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Batch - A1

Tutorial No: - 05

Subject : Data Structures.

Q Demonstrate the working of Quick Sort for the following list.

(a) 5, 3, 8, 1, 4, 6, 2, 7

Step 1 :- pivot is 5.

after the first partition.

~~3~~ ~~1~~ ~~4~~ ~~2~~ ~~8~~ ~~6~~ ~~8~~ ~~7~~

5 3 8 1 4 6 2 7

3 5 8 1 4 6 2 7

3 1 5 8 4 6 2 7

3 1 4 2 5 6 8 7

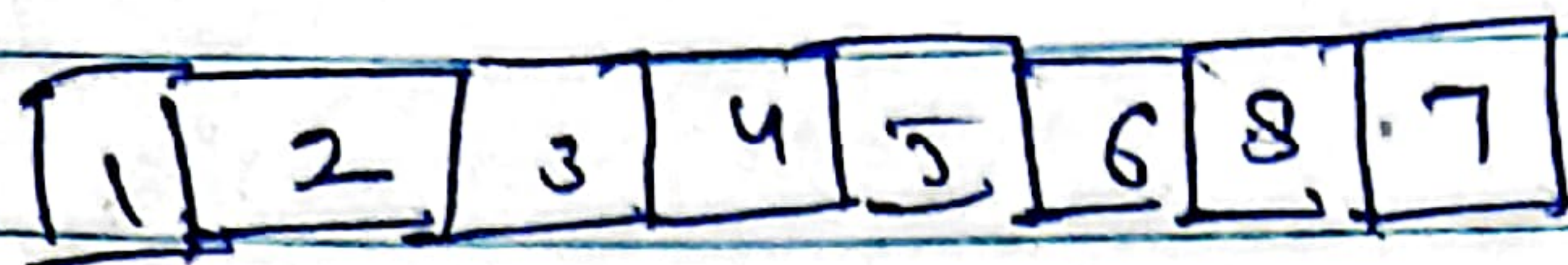
Step 2 :- pivot is 2

2 1 3 4 5 6 8 7

Step 3 :- pivot is 4

1 2 3 4 5 6 8 7

Step - 4



Step - 5



⑥ 54, 26, 93, 17, 77, 31, 44, 55, 20

→ Pivot element 54

20	26	17	31	44	54	93	77	55
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Pivot element 44

20	26	17	31	44	54	55	77	93
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pivot element 26

17	20	26	31	44	54	55	77	93
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pivot element 31

17	20	26	31	44	54	55	77	93
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$$\textcircled{2} \quad [44, 22, 14, 38, 8, 55]$$

$$\rightarrow [22, 44, 14, 38, 8, 55]$$

$$\rightarrow [22, 14, 44, 38, 8, 55]$$

$$\rightarrow [22, 14, 38, 44, 8, 55]$$

$$\rightarrow [22, 14, 38, 8, 44, 55]$$

$$\rightarrow [14, 22, 38, 8, 44, 55]$$

$$\rightarrow [14, 22, 8, 38, 44, 55]$$

$$\rightarrow [14, 8, 22, 38, 44, 55]$$

$$\rightarrow [8, 14, 22, 38, 44, 55]$$

$$\textcircled{3} \quad [15, 11, 16, 12, 14, 18]$$

$$\rightarrow [11, 15, 16, 12, 14, 18]$$

$$[11, 15, 12, 16, 14, 18]$$

$$[11, 15, 12, 14, 16, 18]$$

$$[11, 12, 15, 14, 16, 18]$$

$$[11, 12, 14, 15, 16, 18]$$