Input, Output, and Files

Everything is file.

以流的方式统一管理文件

- 创建流
- 从流读取数据>>
- 往流写入数据<<
- 多态机制，统一的接口，同样的调用

```cpp
#include <iostream>
#include <fstream>
#include <string>

void fileInTest()
{
    std::ifstream fin("data.txt"); //construct ifstream object and open the
file
    if (!fin.is_open())
    {//fail, return
        return;
    }

    std::string name;
    int age, score;

    while (fin >> name >> age >> score) //without blanks
    {
        std::cout << name << "\t" << age << "\t" << score << std::endl;
    }

    fin.close(); //fin析构时会自动调用，此处可不写
}

void fileOutTest()
{
    std::ifstream fin;
    fin.open("student.txt");//open file
    if (fin.fail())
    {//fail, return
        return;
    }

    std::string name;
    int age, score;
    std::getline(fin, name); //with blanks
    fin >> age >> score;
    fin.close();
```

```cpp
    std::ofstream fout;
    fout.open("studentOut.txt");//open file
    fout << name << std::endl << age << std::endl << score;
    fout.close();
}

int main()
{
    fileInTest();

    fileOutTest();

    return 0;
}
```