

Check if the Array is Sorted \rightarrow

* non-descending array (ascending / Increasing):

- i) if current element is greater than or equal to previous element, then return ~~false~~ true.
- ii) else return false.

i) If any current element is smaller than the previous, then array is not sorted \rightarrow return false

ii) If no such case is found, the array is sorted, return true.

Solⁿ: \rightarrow for (int $i=1$; $i < n$; $i++$)
{
 if ($arr[i] < arr[i-1]$) \rightarrow (i)
 {
 return false
 }
}
return true // otherwise \rightarrow (ii)

Dry Run: $arr = \{1, 2, 3, 4, 5\}$, $n = 5$

$i=1$	$i=2$	$i=3$	$i=4$	$i=5$
$arr[i] = 2$	$arr[2] = 3$	$arr[3] = 4$	$arr[4] = 5$	\downarrow exit for loop
$arr[i-1] =$	$arr[1] = 2$	$arr[2] = 3$	$arr[3] = 4$	\downarrow return true.
$arr[0] = 1$	$3 < 2 \rightarrow \times$	$4 < 3 \rightarrow \times$	$5 < 4 \rightarrow \times$	
$2 < 1 \rightarrow \times$	continue	continue	continue	
continue				

Dry Run: \Rightarrow ② arr = {1, 3, 2, 4, 5}

arr[i] = arr[1] = 3

arr[i-1] = arr[0] = 1

$3 < 1 \rightarrow \times$

continue

arr[i] = arr[2] = 2

arr[i-1] = arr[1] = 3

$2 < 3 \rightarrow$ condition matched.

return false