**A Shopping Cart**

In this exercise you will complete a class that implements a shopping cart as an array of items. The file *Item.java* contains the definition of a class named *Item* that models an item one would purchase. An item has a name, price, and quantity (the quantity purchased). The file *ShoppingCart.java* implements the shopping cart as an array of Item objects.

1. Complete the *ShoppingCart* class by doing the following:

a. Declare an instance variable *cart* to be an array of Items and instantiate *cart* in the

constructor to be an array holding *capacity* Items.

b. Fill in the code for the *increaseSize* method. Your code should be similar to that in Listing

8.8 of the text but instead of doubling the size just increase it by 3 elements.

c. Fill in the code for the *addToCart* method. This method should add the item to the cart and

update the *totalPrice* instance variable (note this variable takes into account the quantity).

d. Compile your class.

2. Write a program that simulates shopping. The program should have a loop that continues as long as the user wants to shop. Each time through the loop read in the name, price, and quantity of the item the user wants to add to the cart. After adding an item to the cart, the cart contents should be printed. After the loop print a “Please pay ...” message with the total price of the items in the cart.