Lab 6

# Objective

* Applications of Linked List
* Applications of circular linked list

**You are required to provide solution for all the tasks using linked lists having HEAD pointer ONLY.**

# Lab Task 1

Write a function that displays the numbers greater than a key present in a linked list, you are also required to count the number of elements greater than the key.

**Example:**

1 2 8 9 7 15 3 6 14 20

Key = 8

**Output:**

9 15 14 20

Count: 4

# Lab Task 2

Write a function that counts the number of times a key is present in a linked list

**Example:**

9 8 15 8 19 8 15 11 2 1 8 19 20

Key = 8

**Output:**

Count: 4

# Lab Task 3

Write a functions that merges the two linked lists and sort the **resultant linked** list in **descending** order.

**Example:**

Linked list 1: 1 2 8 9 15 4

Linked list 2: 7 6 12 10 19 13

**Output:** 19 15 13 12 10 9 8 7 6 4 2 1

# Lab Task 4

Given a singly linked list of characters, write a function that returns true if the given list is palindrome, else false. The input is NOT case sensitive.

**Input:** rADaR

**Output:** It’s a palindrome

**Input:** MADAM

**Output:** It’s a palindrome

**Input:** Rudder

**Output:** It’s not a palindrome

# Lab Task 5

Modify the implementation of the linked list having head pointer only that inserts the values in a linked list Ascending order.

# Lab Task 6

Modify the implementation of the linked list having head pointer only that inserts the values in a linked list Descending order.