

HW CLASS:08 8/9/23

<https://www.linkedin.com/in/manojofficialmj/>

Program 01: Shift array's element by one (right to left)

input arr

0	1	2	3	4	5
10	20	30	40	50	60

size = 6

output arr

0	1	2	3	4	5
60	10	20	30	40	50

PSEUDO CODE →

- ①  $temp = arr[size-1]$
- ②  $i = size-1$  and  
shift →  $arr[i] = arr[i-1];$   
 $i--$
- ③ start  $arr[0] = temp;$

```
// Shift array's element by one
void shiftArray(int arr[],int size){
    // Step 01
    int temp = arr[size-1];

    // Step 02
    // Shift --> arr[i]=arr[i-1]
    for(int i=size-1;i>=1;i--){
        arr[i]=arr[i-1];
    }

    // Step 03 Copy temp at index zero
    arr[0]=temp;
}
```

@manojofficialmj

DRY RUNi function = 1

Temp 60

0	1	2	3	4	5
10	20	30	40	50	60

size = 6

i function = 1

0	10	20	30	40	50	60
0	1	2	3	4	5	

size = 6

$i = 5$        $arr[5] = 50$   
 $i--$

iteration: 2

0	10	20	30	40	50	50
0	1	2	3	4	5	

$i = 4$        $arr[4] = 40$   
 $i--$

iteration: 3

0	10	20	30	40	40	50
0	1	2	3	4	5	

$i = 3$        $arr[3] = 30$   
 $i--$

iteration: 4

0	10	20	30	30	40	50
0	1	2	3	4	5	

$i = 2$        $arr[2] = 20$   
 $i--$

iteration: 5

0	10	20	20	30	40	50
0	1	2	3	4	5	

$i = 1$        $arr[1] = 10$   
 $i--$

iteration: 6

0	10	10	20	30	40	50
0	1	2	3	4	5	

$i = 0$        $arr[0] = temp$       when  $i = 0$   
 $i--$

iter: 07

0	60	10	20	30	40	50
0	1	2	3	4	5	

$i = -1$  →  $i < 0$  END

## Program 02: Shift array's element by one (left to right)

input

ann	10	20	30	40	50	60
	0	1	2	3	4	5

size = 6

output

ann	20	30	40	50	60	10
	0	1	2	3	4	5

PSEUDO CODE  $\rightarrow$

- ①  $temp = arr[0]$
- ②  $i = 0$  ~~xx~~ shift  $arr[i] = arr[i+1]$   
 $i++$
- ③ copy temp at last

```
// Shift array's element by one
void shiftArray(int arr[],int size){
    // Step 01 Store first element
    int temp = arr[0];

    // Step 02 Shift --> arr[i]=arr[i+1]
    for(int i=0;i<size-1;i++){
        arr[i]=arr[i+1];
    }

    // Step 03 Copy temp at index last
    arr[size-1]=temp;
}
```

@manojofficialmj