Data Structure and Algorithm

Training Assignments

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Assignment 2: Linked List

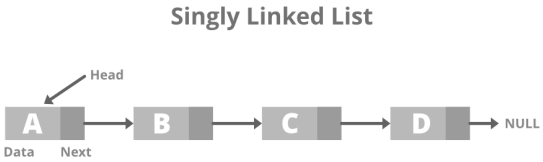
Objectives:

» Understand the basics of LinkedList?

» Able to use Singly LinkedList to solve basic algorithms.

Assignment Descriptions:

Problem 1: Suppose that a linked list is made up of nodes of integer



that you are given a pointer "list" of type link, which points to the first node of the list; and that the last node has NULL as its link.

a) Write a code fragment to insert a new node at the given position.

b) Write a code fragment to delete an existed node at the given position.

c) Write an iterative function count() that takes a link as input, and prints out the number of elements in the linked list.

d) Write an iterative function max() that takes a link as input, and returns the value of the maximum key in the linked list.

Assume all keys are positive, and return -1 if the list is empty.

-- THE END --