

## 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;
}
```

### Recursive Function Call Flow:

- Initial Call:**  
sorted(arr, 5)
  - arr[4] = 5 and arr[3] = 4 → 5 >= 4  
→ Continue checking with n = 4.
- Second Call:**  
sorted(arr, 4)
  - arr[3] = 4 and arr[2] = 3 → 4 >= 3  
→ Continue checking with n = 3.
- Third Call:**  
sorted(arr, 3)
  - arr[2] = 3 and arr[1] = 2 → 3 >= 2  
→ Continue checking with n = 2.
- Fourth Call:**  
sorted(arr, 2)
  - arr[1] = 2 and arr[0] = 1 → 2 >= 1  
→ Continue checking with n = 1.
- Base Case:**  
sorted(arr, 1)
  - n == 1 → Return true.

### Backtracking:

- The base case returns true and propagates this result through all the previous recursive calls:
  - sorted(arr, 2) → true
  - sorted(arr, 3) → true
  - sorted(arr, 4) → true
  - sorted(arr, 5) → true

Output:-  
true