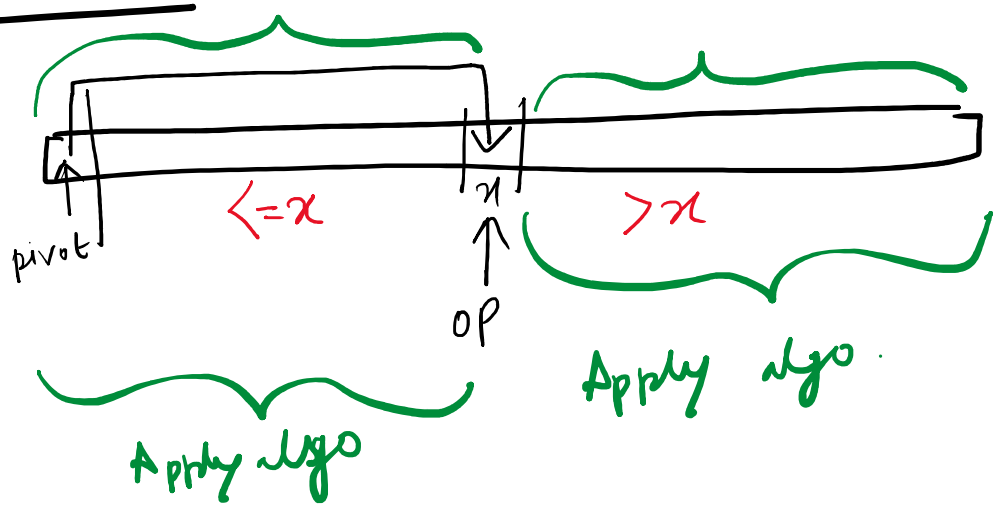
Quick Sort – Based on divide & conquer technique.



Note –

① pivot element

↓

Any one choice

Generally,

pivot = arr[0]

or

pivot = arr[last-element]

35	50	15	25	80	20	90	45
	P				q		

↓↓

35	20	15	25	80	50	90	45
	P	P	P	(P)	q		

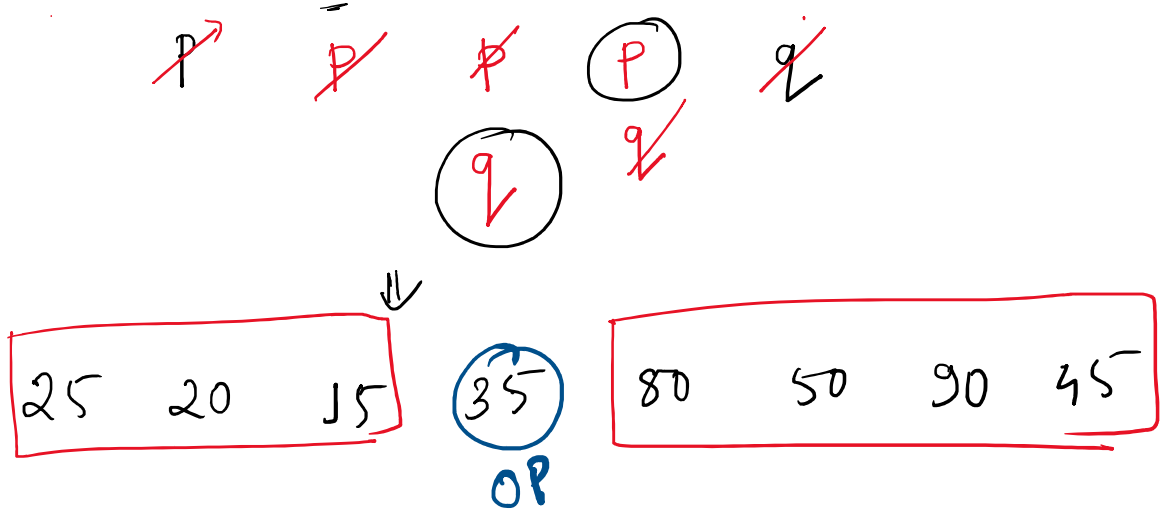
pivot = 35

P, q

① P → arr[P] <= pivot.

q ← arr[q] > pivot.

② Chk if p & q have



② Chk if p & q have crossed each other

↳ swap(pivot, arr[q]);

③ Chk if p & q have not crossed each other.

Swap (arr[p], arr[q])

left arr - 25 20 15 pivot = 25, p

p q

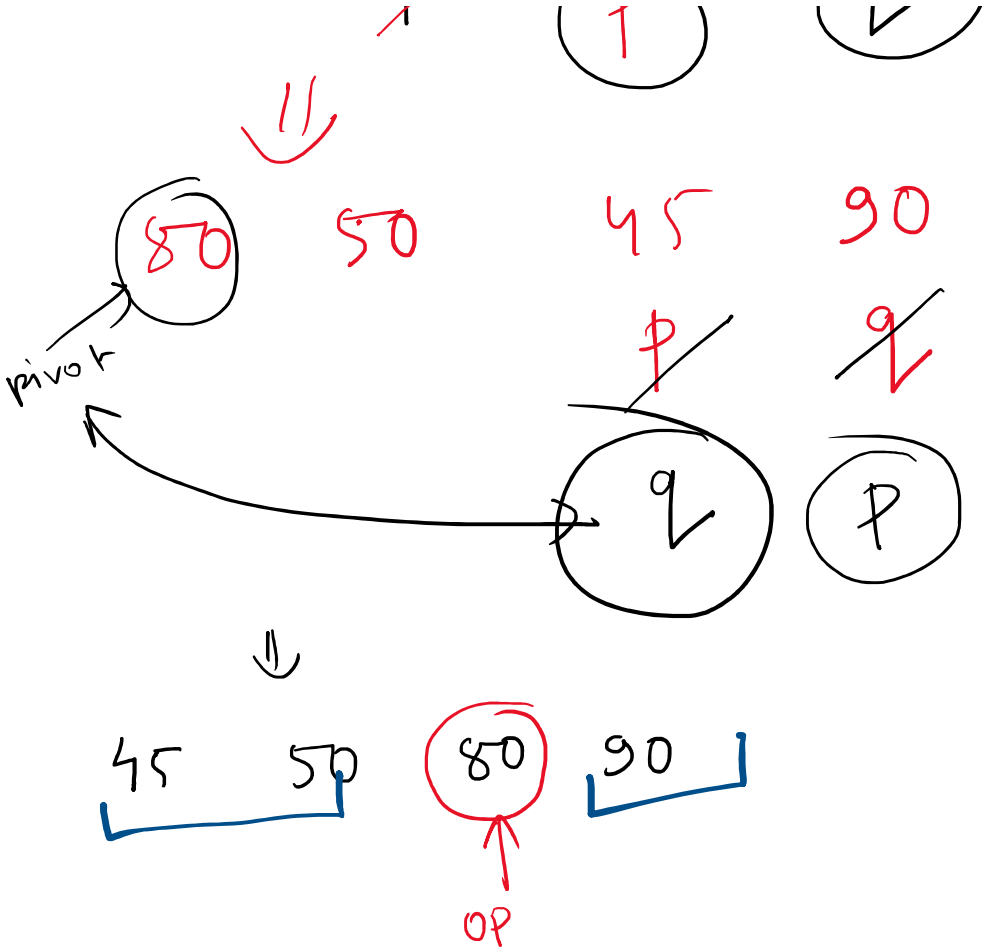
p p

15 20 25 ← op

Right arr - 80 50 90 45 pivot = 80, p

p p q

arr[q] > pivot



arr[p] <= pivot.

45 > 80

45 <= 80

45 > 80