[物件導向程式設計實習](https://flipclass.stust.edu.tw/course/31251)作業

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1. 題目

請將0401score.csv的成績檔案牘入陣列，透過bubble sorting 將班上同學成績，由大至小排列出來

1. 程式

#include <iostream>

#include <fstream>

// #include <algorithm>

#include <string>

#include <vector>

#include <sstream>

#include <iomanip>

using namespace std;

struct Student

{

string name;

string id;

string score;

};

// bool compareByScore(Student a, Student b);

vector<Student> bubbleSort(vector<Student> StudentList, bool isAsc);

int main()

{

ifstream fin;

string line;

vector<Student> StudentList;

fin.open("0401score.csv");

if (!fin)

{

cout << "檔案開啟失敗" << endl;

return 1;

}

cout << "檔案開啟完成" << endl;

while (getline(fin, line))

{

Student student;

stringstream ss(line);

getline(ss, student.name, ',');

getline(ss, student.id, ',');

getline(ss, student.score, ',');

StudentList.push\_back(student);

}

fin.close();

cout << "檔案索引完成" << endl;

// sort(StudentList.begin(), StudentList.end(), compareByScore);

StudentList = bubbleSort(StudentList, 0);

for (int i = 0; i < StudentList.size(); i++)

{

cout << setw(10) << StudentList[i].name << setw(8) << StudentList[i].id << setw(6) << StudentList[i].score << endl;

}

return 0;

}

// bool compareByScore(Student a, Student b)

// {

// return stof(a.score) > stof(b.score);

// }

vector<Student> bubbleSort(vector<Student> StudentList, bool isAsc)

{

for (int i = 0; i < StudentList.size(); i++)

{

for (int j = 0; j < StudentList.size() - i - 1; j++)

{

if (isAsc)

{

if (stof(StudentList[j].score) > stof(StudentList[j + 1].score))

{

swap(StudentList[j], StudentList[j + 1]);

}

}

else

{

if (stof(StudentList[j].score) < stof(StudentList[j + 1].score))

{

swap(StudentList[j], StudentList[j + 1]);

}

}

}

}

return StudentList;

}

1. 程式說明

如程式所示

1. 一張含有 文字, 螢幕擷取畫面 的圖片

   自動產生的描述執行結果