$\begin{matrix} (a+b, b) \\ \boxed{(2, 1)} \end{matrix} \xrightarrow{\quad} \begin{matrix} (a, a+b) \\ \boxed{(1, 2)} \end{matrix}$$

$\Rightarrow \boxed{x} = \boxed{y}$

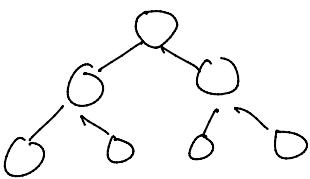
$\downarrow \min(x, y) + 1$

revision

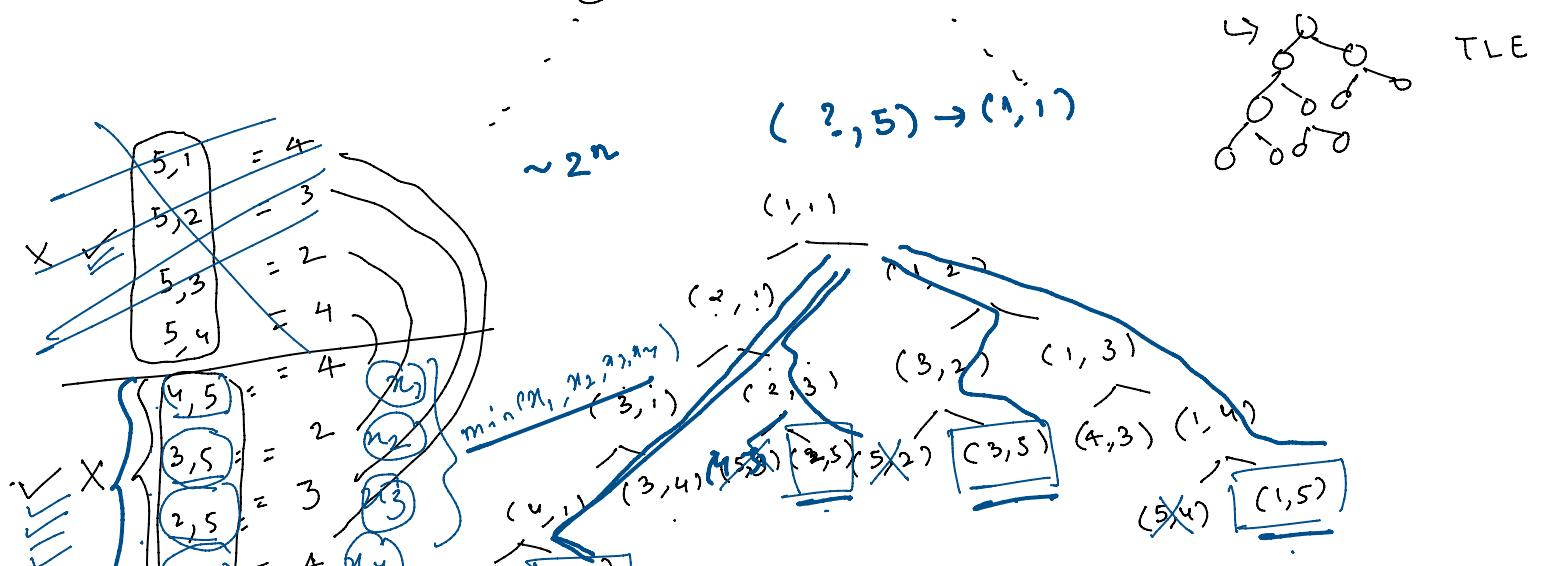
$$\text{recurrence} \quad \left\{ \begin{array}{l} f(a, b) = 1 + \min \left(\begin{array}{l} f \left(\frac{a-a+b}{2}, \frac{a+b}{2} \right), \\ f \left(\frac{a+b}{2}, b \right) \end{array} \right) \end{array} \right\} \text{ recurrence re-run}$$

$$\text{base case} \quad \left\{ \begin{array}{l} f(n, b) = 0 \\ \text{or} \\ f(0, n) \end{array} \right.$$

