

Arrange Numbers in Array

Problem Description: You are given with a number n , put all elements from 1 to n in an array in order - 1,3,.....4,2

For example, if $N=6$, then the output must be: 1 3 5 6 4 2

How to approach?

To arrange the numbers in the given sequence, we can continue by taking 2 indices one from start(i) and the other from the end(j). Start with number =1, print it on the first index(i), then increment the number and index i , now print the number on the last index(j), again increment the number and decrement j , print number on the 2nd index(i) and so on continue till i crosses j .

Pseudo Code for this problem:

Function arrange:

$i=0, j=n-1$

$number=1$

While i is less than j :

$arr[i]=number$

Increment number by 1

Increment i by 1.

$arr[j]= number$

Increment number by 1

Decrement j by 1

If i is equal to j :

$arr[i]=number$

❑ Let us dry run the code for $N= 6$

$i=0, j=5$

$number=1$

→ $arr[0]=1$

$i=1, number=2$

→ $arr[5]=2$

$j=4, number=3$

→ arr[1]=3
i=2, number=4

→ arr[4]=4
j=3, number=5

→ arr[2]=5
i=3, number=6

→ i=j
arr[3]=6

Final output:
arr[]=1 3 5 6 4 2