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