

Introduction to Programming and Data Structures, 2023-24, Semester-II
Assignment 04

Maximum Marks: 150
Topic: Linked list

Submission Deadline: **2023-Oct-01**
Clarification Deadline: **2023-Sep-29**

[AP0401:] *Linked list operations:*

- **Problem:** Implement a singly linked list (having integer values) with the following functionalities:
 1. Insertion: Insert at the beginning of the list.
 2. Deletion: Delete all nodes having a given value.
 3. Loop creation: Create a loop at specific location. Given k , this operation links address of the k th node to the last node.
 4. Display: Show the linked list in the terminal, irrespective of presence of loop or not.
 5. Exit the program.
- Create a menu-driven program that allows users to choose operations from the menu.
 1. Display a menu with options for each operation.
 2. Accept user input for selecting an option.
 3. Perform the selected operation.
 4. Continue until the user chooses to exit the program.
- **Output:** User inputs from terminals only.
- **Output:** Just display the outputs in the terminals.

[100]

- Good programming practice:
 - Indentation, name of files, variables, etc. should be inappropriate.
 - Each function should handle input errors. This should include all possible errors by scanf, malloc, etc.

[10+40]