

Check sorted in C++

```
#include <iostream>
using namespace std;

bool sorted(int arr[], int n) {
    if (n == 1 || n == 0) {
        return true;
    } else if (arr[n - 1] < arr[n - 2]) {
        return false;
    } else {
        return sorted(arr, n - 1);
    }
}

int main() {
    int arr[] = {1, 2, 3, 4, 5};
    int n = sizeof(arr) / sizeof(arr[0]);
    cout << boolalpha << sorted(arr, n) << endl;
    return 0;
}
```

Input

```
arr[] = {1, 2, 3, 4, 5}
n = 5
```

Recursive Calls

We check if the last two elements are in correct order ($arr[n-2] \leq arr[n-1]$), and recursively reduce the array size.

Dry Run Table

Call	n	arr[n-2]	arr[n-1]	Comparison	Result
sorted(arr, 5)	5	4	5	$4 \leq 5$	✓
sorted(arr, 4)	4	3	4	$3 \leq 4$	✓
sorted(arr, 3)	3	2	3	$2 \leq 3$	✓
sorted(arr, 2)	2	1	2	$1 \leq 2$	✓
sorted(arr, 1)	1	—	—	Base case	✓

✓ Output

```
true
```

Your program will print:

```
true
```

Output:-
true