Introduction to C++ (Season 1)

Unit 4: Objects and Classes
第4单元: 物以类聚 – 对象和类

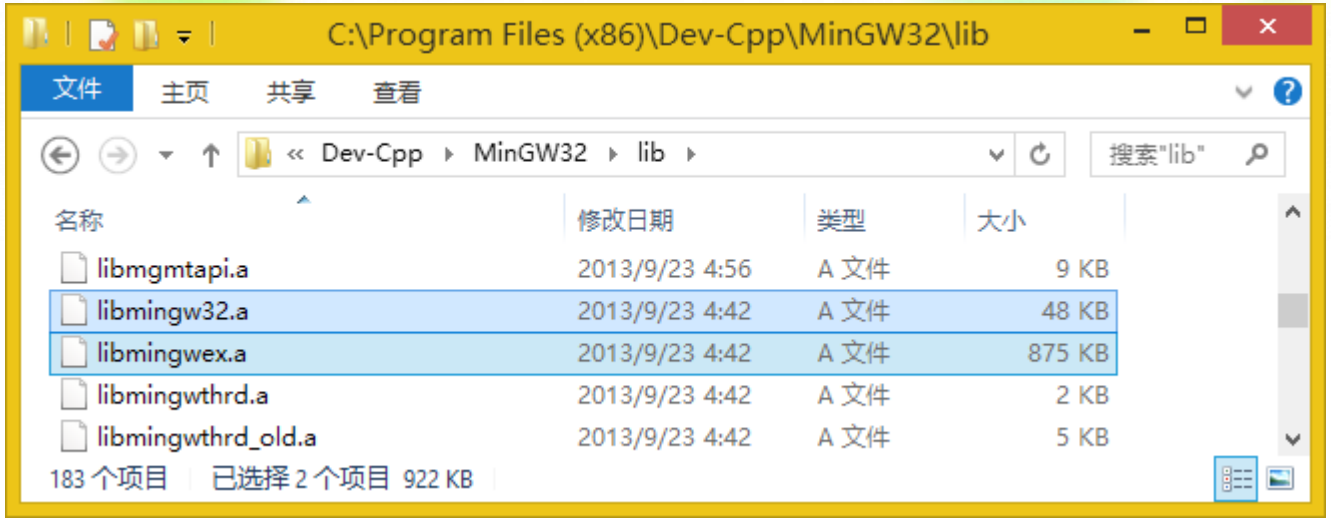
Section 11 : Class Abstration and Encapsulation
第11节： 类抽象与封装

What do we do encapsulation in C? (C语言中如何封装)

HelloWorld.cpp

```
#include <stdio.h>

int main() {
    printf ("Hello World!");
    return 0;
}
```



stdio.h

```
/*
 * Formatted Output
 * we offer these conforming alternatives from libmingwex.a
 */
#undef  __mingw_stdio_redirect__
#define __mingw_stdio_redirect__(F) __cdecl __MINGW_NOTHROW __mingw_##F
extern int __mingw_stdio_redirect__(printf)(const char*, ...);
```

Class Abstraction and Encapsulation (类抽象与封装)

❖ Class abstraction (类抽象)

- to separate class implementation from the use of the class. (将类的实现与使用分离开)
- The creator provides a class description (类创建者提供类的描述)
- The user of the class does not need to know how the class is implemented. (使用者不需知道类是如何实现的)

❖ Class encapsulation (类封装)

- The detail of implementation is encapsulated and hidden from the user.(类实现的细节被封装起来，并对用户是隐藏的)