CS 12 - Lab 7
Inheritance

In this lab you will use inheritance. You must use separate files and you must have a makefile. Be sure to include all necessary information at the top of the each file in the program and use good commenting and style throughout your program.

You will be using the account class from the last lab. If you did not finish this properly, below is the code for the class. If you need to use this code, be sure to separate it into files and comment it.

Define a class called **jointaccount** to represent a bank account that can be shared by two people. It should publicly inherit the account class. In its entirety, its data members should include, the acocunt owner's name, the account number, the balance, the owner's SSN and the joint owner's SSN. (Just assume that SSNs are integers, they do not have to be 9 digits long.) Member functions (in the class's entirety) should include:

- Open an account. Prompt the user for the account name and beginning balance. Set the account number. Ask for the owner's and joint owner's SSNs.
- Display the information in the class (the data members) nicely formatted.
- Deposit a given amount into the account. This function should take one parameter, the amount to deposit.
- Withdraw a given amount from the account. This function should take one parameter, the amount to withdraw. You should not allow someone to make a withdrawal if their is not enough money in the account.
- Display the information in the class (the data members) nicely formatted.

Adjust the main program from last week's lab to use the jointaccount class instead.

Account class code

```
class account
{
 private:
  char name[20];
  int account_num;
  double balance;
 public:
  void start_account();
  void display();
  void deposit(double);
```

```
  void withdrawal(double);
};


void account::start_account()
{
  cout << "Enter the account owner's name: ";
  cin.getline(name, 20, '\n');
  cout << "Enter account number: ";
  cin >> account_num;
  cout << "Enter beginning balance: ";
  cin >> balance;
}

void account::display()
{
  printf("ACCOUNT OWNER:  %s\n", name);
  printf("ACCOUNT NUMBER: %8d\n", account_num);
  printf("BALANCE:        %8.2f\n", balance);
}

void account::deposit(double dep)
{
  balance += dep;
}

void account::withdrawal(double with)
{
  if ((balance - with) < 0)
    cout << "You do not have $" << with << " in your account." << endl;
  else
    balance -= with;
}
```