# Data Structure and Algorithm [Assignment 2]

**Submission to be done on UCP PORTAL**
**Deadline: Wednesday, December 04, 2024, 9:00am (morning)**

## Task 1

Write a function to merge two sorted singly linked lists into a single sorted linked list.

## Task 2

Write a function to find the middle element of a singly linked list. Try to do it in one pass.

## Task 3

Write a function to determine if a linked list is a palindrome.

## Task 4

Write a function to find the maximum value in a linked list.

## Task 5

Write a function to remove duplicates from an unsorted linked list.

## Task 6

Write a function to find a linked list's length (size/number of nodes).

## Practice Tasks (not to be submitted)

- Merge K-sorted linked lists into one sorted linked list.
- Search for a given value in a linked list.
- Insert a node at a given position in a linked list.
- Reverse a singly linked list.
- Sum values of all nodes in the linked list.
- Find the sum of all odd values in the linked list.
- Remove every Kth node from a linked list.
- Swap nodes at two specified positions in a linked list.
- Rotate the linked list to the right by K positions.