King Fahd University of Petroleum & Minerals
College of Computer Science and Engineering
Information and Computer Science Department
ICS 202 – Data Structures
Linked Lists-Part II

Objectives

The objective of this lab is to design, implement and use Linked Lists

Outcomes

After completing this Lab, students are expected to:
- Design Linked List classes.
- Implement Linked List classes (Singly, Doubly, Circular).
- Use Linked Lists in developing applications.

Lab Exercises

1. Download, compile and execute the programs related to Doubly linked lists. (class **DLList**).

2. Write a method **public void printReverse()** that prints the elements of a doubly linked list in reverse.

3. Write a method **public void delete7()** which deletes the 7th element from the list. Note that if you reach the end then you have to reverse the direction of counting.

In the *main*() method of the test class, create a randomly generated Doubly-Linked list of 10 Integers**.** Next, call the *delete7()* method and print the lists iteratively until the list becomes empty. Make sure to print the list after each deletion.

For example, your list initially could be:
[3 1 2 5 8 7 9 0].

After deleting 7th element:
[3 1 2 5 8 7 **9** 0] => [3 1 2 5 8 7 0].

After deleting 7th element again;
[3 1 2 5 8 7 **0**] => [3 1 2 5 8 7].

After deleting 7th element again (counting in the same direction, then moving reverse),
[3 1 2 5 **8** 7] => [3 1 2 5 7]

[3 1 **2** 5 7] => [3 1 5 7]