Chapter 12 Laboratory Exercise

Prelab Assignment

1. When do you need to use an import statement?

2. What is the difference between public inheritance and protected inheritance?

3. What is the difference between overloading a method and overriding a method?

4. Why would you want to use a finally clause in a try statement?

5. Why would a super method call be included in a constructor?

6. Write the code for a Java method that takes two integers as arguments and returns the quotient as a percent. Include a catch statement that prints an error message when division by zero is attempted.

7. Write the code for a Java method that calls the percent method you wrote for Exercise 6.

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1. Revise and test the telephone directory your wrote for Lab 8 Exercise 4 so that it is implemented as a package and use inheritance to create a specialized version of the telephone directory which allows the entries to be sorted alphabetically by name and draw a UML diagram.

2. Revise and test the Money class you wrote in Lab 5, Exercise 1 so that you trap all arithmetic exceptions that might occur when used by a client program (e.g. the program you wrote for Lab 5 Exercise 2 or 3).

3. Create an abstract class ReadingMaterial that contains a string title and an integer publication year. Use your abstract class as the basis for creating classes that contains complete publication data (e.g. author, title, publisher, data of publication, volume information as appropriate) for newspapers and books. Write appropriate constructor and accessor methods for each class.

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Postlab Questions

1. Should the Money class be implemented as a descendent from an abstract class? Why or why not?

2. Is the telephone directory class a good candidate for a package? Why or why not?

3. What exceptions should you try to handle in the telephone directory class you created in Exercise 1?

4. Draw the inheritance hierarchy for the classes you created for Exercise 3?