

# Array



## Linear data structure

Collection of elements of similar data type.

0	1	2	3	4	5	6	7	8
[25	35	5	80	92	67	42	51	47]

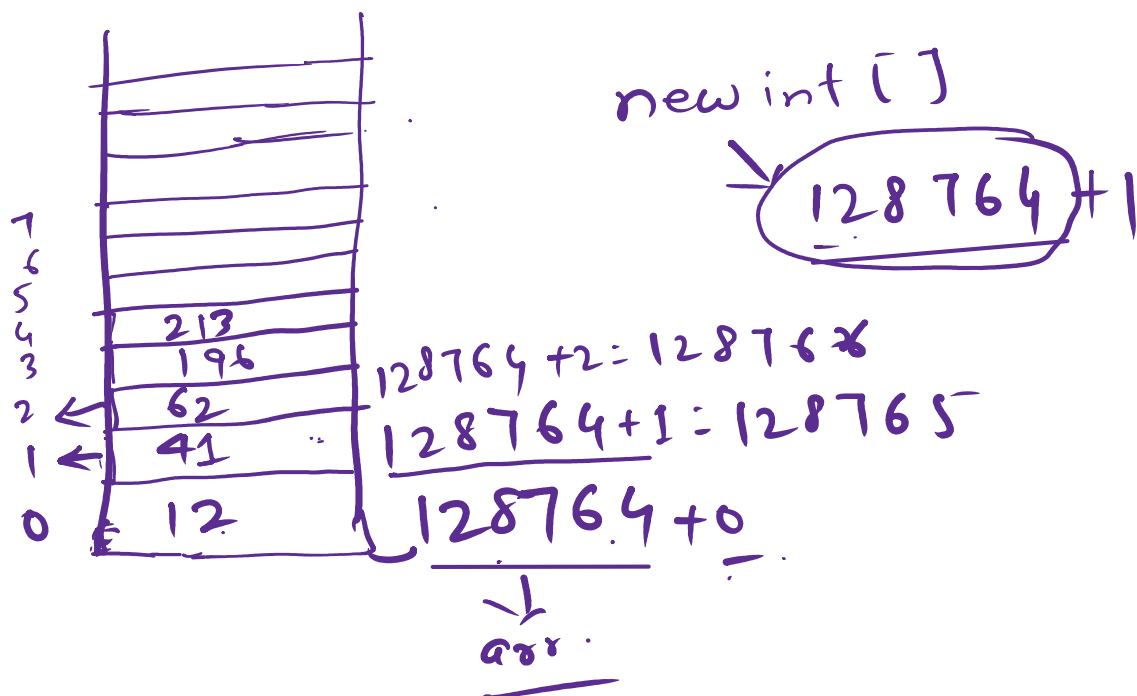
1st Way int arr[] = new int[9];

arr[0] = 25;    arr[3] = 80;  
 arr[1] = 35;    arr[4] = 92;  
 arr[2] = 5;    arr[5] = 67;  
 arr[6] = 42;    arr[7] = 51;  
 arr[8] = 47;

2nd Way int jatin[] = { 25, 35, 5, 80, 92, 67, 42, 7, 47 };

jatin[0] = 50;

[50, 35, 5, 80, 92, 67, 42, 7, 47]



Print array reverse linewise

$$\begin{array}{cccccc} & 0 & 1 & 2 & 3 & 4 \\ [1, & 2, & 3, & 4, & 5] & n=5 \\ \hline & 0 & & & & \underline{n-1} \end{array}$$

5 4 3 2 1

$arr[4], arr[3], arr[2], arr[1], arr[0]$

$\downarrow \text{to } 0 \rightarrow \underline{n-1 \text{ to } 0}$

$$\begin{array}{l} i=4 \\ \hline i=3 \\ i=2 \\ i=1 \\ \hline i=0 \end{array} \quad \text{for } (i=n-1; i \geq 0; i--)$$

Two Arrays are identical or not

$[10, 15, 16, 18] \rightarrow 4$

$[20, 40, 5] \rightarrow 3$

$[10, 15, 16, 18] \times$

$[20, 40, 50, 60]$

$$\text{arr1}[i] = \text{arr2}[i]$$

arr1  $[10, 15, 16, 18]$   $i=0$   $\text{arr1}[0] = \text{arr2}[0]$   
 $i=1$   $\text{arr1}[1] = \text{arr2}[1]$   
 $i=2$   $\text{arr1}[2] \neq \text{arr2}[2] \rightarrow \text{false}$   
 $i=3$   $\text{arr1}[3] = \text{arr2}[3]$