

## Rotate Array by k times

Ex:  $arr[] = \{3, -2, 1, 4, 6, 9, 8\}$  ,  $k=3$

We have to rotate by 3 places

$arr[] = \{3, -2, 1, 4, 6, 9, 8\}$

↙ 1<sup>st</sup> rotation

$\{8, 3, -2, 1, 4, 6, 9\}$

↙ 2<sup>nd</sup> rotation

$\{9, 8, 3, -2, 1, 4, 6\}$

↙ 3<sup>rd</sup> rotation

$\{6, 9, 8, 3, -2, 1, 4\}$

↘ we have to return this array

## // Optimal Idea

- ① Reverse whole array
- ② Reverse first  $k$ -Elements
- ③ Reverse the elements after  $k$  elements

Ex:  $\{3, -2, 1, 4, 6, 9, 8\}$ ,  $k=3$

reverse whole array  
 $\{8, 9, 6, 4, 1, -2, 3\}$

reverse first 3 elements  
 $\{6, 9, 8, 4, 1, -2, 3\}$

reverse elements after 3 elements  
 $\{6, 9, 8, 3, -2, 1, 4\}$   
final array