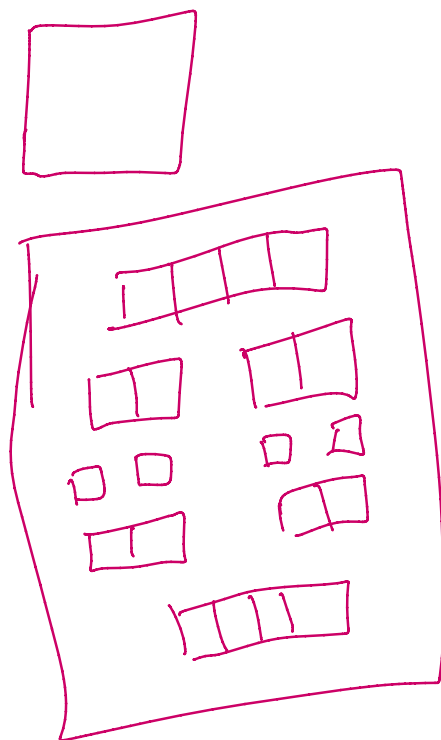
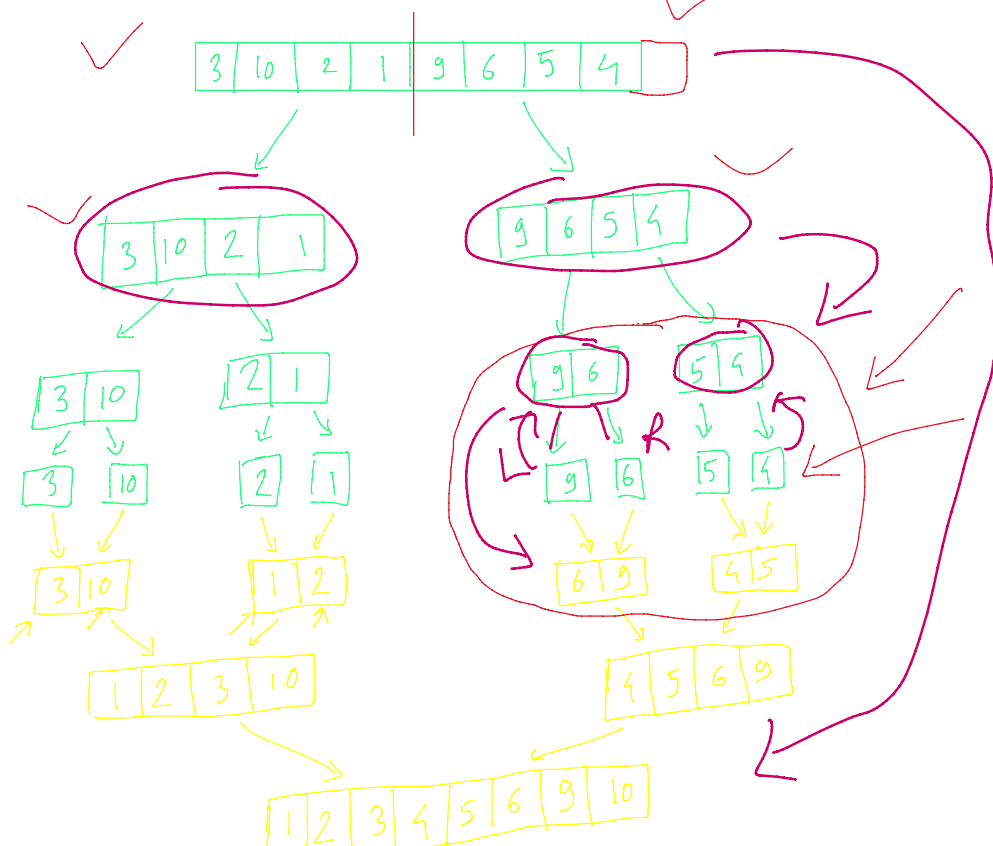


$(n^2)$

$100 \rightarrow 10000$  ✓ ↑

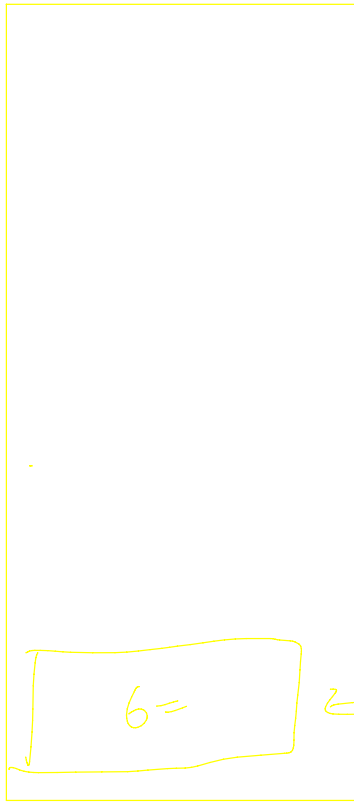
Quick Sort  
sort()

merge Sort → recursive  
Time →  $O(n \log n)$  →  $O(n \log n)$   
space →  $O(n)$  →  $O(1)$





L



sum

sum

sum

← main

$$\text{sum}(3) = 6$$

$$\downarrow \quad \quad \quad \uparrow$$
$$3 + \text{sum}(2) = 6$$

$$\downarrow$$
$$\underline{2 + \text{sum}(1)} = 3$$

$$\downarrow$$
$$1 + \text{sum}(0) = 1$$
$$\downarrow$$
$$\underline{\underline{0}}$$