

# Merge Sort

A 

5	2	4	7	1
---	---	---	---	---

0	1	2	3	4
---	---	---	---	---

$low=0, high=4, mid=2$

MSort(A, 0, 2)

MSort(A, 3, 4)

$l=0, h=2, m=1$

5	2	4
---	---	---

0	1	2
---	---	---

7	1
---	---

3	4
---	---

$l=3, h=4, m=3$

MSort(A, 0, 1)

MSort(A, 2, 2)

MSort(A, 3, 3)

MSort(A, 4, 4)

$l=0, h=1, m=0$

5	2
---	---

0	1
---	---

4
---

2
---

7
---

3
---

1
---

4
---

MSort(A, 0, 0)

MSort(A, 1, 1)

5
---

0
---

2
---

1
---

Merge(A, 0, 0, 1)

2	5
---	---

0	1
---	---

Merge(A, 0, 1, 2)

2	4	5
---	---	---

0	1	2
---	---	---

Merge(A, 3, 3, 4)

1	7
---	---

3	4
---	---

Merge(A, 0, 2, 4)

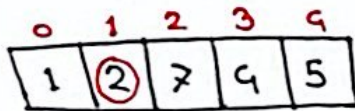
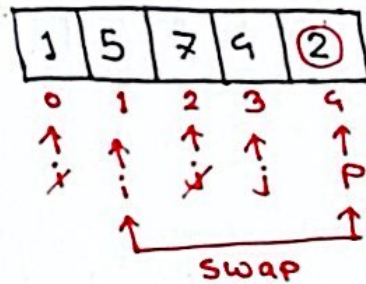
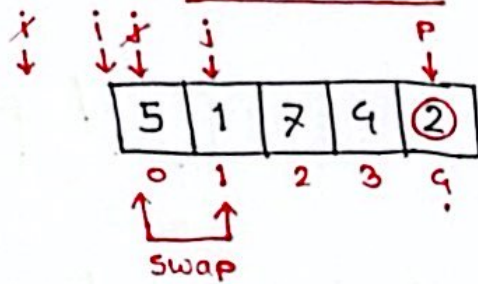
1	2	4	5	7
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0	1	2	3	4
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QSort(A, 0, 4)

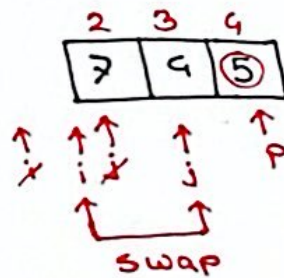
## Quick Sort



QSort(A, 0, 0)



QSort(A, 2, 4)



QSort(A, 2, 2)

QSort(A, 4, 4)