

## Summary

- ① Arrays
- ② Strings
- ③ Recursion { MergeSort, QuickSort
- ④ Searching & Sorting

↓  
Binary Search

- ⑤ Linked list
  - ↓
  - 1) Reversal
  - 2) cycle detection
  - 3) Palindrome

- ⑥ Stack & Queue
  - ↓
  - LIFO
  - ↓
  - FIFO

↳ Implement Stack using Queue & vice-versa

$n = 24, k = 5 \checkmark$

↓

$$\begin{array}{rcl} 24 \times \underline{1} & = & 24 \\ 24 \times \underline{2} & = & 48 \\ 24 \times \underline{3} & = & 72 \\ 24 \times \underline{4} & = & 96 \\ 24 \times \underline{5} & = & 120 \end{array}$$

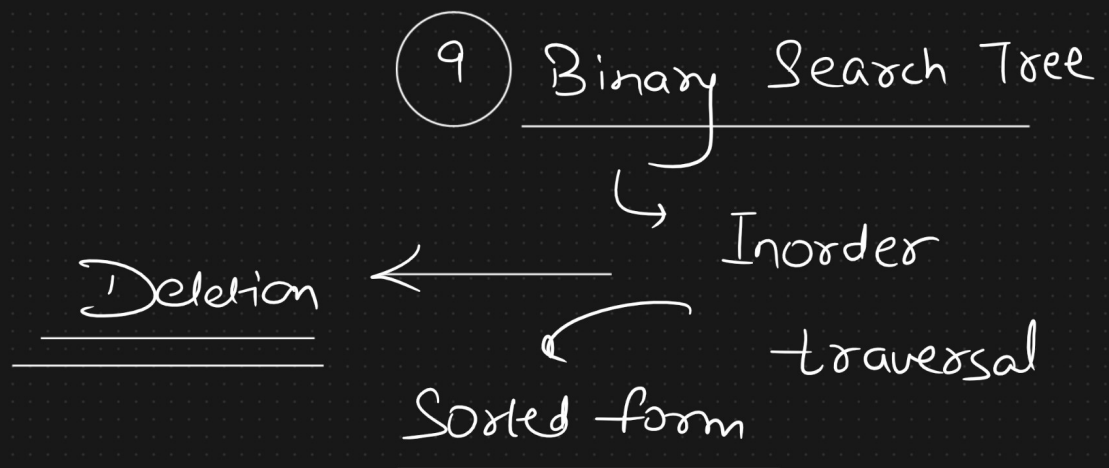
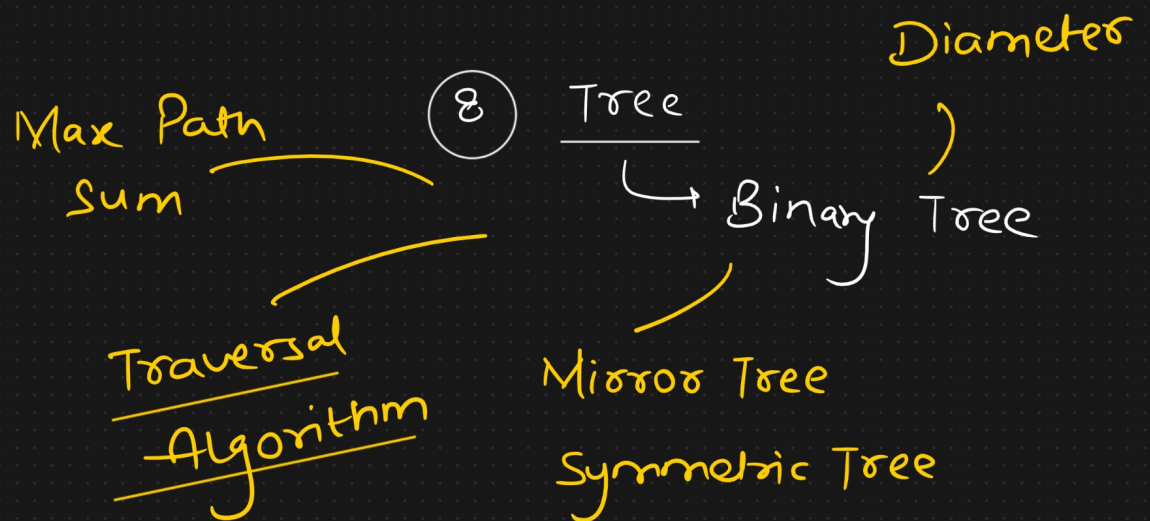
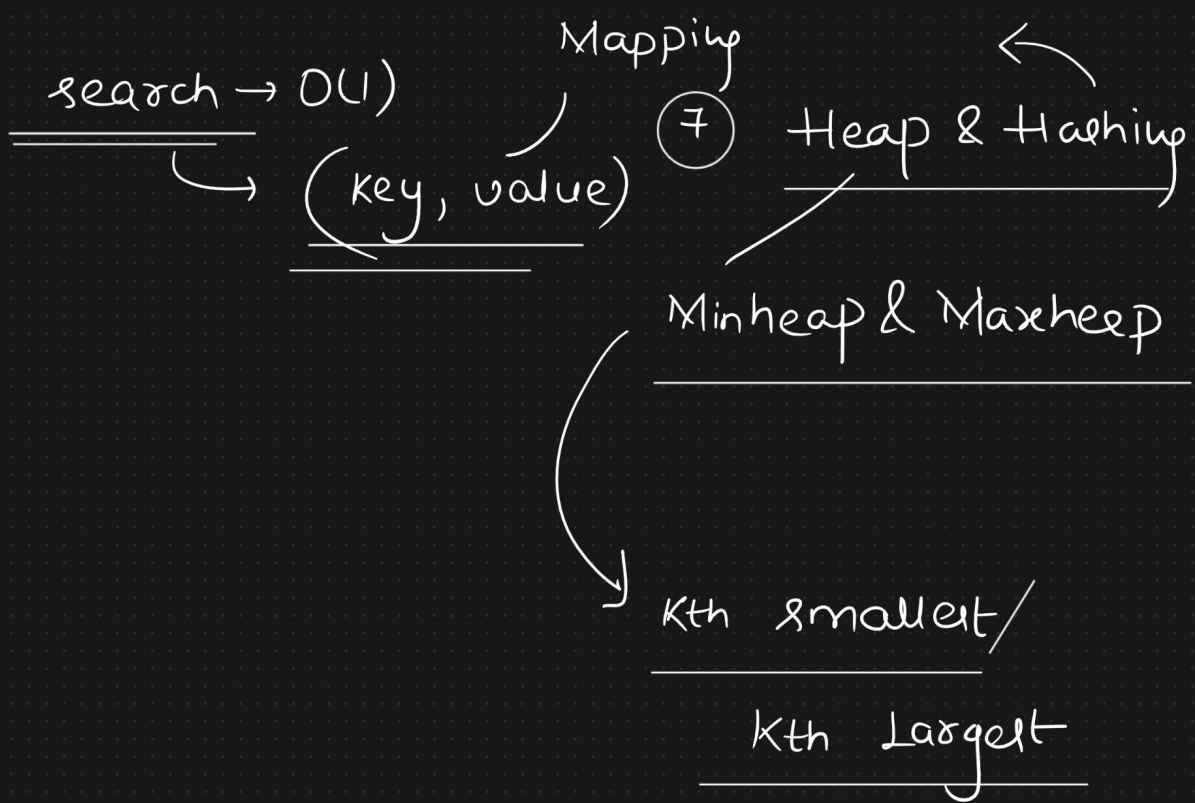
Base case  $\xrightarrow{n \times 1}$   $n$

