CL2001 – Data Structure Lab

Lab 6 Task:

Problem: 1 |

Implement the stackADT with size 10. It should have the following functions:

1. initializeStack: Initializes the stack to an empty state.
2. isEmptyStack: Determines whether the stack is empty.
3. isFullStack: Determines whether the stack is full.
4. push: Adds a new element to the top of the stack.
5. top: Returns the top element of the stack.
6. pop: Removes the top element of the stack.

Implement main() in such a way that working of all the functions mention above will be satisfied.

Problem: 2 |

Write a C++ program to implement stack using Linked List.

The program should use the following functions.

Push(element)

Pop()

Display_stack()

Problem: 3 |

Implement the QueueADT with size 10. Create the following driver functions:

Functions:

1. Enqueue()
2. Dequeue()
3. Isempty()
4. Isfull()

Implement main() in such a way that working of all the functions mention above will be satisfied.

Problem: 4 |

Provide Linked list base implementation of queue. Also create a driver function

Functions:

1. Enqueue()
2. Dequeue()
3. Isempty()
