

```
/// STL Sort Demo: sort_student_by*
/// Author: Pinyo Taeprasartsit
#include <vector>
#include <algorithm>

class Student {
public:
    int ID;
    double GPA;
    Student(int ID, double GPA) {
        this->ID = ID;
        this->GPA = GPA;
    };
};

bool sortByID(const Student s1, const Student s2) {
    return (s1.ID < s2.ID);
}

bool sortByGPA(const Student& s1, const Student& s2) {
    return (s1.GPA > s2.GPA);
}

using namespace std;
int main() {
    Student data[] = {Student(7, 3.5), Student(2, 3.6),
        Student(4, 3.2), Student(5, 4.0), Student(3, 3.8),
        Student(1, 3.9), Student(6, 2.8)};
    vector<Student> vec(data, data + 7);
    std::sort(vec.begin(), vec.end(), sortByID);

    for(auto& student : vec)
        printf("%d %.1f\n", student.ID, student.GPA);
    return 0;
}
```