

Pseudo Code and Design

Node Class

First, I need to create Node class to represent one entry in the Telephone list, it should have name, email and phone numbers and the reference to next node, all of them should be private, and I need getters and setters to access to this fields. And as I need to sort the list by last name, I need a special getter for last name.

Linked List Class

Second, I need to create a linked list class to store these Nodes, this class should have the head node of the list so that I can iterate all of the nodes. And I need to implement *add*, *print*, *searchForName*, *searchForEmail* and *delete* method. Since all of the method will need to walk through the list, it would be easier to implement an iterator first.

User Interaction Class

Last, I need to a class to run main method and responsible for interaction with users, it should be able to show a menu where user can see what they can do with it when the program start and take in an instruction and output the information or delete or serialize the list, and it should handle the bad input and give user a warn. It should be able to shut down if the user want to.

All classes should implement Serializable interface in order to be serializable.