Pair with equal sum in C++

```
#include <iostream>
#include <unordered_set>
#include <vector>

using namespace std;

bool sol(vector<int>& arr) {
    unordered_set<int> set;

    for (int i = 0; i < arr.size(); i++) {
        for (int j = i + 1; j < arr.size(); j++) {
            int sum = arr[i] + arr[j];
            if (set.count(sum)) {
                return true;
            } else {
                set.insert(sum);
            }
        }
    }
    return false;
}

int main() {
    vector<int> arr = {2, 9, 3, 5, 8, 6, 4};
    bool ans = sol(arr);
    cout << boolalpha << ans << endl;
    return 0;
}
```

Dry Run:

Input:

arr = {2, 9, 3, 5, 8, 6, 4}

1. **Initialization**:
    - set = {} (an empty unordered set)
    - Start iterating over the array.
2. **Iteration through the array**:
    - **For i = 0 (arr[0] = 2)**:
        - **For j = 1 (arr[1] = 9)**, sum = 2 + 9 = 11. Insert 11 into the set.
        - **For j = 2 (arr[2] = 3)**, sum = 2 + 3 = 5. Insert 5 into the set.
        - **For j = 3 (arr[3] = 5)**, sum = 2 + 5 = 7. Insert 7 into the set.
        - **For j = 4 (arr[4] = 8)**, sum = 2 + 8 = 10. Insert 10 into the set.
        - **For j = 5 (arr[5] = 6)**, sum = 2 + 6 = 8. Insert 8 into the set.
        - **For j = 6 (arr[6] = 4)**, sum = 2 + 4 = 6. Insert 6 into the set.
    - **For i = 1 (arr[1] = 9)**:
        - **For j = 2 (arr[2] = 3)**, sum = 9 + 3 = 12. Insert 12 into the set.
        - **For j = 3 (arr[3] = 5)**, sum = 9 + 5 = 14. Insert 14 into the set.
        - **For j = 4 (arr[4] = 8)**, sum = 9 + 8 = 17. Insert 17 into the set.
        - **For j = 5 (arr[5] = 6)**, sum = 9 + 6 = 15. Insert 15 into the set.
        - **For j = 6 (arr[6] = 4)**, sum = 9 + 4 = 13. Insert 13 into the set.
    - **For i = 2 (arr[2] = 3)**:
        - **For j = 3 (arr[3] = 5)**, sum = 3 + 5 = 8. 8 is already in the set, so return true.

Output:

Since a sum of 8 was found twice, the program outputs

true

Output:-
true