Paper Code   : SWL:206
Paper Name   : Software Lab II (Data Structure in C)

1. An array A contains 25 positive integers. Write a program in C which will find out the number of odd and even numbers in that array.

2. Write a program in C for traverses a Linear Array with a lower bound and upper bound.

3. Write a program in C to insert an element in the Kth position of an array size 20.

4. Consider two single dimensional arrays of size 20 and 30 respectively. Write a program in C to find out the elements which are common in both arrays.

5. Write a program in C to delete duplicate elements from an array of 20 integers.

6. Write a C program for multiplication of two spare matrix.

7. Write a C Program to count the numbers of elements in a linked list.

8. Consider that a single linked list contains the following elements :

    Roll_no. : integer

    Name : string of maximum of 25 Character

    Avg_no : float.

   Write a program in C to represent a single linked list with the above elements.

9. Write a C program to insert an ITEM after a given node in a Linked list.

10. Write a C program to find the location of the last node in a sorted linked list.

11. Write a C program to delete an element from a linked list the first node N contains the given ITEM of information.

12. Write a C program to implement circular linked list.

13. Write a C program to implement doubly linked list.

14. Write a program in C to implement stack using array.

15. Write a program in C to implement stack using linked list.

16. Write a program in C to transform the following infix expression to postfix expression :

    (A + B ^D)*(D/E)

17. Write a program in C to find the Fibonacci sequence upto 10th term.

18. Write a program in C to implement queue using array.

19. Write a program in C to implement queue using linked list.

20. Write a program in C to implement circular queue.

21. Write a program in C to implement priority queue.

22. Write a program in C for preorder traversal of a binary tree using stack.

23. Write a program in C for inorder traversal of a binary tree using stack.

24. Write a program in C for postorder traversal of a binary tree using stack.

25. Write a program in C to insert new nodes to a binary search tree and delete a node from binary search tree.

26. Write a program in C to find the location of the first node containing ITEM and also find the location of an edge in the graph G.

27. Write a program in C to insert new nodes to a graph G and delete a node from a graph G.

28. Write a program in C to implement Breadth-First Search.

29. Write a program in C to implement Depth-First Search.

30. Write a program in C to implement Bubble Sort.

31. Write a program in C to implement Quick sort.

32. Write a program in C to implement Selection sort.

33. Write a program in C to implement Merge sort.

34. Write a program in C to implement Linear search.

35. Write a program in C to implement Binary search.