

In this Video, we are going to solve questions on Array:

- Reverse an Array after m position
- Merge 2 sorted arrays
- Move zeroes to end

There is a lot to learn, Keep in mind “ Mnn boot karega k chor yrr apne se nahi yoga ya maza nahi para, Just ask 1 question “ Why I started ? ”

Visit Coding ninjas: <https://bit.ly/31zFssd>

Discord Server Link: <https://discord.gg/feSQuVXMrd>

Course Flow: <https://whimsical.com/dsa-4-placement...>

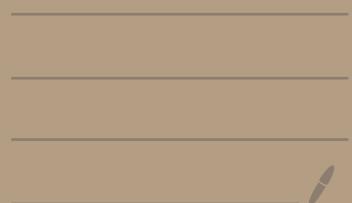
Homework: Added in Video already

Notes Link: <https://drive.google.com/file/d/1JeIK...>

Code Links: <https://github.com/loveBabbar/CodeHel...>

Question Links:

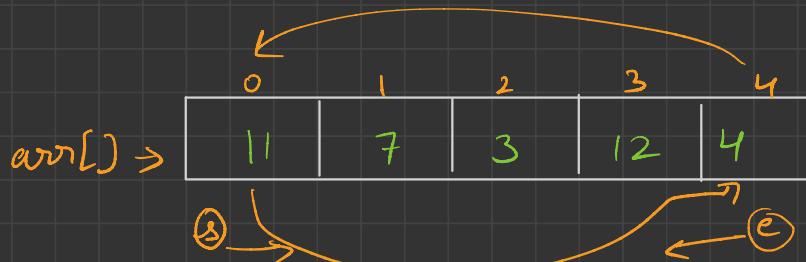
- Reverse an Array: <https://bit.ly/3EOyAFz>
- Merge 2 sorted arrays:<https://leetcode.com/problems/merge-s...>
- Move zeroes to end:<https://leetcode.com/problems/move-ze...>



$\text{arr}[] \rightarrow \{ 1, 3, 2, 4 \}$

Reverse

$\{ 4, 2, 3, 1 \}$



→ 4, 7, 3, 12, 11

② → c

→ 4, 12, 3, 7, 11

③ → c

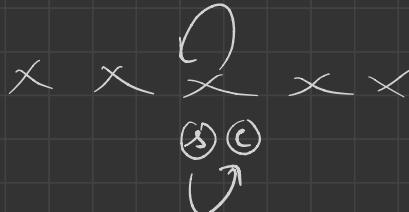
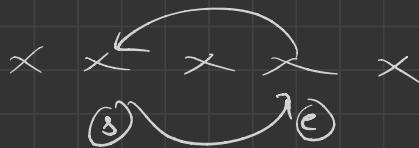
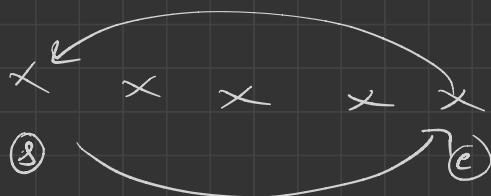
j = 2c

4, 12, 3, 7, 11

Original array →

11 7 3 12 4

4 12 3 7 11



c s

$s > c$
your
just

$\rightarrow \text{arr1}[] = \{ \underline{\underline{i}}, \underline{\underline{1}}, \underline{\underline{3}}, \underline{\underline{5}}, \underline{\underline{7}}, \underline{\underline{9}} \}$
 $\text{arr2}[] = \{ \underline{\underline{2}}, \underline{\underline{4}}, \underline{\underline{6}} \}$

$i - \downarrow j$
 $\rightarrow \frac{\text{arr1}[i]}{\text{arr2}[j]}$
 \downarrow
 \swarrow
 \searrow
 $\text{arr3}[] / \text{index increment}$

1	2	3	4	5	6	7	8
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$\{ \frac{1}{ix}, \frac{3}{ix}, \frac{5}{ix}, \frac{7}{ix}, \frac{9}{ix} \}$
 $\{ 2, 4, 6, 8, 10 \} \rightarrow$
 j → array set → sort arr

$$1 \Big| 2 \Big| 3 \Big| 4 \Big| 5 \Big| 6 \Big)$$

while (i < n and j = m)
 \downarrow
 \uparrow

while ($i < n$)
 copy
 \downarrow

while ($j < m$)
 copy
 j

Move zeros

$$\{ 0, 1, 0, 3, 12 \}$$

$$o/p \rightarrow \{ 1, 3, 12, 0, 0 \}$$

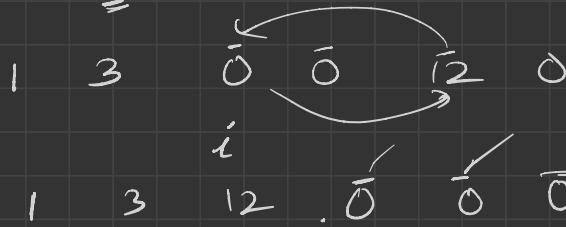
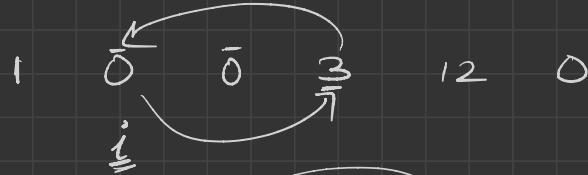
$$i/p \rightarrow \{ 2, 0, 1, 3, 0, 0, 0 \}$$

$$o/p \rightarrow \{ 2, 1, 3, 0, 0, 0, 0 \}$$

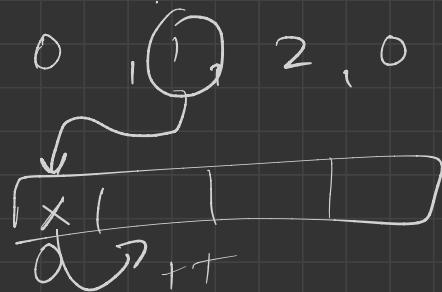


$i = 1$
1 is non zero
 $i = 1$

$= 0 \rightarrow \text{ignore}$
 $\neq 0 \rightarrow \text{swap}, i++$



$i = 5$
 $i \rightarrow n$



Rotate Array

(1, 3, 9, 12, 17)

