

## Check if sorted

3/1/24

11:22 AM

I/p:  $arr[] = \{8, 12, 15\}$

O/p: Yes

I/p:  $arr = \{100, 20, 200\}$

O/p: No

$i = 0$   
 $j = i + 1$   
 $if \ arr[i] < arr[j]$

$i++$   
 $j++$

boolean isSorted (int arr[])

for (int i = 0; i < n; i++)  
for (int j = i + 1; j < n; j++)  
if (arr[j] < arr[i])  
return false

Time complexity  $\rightarrow O(n^2) \rightarrow \because$  of two for loops

bool sorted (int arr[], int n)

for (int i = 1; i < n; i++)  
if (arr[i] < arr[i - 1])  
return false  
return true

Time complexity  $O(n)$