Indian Institute of Technology (Indian School of Mines) Dhanbad
Data Structures Lab (NCSC104)
B.Tech (CSE)

Assignment-5 (Array and basic Link List)

1. Write a program that finds the intersection point of two singly linked lists, where one list has a size of N and the other has a size of M.
   Input:
   LinkList1 = 5->9->6->4->2->3
   LinkList2 = 8->1->2->4->2->3
   Common= 4->2->3
   Output:
   Intersection Point: 4

2. Print the sum of all nodes in a singly linked list such that node value can be divided into three distinct integers (x,y,z) and x,y,z>=2
   Sample input:
   64->32->97->2->12345->null
   Sample Output
   12409
   Explanation
   64 can be divided into three distinct integers 2,4,8.
   32,97,2 can't be divided into three distinct integers.
   12345 can be divided into three distinct integers 3,5,823.
   Sum =64+12345=12409.

3. Given a linked list, it may consist of duplicate nodes. The task is to find the sum of non-duplicate nodes.
   Input: 1 -> 2 -> 1 -> 3 -> 4 -> 3 -> NULL
   Output: 6
   2 and 4 are the only non-duplicate nodes and 2 + 4 = 6.

4. Print the given Singly-linked List after reversing the first K and last K node of a singly linked list.
   Sample Input
   2->9->33->34->23->32->20->327->76->70
   K=3
   Sample output
   33->9->2->34->23->32->20->70->76->327