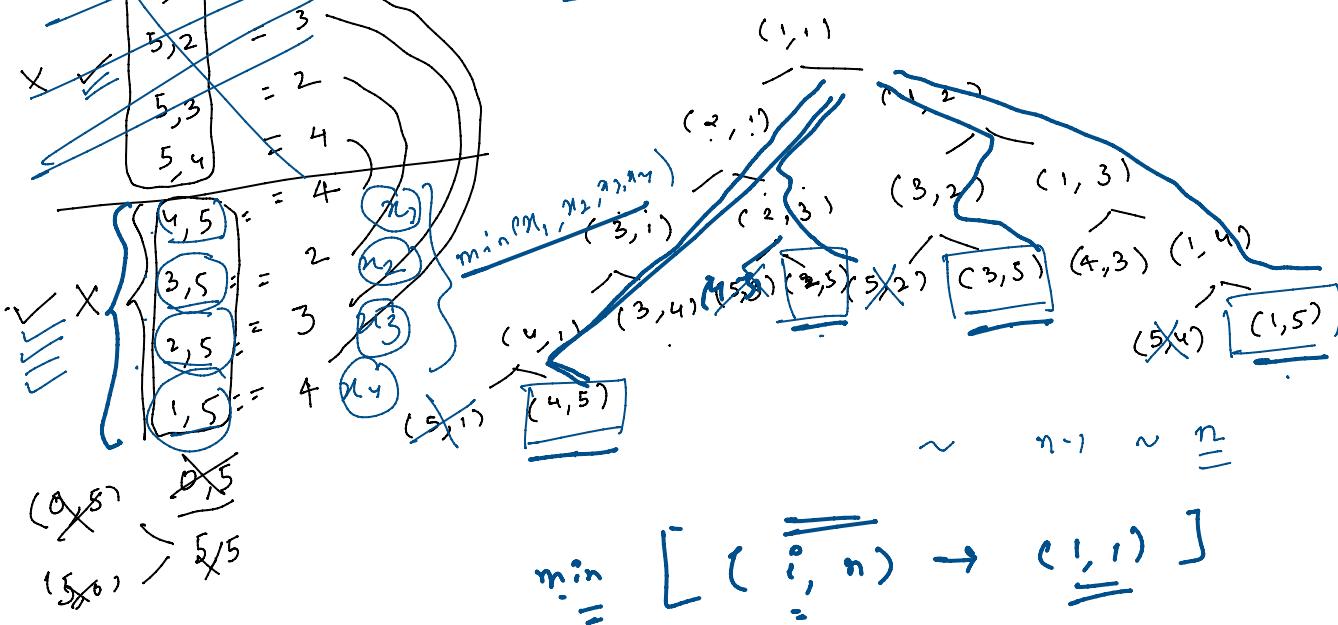
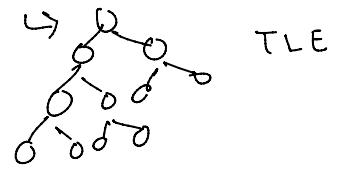
$a = n$
or
 $b = n$



\leq
~ exponential

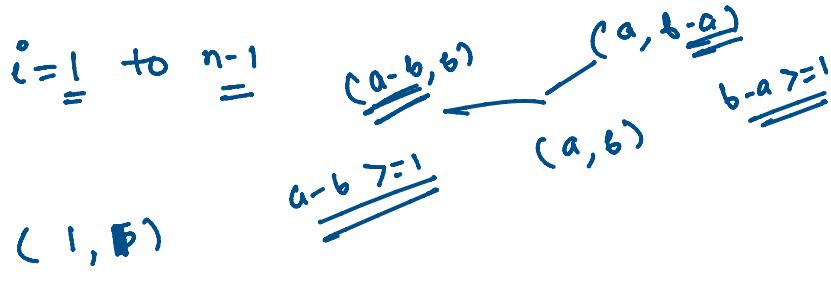


$(?, 5) \rightarrow (1, 1)$



$\min \left[\left(\underline{i}, \underline{n} \right) \rightarrow \left(\underline{1}, \underline{1} \right) \right]$

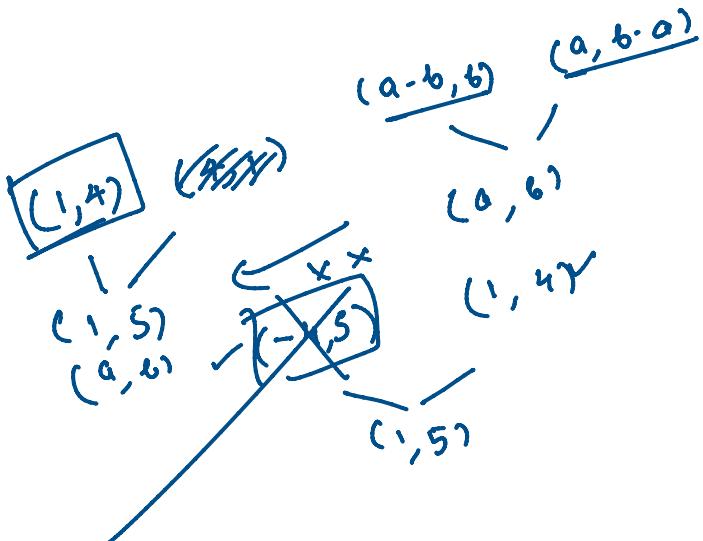
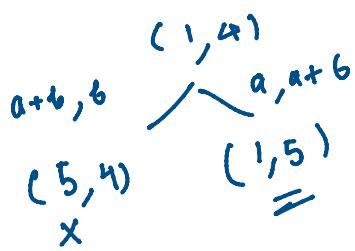
$i = 1 \text{ to } n-1$



