

Swap Alternate

Problem Description: You are given with an array of length N, you have to swap every pair of alternate elements in the array.

For example: N= 6

arr[] = 9 3 6 12 4 32

Output after swapping : 3 9 12 6 32 4

How to approach?

To swap alternate elements in an array, you can run a for loop from the leftmost element till end with an increment of 2 indices each time. To swap adjacent elements that is, elements at ith and (i+1)th index you can use another variable temp to store a value temporarily.

Time complexity for doing this problem is O(n) as you have to traverse this array only once and have to perform a constant time work in each iteration.

Pseudo Code for this problem:

Function swapalternate:

i=0

While i less than size-1:

temp = arr[i]

arr[i] = arr[i + 1]

arr[i + 1] = temp

Increment i by 2

❑ Let us dry run the code for N= 6

arr[] = 9 3 6 12 4 32

→ i=0

temp=9

arr[0]=3

arr[1]=9

→ i=2

temp=6

arr[2]=12

arr[3]=6

```
→ i=4  
temp=4  
arr[4]=32  
arr[5]=4
```

So final output:
arr[] = 3 9 12 6 32 4