

CS221-Data Structures

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Assignment 1 [Linked list]

Deadline: 8th October 2022 11:55PM

Max. students per group: 2

In this assignment, you have to create a program to maintain a telephone directory. Use a 4-Way linked list to store the phone numbers. In addition to maintain the connectivity pointers, each node of the list must represent following attributes

- Phone Number (Key)
- Owner's Name
- Address
- Email (if any)

Add following function to your class

- Creation a list
- Insertion a phone number in the directory
- Deletion a phone number (after searching it)
- Search a number using owner's name, address or email.
- Display the phone numbers in the directory

The constructor of four-way linked list should take two integer parameters (i.e., maximum items in a row, maximum items in a column). This shall restrict the 4-way linked list growth.

Following is the pictorial representation of a 4-way linked list.

