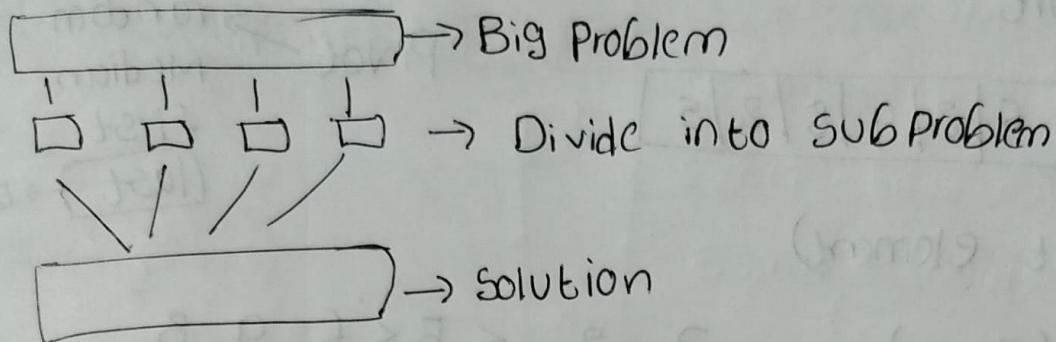
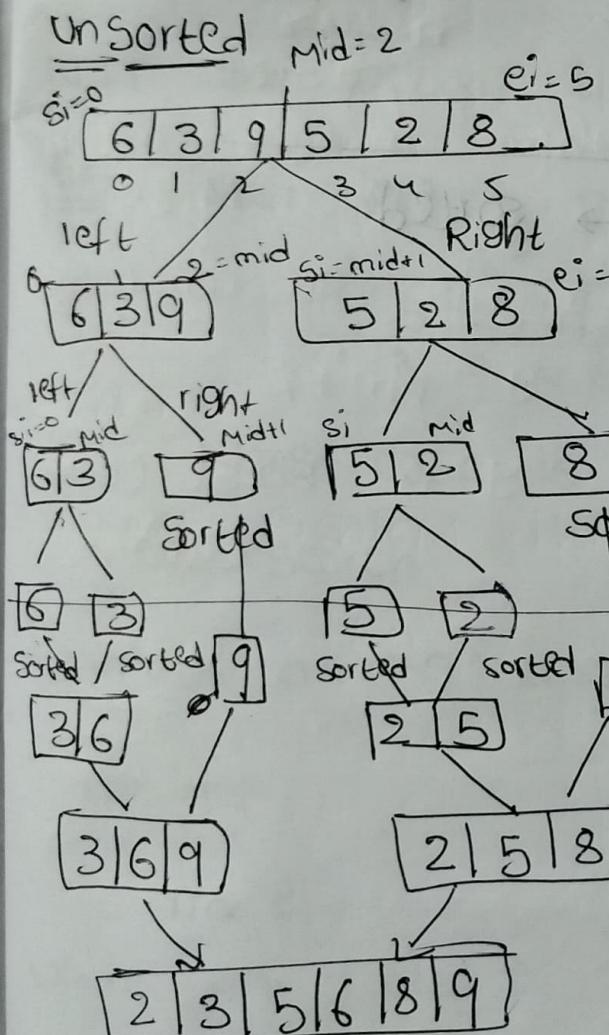


Divide 8 Conquer



Merge Sort



Approach

① Divide

Mid

$St = 0, End = n - 1$

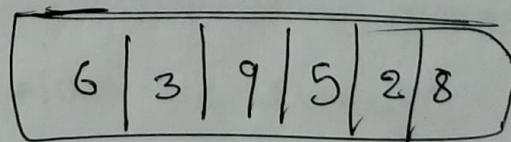
$mid = (St + End) / 2$ (or)

$St + (End - St) / 2$

② Merge sort (left)

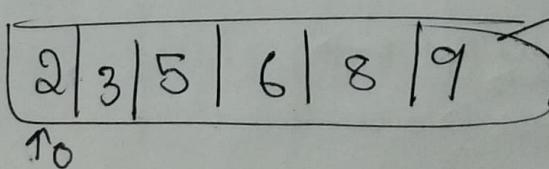
Merge sort (right)

③ Merge



(3, 6, 9) (2, 5, 8)

left + right
temp (size)



(3, 6, 9)
↑
(2, 5, 8)
↑

Problem 2

Quick Sort

6	3	9	8	2	5
---	---	---	---	---	---

Pivot → random
Median
first
last → easy

① Pivot (last element)

② Partition (Parts)

③ quicksort (left)

quicksort (right)

$$\underline{3, 2} \quad < 5 < \underline{6, 9, 8}$$

↓

quicksort

base

single → sorted

$$(0) 5 | (bim + 2) = bim$$

$$5 | (bim + 2) + 2$$

$$(5+2) + 2 = 9$$

$$(5+2+2) + 2 = 11$$

$$5 | 8 | 3 | 9 | 2 | 6$$

8	5	3	9	2	6
---	---	---	---	---	---

8	5	2
---	---	---

P	E
---	---

8	5	2
---	---	---

8	5	2
---	---	---

8	5	2
---	---	---

8	5	2
---	---	---

P	8	5	2	1	9
---	---	---	---	---	---