Assignment 1: M.Tech CDS

1. Understand the object oriented paradigms. Encapsulation, polymorphism, inheritance, Abstraction. Implement using an object oriented programming language.
2. Design a data structure "Matrix" with all valid operations on it. Use operator/function overloading facilities. Use template class to implement the same to make it generic.
3. Design a "List" data structure with all valid operations. Implement using Template class.
4. Design a Linked list (with single and double link) with all valid operations.
5. Use a Linked list to reverse a string, to find whether a string is a palindrome or not.
6. Design a Stack and a queue using linked list (use singly linked list).
7. Convert a infix expression to post-fix expression and evaluate the same.