

C++ Programming

STL Algorithms

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Algorithms: Sort

```
1 #include<iostream>
2 #include<vector>
3 #include<algorithm>    // sort algo
4 using namespace std;
5
6 void print(vector<int> &v)
7 {
8     int a = v[0];
9     auto b = v[0];
10
11     for (auto x : v)
12         cout<<x<<" ";
13     cout<<"\n";
14 }
15
16 int main() {
17     vector<int> v(5);
18
19     for (int i = 0; i < (int)v.size(); ++i)
20         v[i] = 10 - i;
21
22     print(v);    // 10 9 8 7 6
23
24     sort(v.begin() + 1, v.end());    // sort from v[1] to v[size-1]
25     print(v);    // 10 6 7 8 9
26
27     sort(v.begin(), v.end());    // sort from v[0] to v[size-1]
28     print(v);    // 6 7 8 9 10
29
30     sort(v.rbegin(), v.rend()); // sort from v[0] to v[size-1]
31     print(v);    // 10 9 8 7 6
```

Algorithms: Reverse

```
1 #include<iostream>
2 #include<vector>
3 #include<algorithm>    // sort algo
4 using namespace std;
5
6 void print(vector<int> &v)
7 {
8     for (int x : v)
9         cout<<x<<" ";
10    cout<<"\n";
11 }
12
13 int main() {
14     vector<int> v(5);
15
16     for (int i = 0; i < (int)v.size(); ++i)
17         v[i] = 10 - i;
18
19     print(v);    // 10 9 8 7 6
20
21     reverse(v.begin(), v.end());
22     print(v);    // 6 7 8 9 10
23
24     v.clear();   // now empty array
25     return 0;
26 }
27
```

“Acquire knowledge and impart it to the people.”

“Seek knowledge from the Cradle to the Grave.”