K=2

12 17 1 3 9

1 3 7 9 11

K=4

3 7 9 11 1

2 3 7

12 15 9

K=3

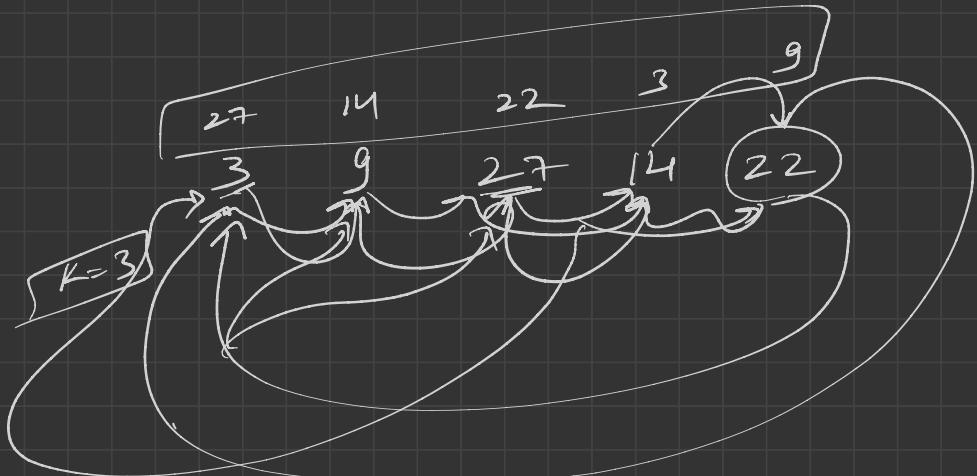
12 15 9 2 3 7

1, 2, 3, 4, 5, 6, 7 $K=3$

5, 6, 7, 1, 2, 3, 4

-1, -100, 3, 99 $K=2$

3, 99, -1, -100



0 1 2 3 4 5

0 1 2 3 4 5 0 1 2 3 5

$$n = \left\lceil \frac{1234}{10} \right\rceil \rightarrow \left\lceil \frac{0 - 9}{ans} \right\rceil$$

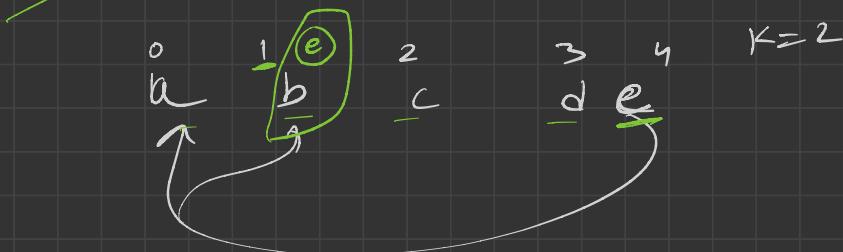
$$\% n \rightarrow \left\lceil 0 - (n-1) \right\rceil$$

$i \rightarrow$ current index

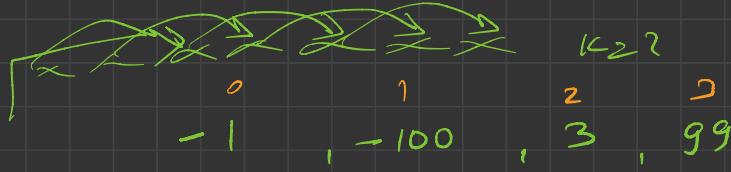
$k \rightarrow$ shift $n \rightarrow$ size of array

$$(i+k) \% n$$

$$arr[(i+k)\%n] = arr[i]$$



$$(4+2)\%5$$
$$6 \% 5 = 1$$



$K=2$

$K=2$

$i=0$

$$\text{arr}[(i+K) \cdot \cdot n] = \text{arr}[i]$$

shifting of
start ($n-K$)
value by K
place

$$\text{arr}[2] = \text{arr}[i]$$

$\begin{array}{cccc} 0 & 1 & 2 & 3 \\ -1 & -100 & -1 & 99 \end{array}$

$i=1$

$$\text{arr}[(1+2) \cdot \cdot 4] = \text{arr}[i] = -100$$

$$\text{arr}[3] = -100$$

$\begin{array}{cccc} 0 & 1 & 2 & 3 \\ -1 & -100 & -1 & -100 \end{array}$

Also
↳ copy last
 K
values

$i=2$

$$\text{arr}[(2+2) \cdot \cdot 4] = \text{arr}[2]$$

$$\text{arr}[0] = -1$$

$\begin{array}{cccc} -1 & -100 & -1 & -100 \end{array}$

↳ Apply from
↳ place copied
values

$\underline{i=3}$

$$\text{arr}[(3+2) \cdot \cdot 4] = \text{arr}[3]$$

$$\text{arr}[1] = \text{arr}[3]$$

$\begin{array}{cccc} -1 & -100 & -1 & -100 \end{array}$