# Data Structures and Algorithms Lab
# Assignment-3

1. Write a program to implement a stack data structure using an array.
2. Implement a system that can handle more than one stack (n stacks).
3. Print the data from a file of integers in reverse order using a stack.
4. Write a Boolean function to return true if two stacks are equal.
5. Write a program for dynamic implementation (using a link list) of stacks (n stacks).
6. Using a stack, write a program to convert an infix expression into its equivalent postfix expression.
7. Write a program to evaluate postfix expression using a stack.
8. Write a program to check balanced brackets of an expression using stack.
9. Write a program to implement queue data structure using an array.
10. Implement a system that can handle multiple queues (n queues).
11. Append a queue x at the end of a queue y.
12. A Boolean function to return true if two eq(q1, q2) are equal.
13. Reverse a queue.
14. Procedure ***replace***(p, e, x) to replace every occurrence of element e in queue p with the value of x.
15. Write a program for dynamic implementation (using a link list) of a queue of the above.
16. Implement a circular queue using an array.
17. Implement a Deque using a doubly linked list.
18. Implement a priority queue using
    a. A single array.
    b. A single linked list.
    c. A 2D array.
    d. Multiple single linked lists.