



Smt. Chandaben Mohanbhai Patel Institute of Computer Applications

BCA – Semester III

CAUC201 – Fundamental of Data Structures and Algorithms

Practical Assignment – 4 Programs on Linked List	
1.	Write program perform the following operations on a Singly Linked List. <ol style="list-style-type: none">1. Insert an element at the first position2. Insert an element at the last position3. Insert an element at a given position4. Delete an element from the first position5. Delete an element from the last position6. Delete an element from a given position7. Display all elements of the list8. Count the total number of nodes
2	Write program perform the following operations on a Doubly Linked List. <ol style="list-style-type: none">1. Insert an element at the first position2. Insert an element at the last position3. Insert an element at a given position4. Delete an element from the first position5. Delete an element from the last position6. Delete an element from a given position7. Display all elements of the list8. Count the total number of nodes
3	Write program perform the following operations on a Singly Linked List. <ol style="list-style-type: none">1. Insert an element2. Delete an element3. Find the sum of elements of the List4. Count number of the nodes in the Linked List5. Search a given element in the Linked List.

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	<ol style="list-style-type: none"> Reverse the Linked List. Make a copy of the given Linked List Concatenate two Linked List Merge two Linked List. Find the union of the two given Linked List Find the intersection of the two given Linked List.
4	<p>Write program perform the following operations on a Circular Singly Linked List. (Optional)</p> <ol style="list-style-type: none"> Insert an element at the first position Insert an element at the last position Insert an element at a given position Delete an element from the first position Delete an element from the last position Delete an element from a given position Display all elements of the list Count the total number of nodes
5	<p>Write a program to perform the following operations on a Singly Linked List.</p> <ol style="list-style-type: none"> Insert an element Delete an element Display an Element Remove duplicates from a single unsorted linked list. Count total number of duplicate elements. <p>Input: Original Singly List: 1 2 3 3 6 6 5</p> <p>Output: After removing duplicate elements from the said singly list: 1 2 3 6 5 Total Duplicate Element: 2</p>
6	<p>Write a program to perform the following operations on a Singly Linked List.</p>



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	<ol style="list-style-type: none">1. Insert an element2. Delete an element3. Display an Element4. Print all Prime numbers and also count total prime numbers from a given list.
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