C201 Homework 10
Submission: Print the source code and bring it to class.

Problem 1. Complete a program that manages bank accounts. The objective of this program is to get you familiar with inheritance, virtual function, function overriding, derived class constructor and derived class destructor.

The specification of each method can be found in the program. The basic information about this program is described blow:
- There are three classes, one base class (Account) and two derived class (CheckingAccount and SavingAccount)
- CheckingAccount and SavingAccount are derived from Account, but they need to (1) implement their own constructors; (2) implement their own destructors; (3) override virtual function calculate_balance(); and (4) add some new methods

The draft of the program is at:
http://www.cs.iusb.edu/~yul/C201/source/hw10.cpp

Problem 2. Class string is defined in C++ library. More information can be found in this web site: http://www.cplusplus.com/reference/string/string/

In this program, you are going to create a class called mystring, which is derived from class string. Class mystring should include:
- A private data member id, which is an integer, representing the ID of a string (see example in function main()).
- A public method, constructor mystring(int, char *), which has two parameters: an integer (int) and a string (char *). It should (1) call base class constructor using the string parameter (char *) and (2) assign integer parameter (int) to id.
- A public method int getid(), which returns id of class mystring.

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

// Your code goes here

// If your class is implemented correctly, the main program should work as the followings
int main()
{
    mystRING x(101, "Hello Kitty"); // “hello Kitty” has an ID 101
    cout << x.getid() << endl; //display 101
    cout << x << endl; // display string value: “Hello Kitty”
    cout << x.length() << endl; // display length of the string: 11
    return 0;
}
```