

ASSIGNMENT
DATA STRUCTURE & ALGORITHM LAB
ECE 3RD YEAR 5TH SEM

1. Write a program to insert an element to a particular position of an array.
2. Write a program to delete an element from a particular position of an array.
3. Write a program to implement Tower of Hanoi problem.
4. Write a program to print Fibonacci series of n user given numbers using recursion.
5. Write a program to find GCD of two user given numbers using recursion.
6. Write a program to find the transpose of a Matrix.
7. Write a program to implement Matrix Multiplication.
8. Write a program to print Factorial of n user given numbers using recursion.
9. Write a program to sort n numbers using Bubble sort.
10. Write a program to sort n numbers using Insertion sort.
11. Write a program to sort n numbers using Merge sort.
12. Write a program to sort n numbers using Selection sort.
13. Write a program to sort n numbers using Quick sort.
14. Write a program to perform the Linear Search operation in an array.
15. Write a program to search a particular element by Binary Search method.
16. Write a program to search an element by Binary Search method in recursive way.
17. Write a menu driven program to implement Push, Pop & Display operations in STACK using array.
18. Write a menu driven program to implement Insert, Delete, Display operations in Linear QUEUE using array.
19. Write a menu driven program to implement Insert, Delete, Display operations in Circular QUEUE using array.
20. Write a menu driven program to implement Insert, Delete, and Display operations in D-QUEUE using array.
21. Write a program to do the following operations on Single Linked List
 - a) Creation
 - b) Insert at beginning
 - c) Insert at a specified position
 - d) Insert at end
 - e) Count the number of nodes
 - f) Delete an element from a specified position
 - g) Search an element
 - h) Sort the list
 - i) Display
22. Write a program to do the following operations on Circular Linked List
 - a) Creation
 - b) Insert at beginning
 - c) Insert at a specified position
 - d) Insert at end
 - e) Count the number of nodes
 - f) Delete an element from a specified position
 - g) Search an element
 - h) Sort the list
 - i) Display
23. Write a program to do the following operations on Double Linked List
 - a) Creation
 - b) Insert at beginning
 - c) Insert at a specified position
 - d) Insert at end
 - e) Count the number of nodes
 - f) Delete an element from a specified position
 - g) Search an element
 - h) Sort the list
 - i) Display
24. Write a program to generate the Binary search tree does the following operations
 - a) Creation
 - b) Insertion
 - c) Deletion
 - d) Display