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# hw07 2 應測試項目

## Constructor / Destructor 建構子

```
using namespace std;
int main(){
    cout<<"s1063054"<<endl;

    MyString a;
    a.printInfo(); //PrintInfo() is a function printing the Size and
                  //Capacity of MyString
```

```
C:\Users\hw>main.exe
s1063054
Size:0
Capacity:10
```

## Constructor / Destructor 建構子

```
MyString( const MyString &str );  
    // Constructs a copy of "str". (copy constructor)
```

```
using namespace std;  
int main(){  
    cout<<"s1063054"<<endl;
```

```
    MyString a;  
    a.resize(5);  
    a[0] = 'H';  
    a[1] = 'a';  
    a[2] = 'p';  
    a[3] = 'c';  
    a[4] = 'c';  
    MyString b(a);  
    cout<<b<<endl;  
    b.printInfo();
```

```
C:\Users\hw>main.exe  
s1063054  
H, a, p, c, c,  
Size:5  
Capacity:10
```

## Constructor / Destructor 建構子

```
MyString( const MyString &str, size_t pos, size_t len =
msize );
    // (substring constructor)
    // Copies the portion of str that begins at the character
position "pos" and spans "len" characters
    // (or until the end of str, if either str is too short or if
len is string::msize).
```

```
C:\Users\hw>main.exe
s1063054
H, a, p, c,
Size:4
Capacity:10
a, p, c, c,
Size:4
Capacity:10
a, p, c, c,
Size:4
Capacity:10
Out of Range error: MyArray::_M_range_check
Object creation failed, the program is now exit !
```

```
using namespace std;
int main(){
    cout<<"s1063054"<<endl;
```

```
MyString a;
a.resize(5);
a[0] = 'H';
a[1] = 'a';
a[2] = 'p';
a[3] = 'c';
a[4] = 'c';
MyString b(a,0,4);
cout<<b<<endl;
b.printInfo();
```

```
//////////
MyString c(a,1,43);
cout<<c<<endl;
c.printInfo();
```

```
//////////
MyString m(a,1);
cout<<m<<endl;
m.printInfo();
```

```
//////////
MyString d(a,134,4);
cout<<d<<endl;
d.printInfo();
```

## Constructor / Destructor 建構子

```
using namespace std;
int main(){
    cout<<"s1063054"<<endl;

    MyString a("once upon a time in hollywood");
    print(a); //print() is a function that prints the content of MyString's object
    a.printInfo();//printInfo() is a function that shows the size and capacity of MyString's object
```

C:\Users\hw>main.exe

s1063054

o, n, c, e, , u, p, o, n, , a, , t, i, m, e, , i, n, , h, o, l, l, y, w, o, o, d,

Size:29

Capacity:40

## Constructor / Destructor 建構子

```
using namespace std;
int main(){
    cout<<"s1063054"<<endl;

    MyString a;
    a.resize(5);
    a[0] = 'H';
    a[1] = 'a';
    a[2] = 'p';
    a[3] = 'c';
    a[4] = 'c';
```

C:\Users\hw>main.exe

s1063054

Destructor of class MyString runs, for destructor testing only

## append(...) 字符串相加功能

```
using namespace std;
int main(){
    cout<<"s1063054"<<endl;
    //print() is a function that prints the content of MyString's object
    //printInfo() is a function that shows the size and capacity of MyString's object

    MyString a("once upon a ");
    print(a);
    a.printInfo();
    MyString b("time in hollywood");
    print(b);
    b.printInfo();

    a.append(b);
    print(a);
    a.printInfo();
```

C:\Users\hw>main.exe  
s1063054  
o, n, c, e, , u, p, o, n, , a, ,  
Size:12  
Capacity:20  
t, i, m, e, , i, n, , h, o, l, l, y, w, o, o, d,  
Size:17  
Capacity:20  
o, n, c, e, , u, p, o, n, , a, , t, i, m, e, , i, n, , h, o, l, l, y, w, o, o, d,  
Size:29  
Capacity:40

## insert 插入字符串

```
MyString A("to be");  
A.printInfo();  
MyString B("the ");  
A.insert(6,B);  
cout<<A<<endl;  
A.printInfo();
```

```
MyString C("to be the question");  
C.printInfo();  
MyString D("or not to be ");  
C.insert(6,D);  
cout<<C<<endl;  
C.printInfo();  
cout<<"fklflf"<<endl;  
MyString E("to be the question");  
E.printInfo();  
MyString F("or not to be ");  
E.insert(6,F,3,4);  
cout<<E<<endl;  
E.printInfo();
```

```
C:\Users\hw>main.exe  
s1063054  
Size:5  
Capacity:10  
Out of Range error: MyArray::_M_range_check  
t, o, , b, e,  
Size:5  
Capacity:10  
Size:18  
Capacity:20  
t, o, , b, e, , o, r, , n, o, t, , t, o, , b, e, , t, h, e, , q, u, e, s, t, i, o, n,  
Size:31  
Capacity:40  
fklflf  
Size:18  
Capacity:20  
t, o, , b, e, , n, o, t, , t, h, e, , q, u, e, s, t, i, o, n,  
Size:22  
Capacity:40
```



substr 建構子字串

erase 刪除字串內部分內容

find() and find\_first\_of() 在字串中尋找

operator>>, operator<< 輸入與輸出

Exception handling

```

MyString E("ABCDEFGHIJKLM");
E.printInfo();
E.erase(2,89);
cout<<E<<endl;
E.printInfo();
MyString F("to be or not to be, that is cool question");
E.printInfo();
cout<<F.find("cXXL")<<endl;

MyString G("to be or not to be, that is Xool question");
G.printInfo();
cout<<F.find_first_of("cXXL");

MyString g;
cin>>g;
cout<<g<<endl;
g.printInfo();

C:\Users\hw>main.exe
s1063054
Size:13
Capacity:20
A, B,
Size:2
Capacity:20
Size:2
Capacity:20
4294967295
Size:41
Capacity:80
2123
1, 2, 3,
Size:3
Capacity:10

C:\Users\hw>

```