# **Using Iterative way**

Sort an array without using any inbuilt function by iterative way.

# C#

## Sorting an array of integers

1. Declaring and initializing the array
2. Creating a temporary variable to store the next value
3. Creating a loop which will iterate through the entire array until it reaches the second last position
4. Creating a loop inside that loop which will iterate from the second variable to the end of the array
5. So for loop 1, i=0 and j=1, therefore when we condition the loop, we are asking if the first element of the array

arr[i] = arr[0]

is smaller than the second element of the array

arr[j] = arr[1]

Therefore in our array it would be comparing

N1 N2 N3 N4 N5 N6

{1 9 6 7 5 9}

Arr[0] = 1

Arr[1] = 9

And since 1 is smaller than 9, we initiate the loop.

We need to swap the 1 and the 9 to make this into descending order

1. We store the value of arr[i] = arr[0] = 1

In a temporary variable called temp

Temp holds the value of 1 in this instance

1. We now store the value of arr[j] = arr[1] = 9 inside of where arr[i] = arr[0] had the 1

So now our array looks as follow

N1 N2 N3 N4 N5 N6

{9 9 6 7 5 9}

And the value of the 1 is held in the temp variable

1. Now we take arr[j] = arr[1] = 9 and we move the value of the temporary variable (which came from the first element of the array)

Now our array looks as follows

N1 N2 N3 N4 N5 N6

{9 1 6 7 5 9}

And we are closer to achieving descending order.

The loops will continue until eventually we have a loop which looks as follows

N1 N2 N3 N4 N5 N6

{9 9 7 6 5 1}

## Sorting an array of strings