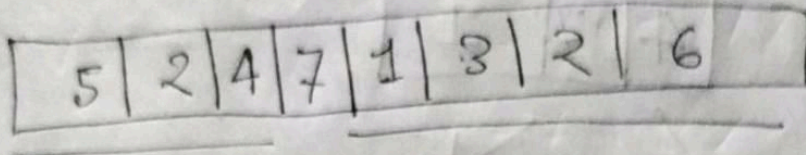


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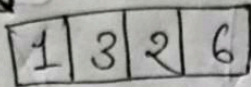
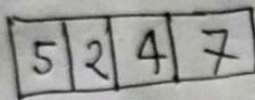
4th class

backedge

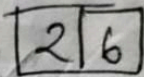
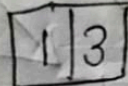
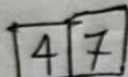
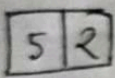
# Merge sort



Divide:



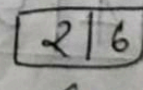
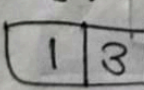
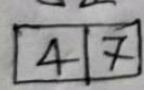
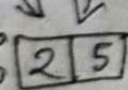
Divide:



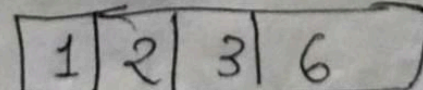
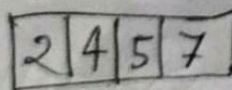
Divide:



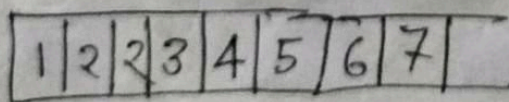
Merge:



Merge:



Merge:



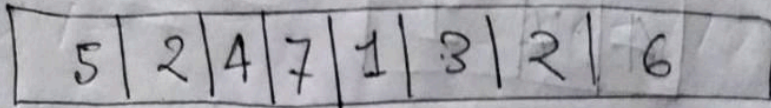


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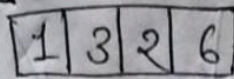
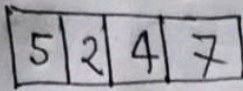
4th class

backedge

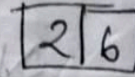
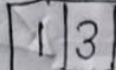
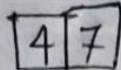
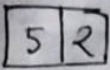
# Merge sort



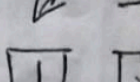
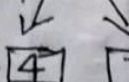
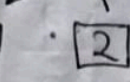
Divide:



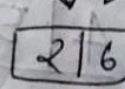
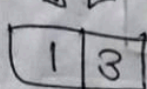
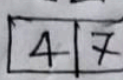
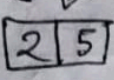
Divide:



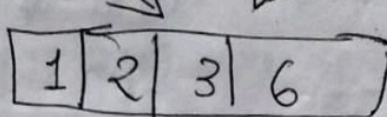
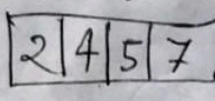
Divide:



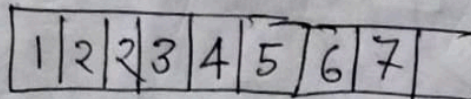
Merge:



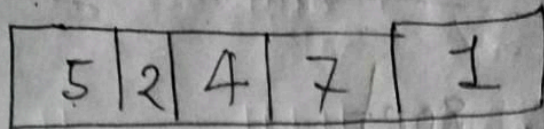
Merge:



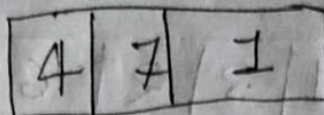
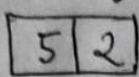
Merge:



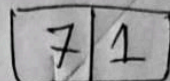




Divide:



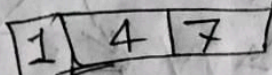
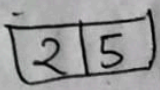
Divide:



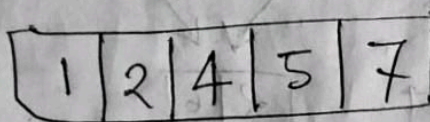
Divide:



