



CS106I

写在前面的话

首先是课程网址, [cs106I](#)

Find the sum of a vector

```
//version 1
vector<int> vec = {1,2,3};
int sum = 0;
for(auto val :vec){
    sum +=val;
}

//version 2
vector<int> vec={1,2,3};
int sum=0;
for(const auto&val :vec){
    sum +=val;
}

//version 3
vector<int> vec={1,2,3};
int sum= std::accumulate(vec.begin(),vec.end(),0);
```

Hello world!

```
#include<iostream>
int hello_cpp(){
    std::cout<<"hello world!"<<std::endl;
}

#include<stdio.h>
#include<stdlib.h>
int hello_c(){
    printf("%s","hello world!");
}
//two versions are equal
```

lecture 2

string

```
int main(){
    string str="Hello world!";
    cout::str::endl;//print the string
    cout::str[1]::endl;//print "e"
    str[1]='i';//change the char

}
```

stream

输出流

```

int main(){
    stringstream oss("Ito-En Green Tea");
    cout << oss.str()<< endl; //Tto-En Green Tea;
    oss << "16,9 Ounces"; //16.9 Ouncesn Tea
    //这个流是从左开始做buffer进行替换的

    stringstream oss("Ito-En Green Tea",stringstream::ate);
    cout << oss.str()<< endl; //Tto-En Green Tea;
    oss << "16,9 Ounces"; //
    //这个流是从右开始做buffer进行替换的

    isstringstream iss("16.9 Ounces");
    double amount;
    string unit;
    iss >> amount; //amount get 16.9 as a double
    iss >> unit;
    cout << amount/2 << endl; //8.45?

    isstringstream iss("16.9 Ounces");
    int amount;
    string unit;
    iss >> amount;
    iss >> unit; //this two lines can be combined as iss >> amount >> unit
    cout << amount/2 << " " << unit << endl; //8 .9
    //一个指针从头开始往右移动, first stop at 6, and amount gets 16, then a bubble, then unit gets .9

}

```

string to integer

```

int stringToInteger(const string& s){
    istringstream iss(s);
    int result;
    iss >> result;

    return result;
}

```

we can use manipulators to pad the output.

```
cout << "[" << setw(10) << "Ito" << "];  
//output:[          Ito]  
cout << "[" << left << setw(10) << "Ito" << "];  
//output:[Ito          ]  
cout << "[" << left << setfill('-') << setw(10) << "Ito" << "];  
//output:[Ito-----]
```