PBC 201 TERM WORK

ARRAY/MATRICES:

1. Wap to print second largest element in array of size N
2. Wap to merge two array into one array.
3. Wap to insert and delete item in an array. After deletion, shift the elements in the array.
4. wap to shift elements of an array in the right direction by one position.
5. wap to find three largest element in an array of size N.
6. Write C programs for check if a given matrix is sparse matrix or not.
7. WAP to implement multiplication of two matrices.
8. Wap to print sum of diagonals in a N*N matrix

STACK/QUEUE:

9. Write a menu driven C program to implement of stack using array with following operations :
    - Check if the stack is empty
    - Check if the stack is full
    - Display the contents of stack
    - Push data
    - Pop data
10. Write a menu driven C program to implement of queue using array with following operations :
    - Check if the queue is empty
    - Check if the queue is full
    - Display the contents of queue
    - Enqueue data
    - Dequeue data
11. WAP to convert an infix expression into postfix expression.
12. WAP to evaluate a postfix expression using stack.

LINKED LIST:

13. Write a menu driven C program to implement of singly linked list with following operations:
    - Create the list
    - Insert a node in the beginning, in the end, at given position
    - Delete a node in the beginning, in the end, at given position
    - Search a node
    - Display the list
14. Write a menu driven C program to implement of doubly linked list with following operations:
    - Create the list
    - Insert a node in the beginning, in the end, at given position
    - Delete a node in the beginning, in the end, at given position

- Search a node
- Display the list

15. Write a menu driven C program to implement of circular linked list with following operations:
    - Create the list
    - Insert a node in the beginning, in the end, at given position
    - Delete a node in the beginning, in the end, at given position
    - Search a node
    - Display the list
16. Write a menu driven C program to implement of stack using linked list with following operations :
    - Check if the stack is empty
    - Check if the stack is full
    - Display the contents of stack
    - Push data
    - Pop data
17. Write a menu driven C program to implement of queue using linked list with following operations :
    - Check if the stack is empty
    - Check if the stack is full
    - Display the contents of queue
    - Enqueue data
    - Dequeue data

SEARCHING:

18. Write a C program that implements Linear Search on a set of n Numbers.
19. Write a C program that implements Binary Search on a set of n Numbers.

SORTING:

20. Write a C program that implements Bubble Sort on a set of n Numbers.
21. Write a C program that implements Insertion Sort on a set of n Numbers.
22. Write a C program that implements Selection Sort on a set of n Numbers.
23. Write a C program that implements Merge Sort on a set of n Numbers.
24. Write a C program that implements Quick Sort on a set of n Numbers.

BINARY SEARCH TREE:

25. Write a C program for binary search tree traversal: in-order , post-order, pre-order.
26. Write a C program to implement BST with the following operations:
    a) Insert an element into a binary search tree.
    b) Delete an element from a binary search tree.
    c) Search for a key element in a binary search tree.
    d) Count the number of nodes the binary search tree.
    e) Display the elements in in-order manner