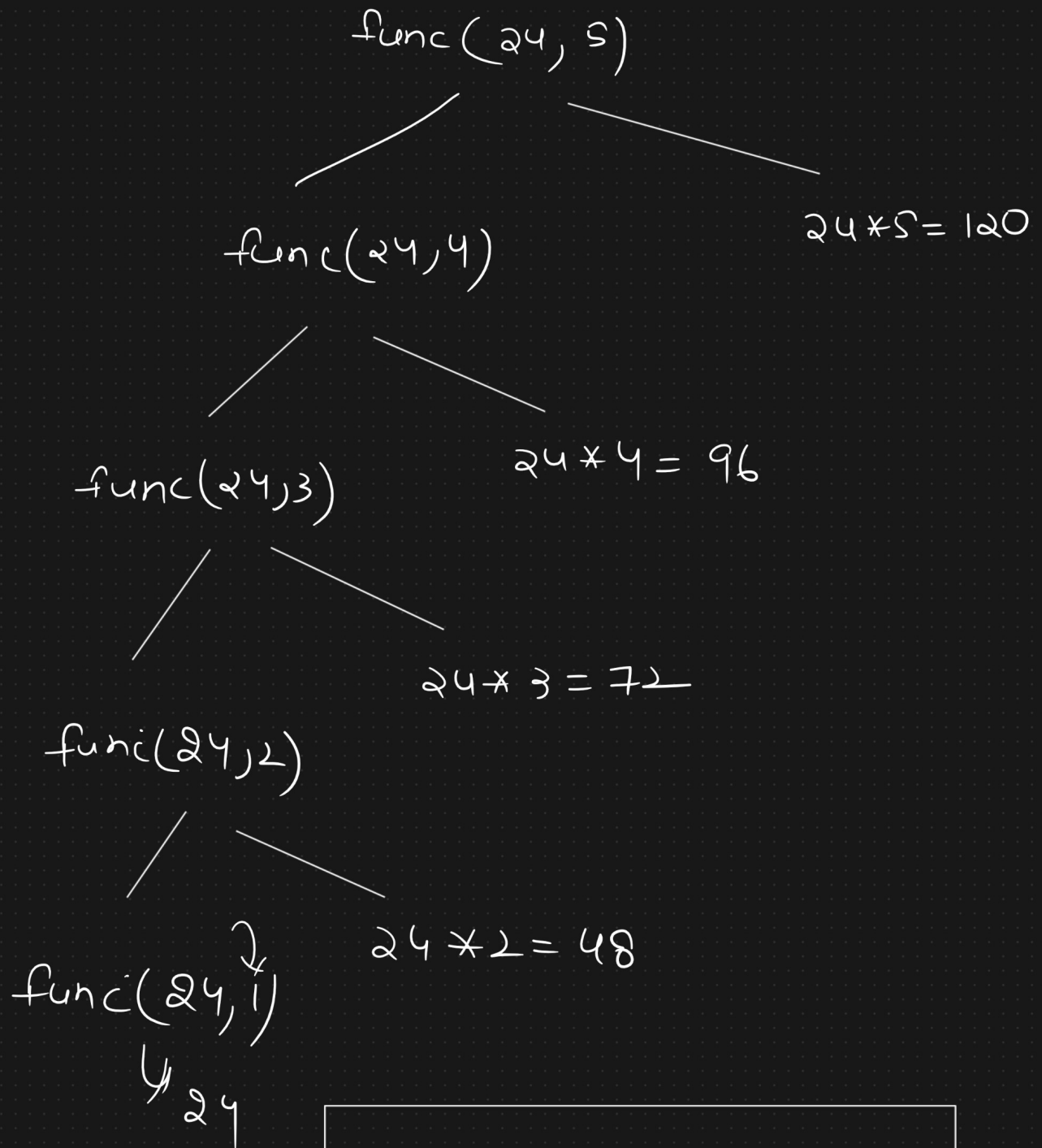
$K == 1$  → return  $n$ ;

Recursive function

fun( $n, k$ )

- ① fun( $n, k-1$ )
- ②  $n \times k$





24, 48, 72, 96, 120

[8, 10]   [9, 11]

Session 1

Session 2

(8, 11)

↓ ↓ ↓ ↓  
intervals = [[1,3],[2,6],[8,10],[15,18]]

(1,6) (8,10) (15,18)

→ Non-overlapping  
interval