Merge:



Merge:





# Binary Search Iteration:

3	6	8	12	14	17	25	29	31	36	42	47	53	55	62
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

Key = 12 → [कौन सा एने धुँडे लाऊँगा?] ]

$$l \quad h \quad \text{mid} \left( \frac{l+h}{2} \right)$$

$$1 \quad 15 \quad \frac{1+15}{2} = \frac{16}{2} = 8$$

$$1 \quad 7 \quad \frac{1+7}{2} = \frac{8}{2} = 4$$

3	6	8	12	14	17	25	29	31	36	42	47	53	55	62
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

Key = 42 → [कौन सा एने धुँडे लाऊँगा?] ]

$$l \quad h \quad \text{mid} \left( \frac{l+h}{2} \right)$$

$$1 \quad 15 \quad = \frac{1+15}{2} = \frac{16}{2} = 8$$

$$9 \quad 15 \quad = \frac{9+15}{2} = \frac{24}{2} = 12$$

$$9 \quad 11 \quad = \frac{11+9}{2} = \frac{20}{2} = 10$$



$$L. \quad h \quad \text{mid} \left( \frac{l+h}{2} \right)$$

$$11 \quad 11 \quad = \frac{11+11}{2} = \frac{22}{2} = 11 \quad \underline{\underline{Ans}} \quad 8$$

$$\left( \frac{l+h}{2} \right) \text{ bin}$$

$$8 = \frac{8}{2} = \frac{1+15}{2}$$

$$17 = \frac{8}{2} = \frac{1+17}{2}$$

5	12	23	44	7	28	18	30	32	41	10	17	8	20	9
---	----	----	----	---	----	----	----	----	----	----	----	---	----	---

$$\left( \frac{l+h}{2} \right) \text{ bin}$$

$$8 = \frac{8}{2} = \frac{1+15}{2}$$

$$17 = \frac{8}{2} = \frac{1+17}{2}$$

$$8 = \frac{8}{2} = \frac{1+15}{2}$$



3	6	8	12	14	17	25	29	31	36	46	47	53	55	62
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

Key = 3015 : 01

l h mid  $\left(\frac{l+h}{2}\right)$

1 15  $\frac{1+15}{2} = \frac{16}{2} = 8$

9 15  $\frac{15+9}{2} = \frac{24}{2} = 12$

9 11  $\frac{11+9}{2} = \frac{20}{2} = 10$

9 9  $\frac{9+9}{2} = \frac{18}{2} = 9$

9 8  $\rightarrow$  ~~l < h~~

l > h so this element doesn't belong to the array.

3

3

3

3 8 5

5 3

3 3

5 3

3 3

3 3

3 3

3 3

3 3

3 3

3 3

3 3

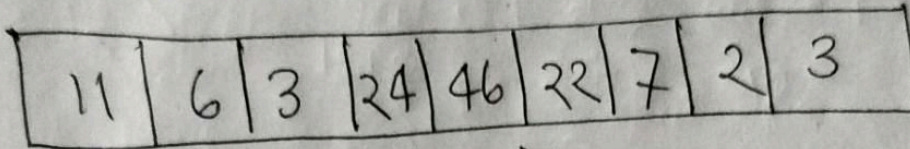


Name: Hure Zannat Minu

ID : 2118CSE50223

Batch: 18th

### Assignment: 01



Divide: 

11	6	3	24
----	---	---	----

Divide: 

11	6
----	---

3	24
---	----

Divide: 

11
----

6
---

3
---

24
----

Divide: 

11
----

6
---

3
---

24
----

Merge: 

6	11
---	----

3	24
---	----

Merge: 

2	3	3	6	7	11	22	24	46
---	---	---	---	---	----	----	----	----

46	22	7	2	3
----	----	---	---	---

46	22
----	----

7	2	3
---	---	---

46
----

22
----

7	2
---	---

3
---

46
----

22
----

7
---

2
---

3
---

22	46
----	----

2	3	7
---	---	---

22	46
----	----

2	3	7
---	---	---