

Phill-C++4

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多認識一點string

- C++ 字串的各種宣告方式

```
#include <iostream>
using namespace std;

int main()
{
    string str1("hello");
    cout << str1 << endl;

    string str2="hello"; //operator overloading
    cout << str2 << endl;

    auto str3 = "hello world"s; //auto+overloading
    cout << str3 << endl;

    auto str4("hello"s); //auto+ constructor
    cout << str4 << endl;

    return 0;
}
```

- 字串的疊加

```
#include <iostream>
using namespace std;

int main()
{
    string str2=" world"s+"a"; //implicit string
    cout << str2.size() << endl; //\0 -> not including

    return 0;
}
```

- 字串大小(C++ style)

```
#include <iostream>
using namespace std;

int main()
{

    string str2="您好嗎"; //Unicode UTF-8 -> xxx --> XXXXXX
    cout << str2.size() <<endl; //\0 -> not including

    return 0;
}
```

- 插入 (指定前一字串的插入點)

```
#include <iostream>
using namespace std;

int main()
{

    string str2="hello world";
    str2.insert(7, "****"); //長度 或插入點的index
    cout << str2 <<endl;

    return 0;
}
```

- 附加 (指定後一字串的起始與結束點)

```
#include <iostream>
#include <string>

using namespace std;

int main() {

    string str1="hello";
    string str2="world";

    str1.append(str2, 2,4); //第2 index, 插入到4th index字元
    cout << str1;
    return 0;
}
```

練習

隨便輸入一個字串 “I love coding”

→ **I love coding**

```
#include <iostream>
using namespace std;

int main()
{
    string str1="I love codeing";
    string str2="**";
    str1.append(str2,0,2);
    str1.insert (0, "**");
    cout <<str1 <<endl;
    return 0;
}
```

練習

“C++ is fun to learn!”

→ “C++-is-fun-to-learn!”

```
#include <iostream>
using namespace std;

int main()
{
    string src="C++ is fun to learn!";
    string dest ="";

    for(size_t i=0; i< src.size(); ++i){
        if(src[i]==' '){
            dest.append("-");
        }
        else{
            dest.append(1, src[i]);
        }
    }

    cout << "original:" << src <<endl;
    cout << "final:" << dest << endl;
    return 0;
}
```

