Lab Assignment 7

Week 8 (4th Mar – 9th Mar 2019)

Topic: Singly Linked List

1. Write a program in C to create a single linked list of 10 nodes and find the occurrence of an element in the linked list.
2. Write a program in C to count the number of nodes in the linked list and find out the max and min valued node.
3. Write a program in C to insert an element at
    a. Beginning of the linked list.
    b. End of the linked list.
    c. Specific location in a linked list.
4. Write a C function that moves last element to front in a given Singly Linked List.
   For example, if the given Linked List is 1->2->3->4->5, then the function should change the list to 5->1->2->3->4.
5. Write a program in C which reads a name and generates the link list of the characters in that name. Later it removes the vowels from the link list and displays the modified link list.
6. Write a program which takes a list and deletes all duplicate nodes from the list. The list is not sorted. For example if the linked list is 12->11->12->21->41->43->21 then function removeDuplicates() should convert the list to 12->11->21->41->43.
7. Create a link list of user supplied ten characters to store a name. Create a second link list of same type of user supplied five characters. Now using a function remove(..), traverse first link list and if any three consecutive characters of second link list appears as consecutive characters of first link list, remove those from first link list.
8. Write a program using linked list to reverse a linked list.
9. Write a program to implement multiplication of two polynomials.
10. Write a function to delete a node from a circular linked list.
11. Assume there are duplicate elements in a linked list. Sort the elements of the list and then print all duplicate elements from the list.
12. Write a function check whether a string in linked list is a palindrome or not.