Assignment 11: Reading Assignment and Optional Programming Project due 12/11

For this week you have to complete a Reading Assignment and Programming Practice. The programming project is optional and will be counted as extra homework credit only, however it would help mastering the concepts of implementation of Linked lists.

Reading Assignment

Read pages 627-639 from Section 10.2, Linked Data Structures completing self-check exercises.

Review Handouts 13 and 14.

Programming Practice

Create a project for the PizzaOrders application presented in class and posted on the course webpage. That application consists of two java files PizzaOrderNode.java and OrdersList.java

Place these two java files in the same project folder and compile them together. Examine the code and structure of the classes carefully, trace the execution of the OrdersList.java stepping into each method and make sure you understand well what is going on.

Programming Assignment

Programming Project

**PizzaShop: Extend the Pizza Orders application**

due 11:00 p.m. on Thursday, 11/24

worth 14 points

This programming project is based on the Pizza Orders application presented in class. Create an extension of this application that implements the following functionality:

1. Maintaining the pizza orders list in the alphabetical order by the person’s name,
2. Deleting all pizza orders for a given person.

Your class definition must contain the following public instance methods of class **OrdersList**

- **InsertNewOrder**(personName, personAddress, pizzaType, quantity) that creates a new object of class PizzaOrderNode and inserts it in the alphabetical order by person name into the existing list.
- **RemoveAllOrdersFrom**(personName) that removes from the list all orders from a person with the specified name.
The main method of this class should use these two and other methods to enable a user to insert, delete and print orders as shown in the sample interaction below.

The main method should contain a loop that allows the user to enter one of the 4 following commands

1. A for Adding,
2. D for Deleting,
3. P for Printing, and

If the user enters something other than A, D, P or S no action should be taken and the next command should be read.

Here is a sample interaction. Note the format of the output from the D, P and S commands.

Greetings! You may start entering orders now.
The commands are as follows: A for Adding an order, D for deleting an order, P for Printing all orders and S for Stopping.

Please enter the next command (A,D,P or S): A
What is the name of the person? Greg
What is the address of this person? 36 Henry Drive
What is the type of pizza ordered? Neapolitan
What is the quantity ordered? 1
Order added.

Please enter the next command (A,D,P or S): A
What is the name of the person? Simon
What is the address of this person? 36 Frederick Lane
What is the type of pizza ordered? Cheese
What is the quantity ordered? 2
Order added.

Please enter the next command (A,D,P or S): A
What is the name of the person? Bella
What is the address of this person? 124 Main Street
What is the type of pizza ordered? Cheese
What is the quantity ordered? 1
Order added.

Please enter the next command (A,D,P or S): P
Printing pizza orders:
** Printing Pizza Order ***************
from Bella at 124 Main Street
pizza type Cheese quantity 1

** Printing Pizza Order ***************
from Greg at 36 Henry Drive
pizza type Neapolitan quantity 1

** Printing Pizza Order ***************
from Simon at 36 Frederick Lane
pizza type Neapolitan quantity 2

Please enter the next command (A,D,P or S): D
Deleting an order. Please enter person's name: Greg
Order deleted

Please enter the next command (A,D,P or S): P
Printing pizza orders:

*** Printing Pizza Order ***************
from Bella at 124 Main Street
pizza type Cheese quantity 1

** Printing Pizza Order ***************
from Simon at 36 Frederick Lane
pizza type Neapolitan quantity 2

Please enter the next command (A,D,P or S): S
Bye!