LAB WORK: LINKED LIST

Single Linked List

1. Write a program to concatenate one linked list at the end of the other.
2. Write a program to perform splitting of a linked list into two lists.
3. Write a program of copying one linked list into other.
4. Write a program to remove first node of the linked list and insert it at the end.
5. Write a program to remove the last node of the linked list and insert it at the beginning.
6. Write a program to count the number of occurrences of an element in a linked list.
7. Count all nonzero elements, odd numbers and even numbers in a linked list.
8. Find the largest and smallest element of a linked list, print total of all elements and find out the average.
9. Given lists L1, L2 and L3, delete all the nodes having even number in info part from the list L1 and insert into list L2 and all the nodes having odd numbers into list L3.
10. Write a program that will swap two nodes in a linked list.
11. Write a program to maintain a sorted linked list in descending order.
12. Create a linked list with given number in which info part of each node contains the digit of this number. Suppose the number is 54681 then the nodes of linked list should contain 5, 4, 6, 8, 1.(Hint: Separate numbers using modulus(% ) operator.)
13. Write a program to multiply a polynomial with a given number.
14. Write a program to multiply two polynomials.

Double Linked List

1. Write a program to concatenate one linked list at the end of the other.
2. Write a program to perform splitting of a linked list into two lists.
3. Write a program of copying one linked list into other.
4. Write a program to remove first node of the linked list and insert it at the end.
5. Write a program to remove the last node of the linked list and insert it at the beginning.
6. Write a program to count the number of occurrences of an element in a linked list.
7. Count all nonzero elements, odd numbers and even numbers in a linked list.
8. Find the largest and smallest element of a linked list, print total of all elements and find out the average.
9. Given lists L1, L2 and L3, delete all the nodes having even number in info part from the list L1 and insert into list L2 and all the nodes having odd numbers into list L3.
10. Write a program that will swap two nodes in a linked list.

Circular Linked List

1. Write a program to concatenate one linked list at the end of the other.
2. Write a program to perform splitting of a linked list into two lists.
3. Write a program of copying one linked list into other.
4. Write a program to remove first node of the linked list and insert it at the end.
5. Write a program to remove the last node of the linked list and insert it at the beginning.
6. Write a program to count the number of occurrences of an element in a linked list.
7. Count all nonzero elements, odd numbers and even numbers in a linked list.
8. Find the largest and smallest element of a linked list, print total of all elements and find out the average.
9. Given lists L1, L2 and L3, delete all the nodes having even number in info part from the list L1 and insert into list L2 and all the nodes having odd numbers into list L3.
10. Write a program that will swap two nodes in a linked list.