$a+b \leq n$

$(1, \underline{n})$

0 x 2



$$f(a, b) = \min \left\{ \begin{array}{l} f(a, b-a) \\ f(a-b, b) \end{array} \right.$$

$$a = 1$$

and

$$b = 1$$

longest palisomeric subring
base :)

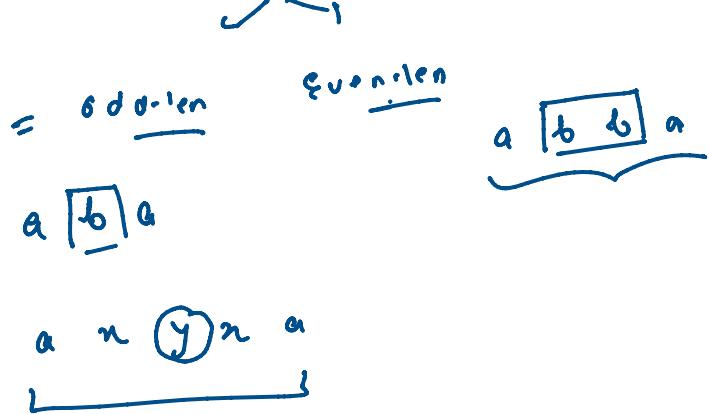
1

" a b x a b b a y b a "

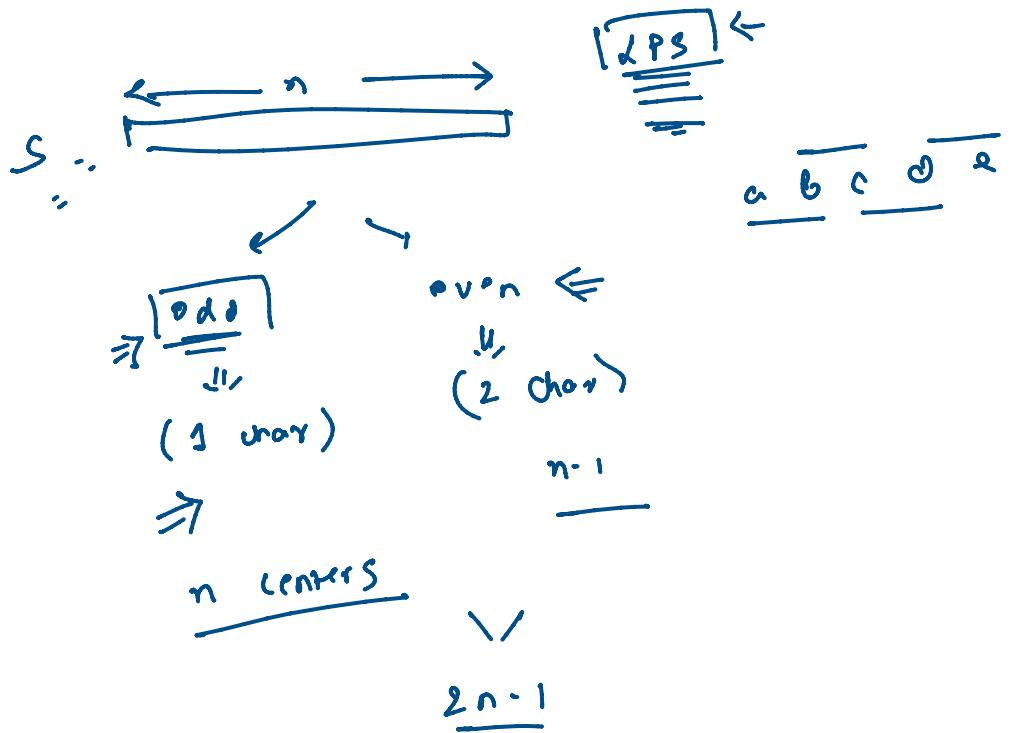
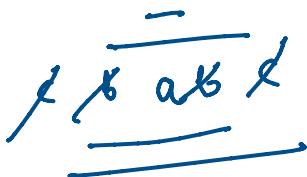
$$\frac{n(n+1)}{2} \sim O(n^2)$$

