Lab 12
Inheritance

Grading:

Package.h	- 5 points if not submitted
TwoDayPackage.h	- 5 points if not submitted
Package.cpp	10 points
TwoDayPackage.cpp	10 points
makefile	3 points
Lab12.cpp (test program)	2 points

Material for this lab assignment comes from Chapter 20 in the textbook.

Part A:

Create a makefile. Source file names are Package.h, Package.cpp, TwoDayPackage.h, TwoDayPackage.cpp, and Lab12.cpp.

The executable file name should be lab12.

Programs that do not compile correctly and produce an executable named lab12 when the command **make** is issued will receive a grade of zero.

Be sure to test your programs and your makefile on the Linux systems in the CS department before submitting.

Part B:

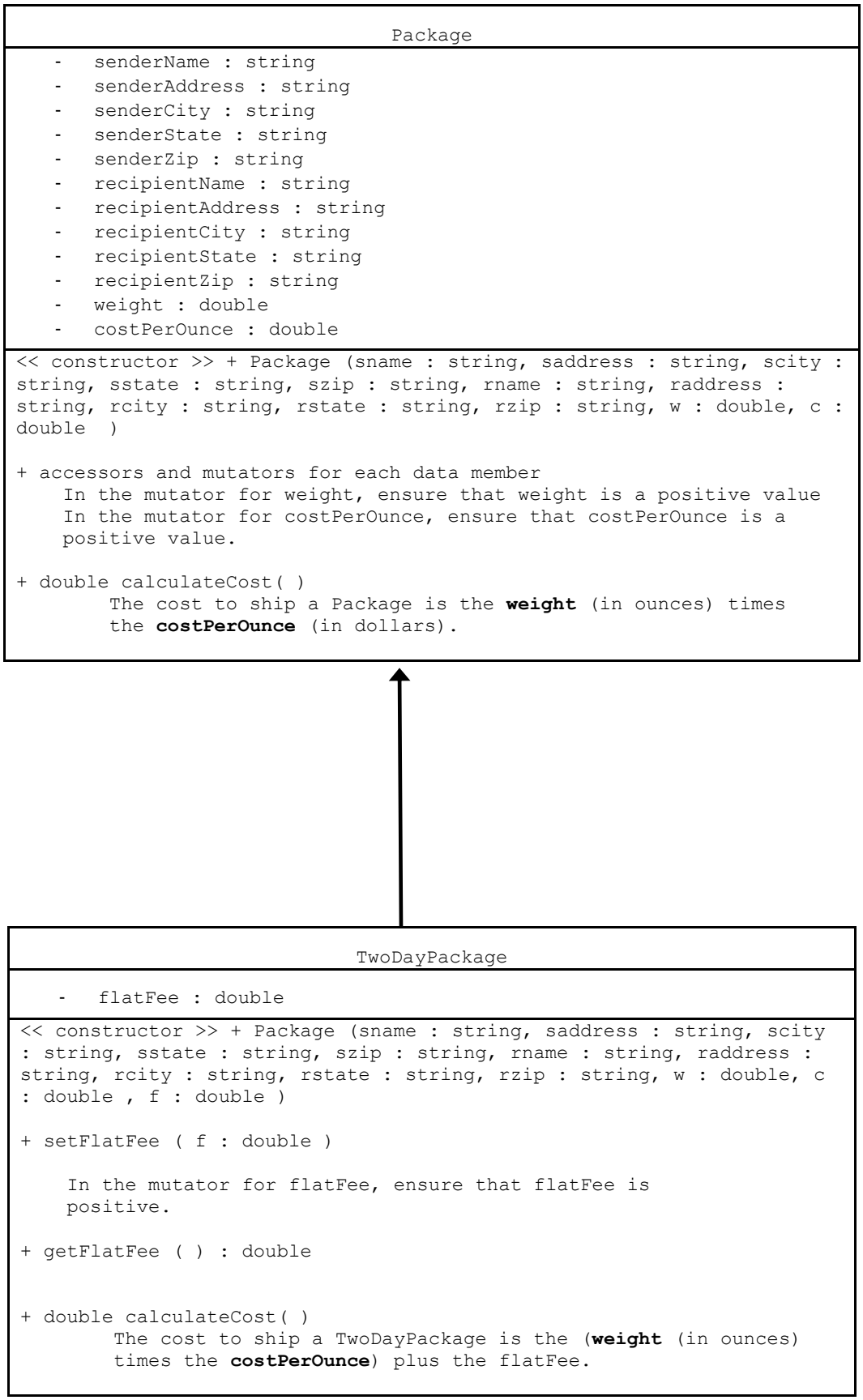
Download Package.h and TwoDayPackage.h.

Using the UML Class Diagrams on page 2 as your guide,

- Check the prototypes in Package.h to make sure they match the UML. Then create Package.cpp and write the function definitions.
- Check the prototypes in TwoDayPackage.h to make sure they match the UML. Then create TwoDayPackage.cpp and write the function definitions.

Part C:

Write a test program called Lab12.cpp that will instantiate several Package and TwoDayPackage objects. Thoroughly test all of the member functions of these classes.


Package
- senderName : string
- senderAddress : string
- senderCity : string
- senderState : string
- senderZip : string
- recipientName : string
- recipientAddress : string
- recipientCity : string
- recipientState : string
- recipientZip : string
- weight : double
- costPerOunce : double
<< constructor >> + Package (sname : string, saddress : string, scity : string, sstate : string, szip : string, rname : string, raddress : string, rcity : string, rstate : string, rzip : string, w : double, c : double)
+ accessors and mutators for each data member
In the mutator for weight, ensure that weight is a positive value
In the mutator for costPerOunce, ensure that costPerOunce is a positive value.
+ double calculateCost( )
The cost to ship a Package is the weight (in ounces) times the costPerOunce (in dollars).
TwoDayPackage
- flatFee : double
<< constructor >> + Package (sname : string, saddress : string, scity : string, sstate : string, szip : string, rname : string, raddress : string, rcity : string, rstate : string, rzip : string, w : double, c : double , f : double)
+ setFlatFee (f : double)
In the mutator for flatFee, ensure that flatFee is positive.
+ getFlatFee ( ) : double
+ double calculateCost( )
The cost to ship a TwoDayPackage is the (weight (in ounces) times the costPerOunce) plus the flatFee.