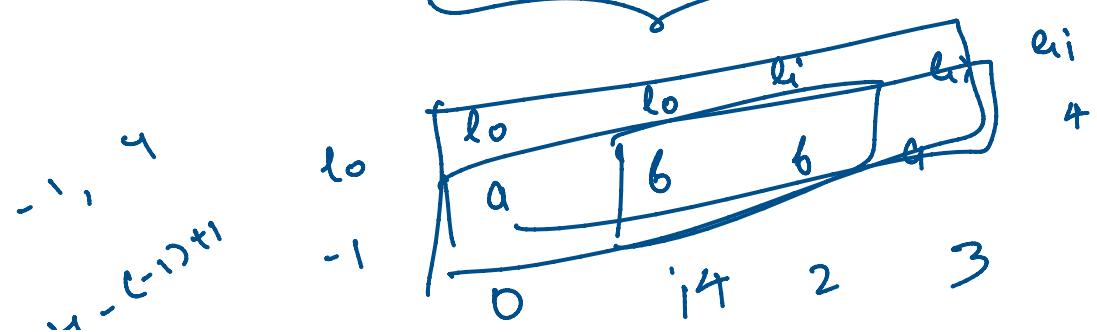
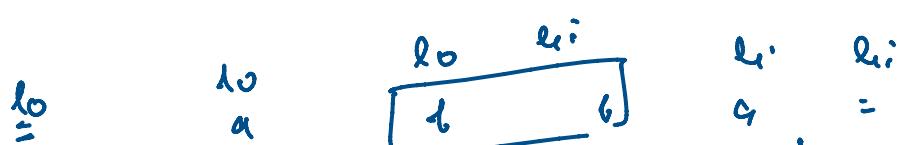
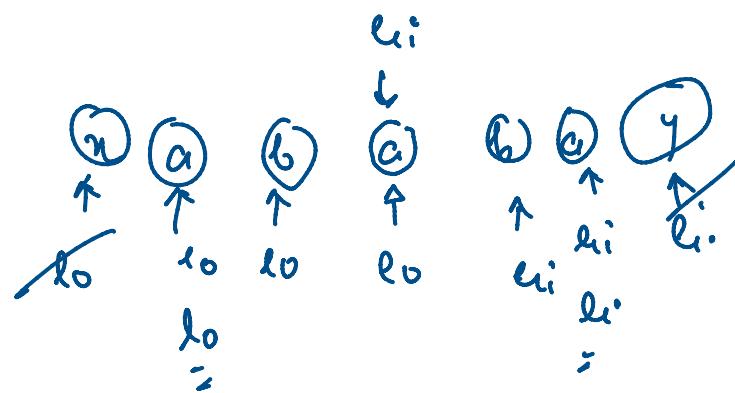
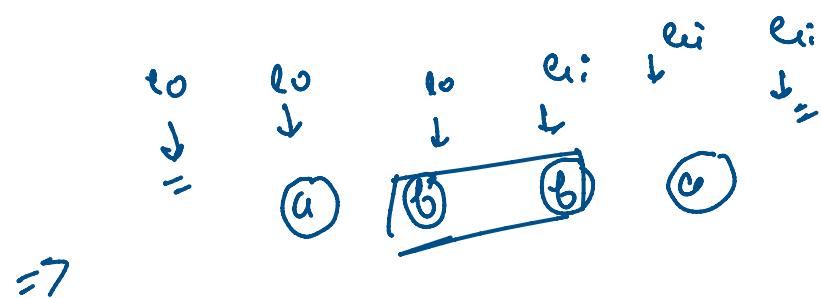
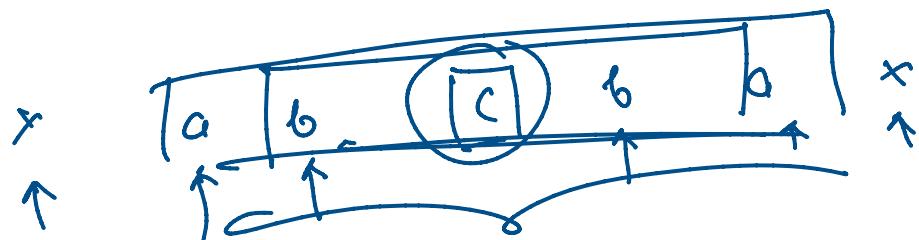
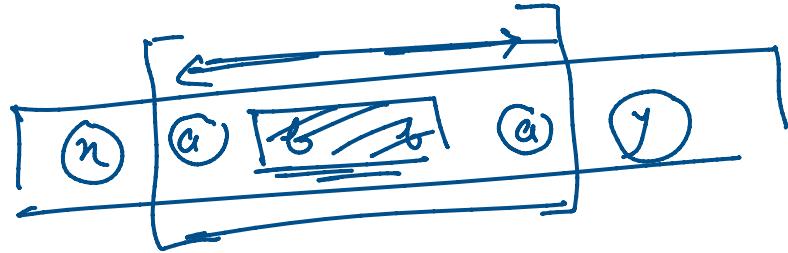
Palindrome

Palindrome



compositionally homogeneous
around center





α
 β
 γ
 δ

$\{ \cdot, \cdot \}$