

MES' Institute of Management and Career Courses (IMCC), Pune

FYMCA- Academic Year 2022-23

**IT11L: Data Structure and Algorithm Practical Assignments**

**Note: Following practical shall be implemented using JavaScript**

1. Write a program to demonstrate singly linked list with following operations  
Create, Insert, Delete, Display, Reverse
2. Write a program to demonstrate doubly linked list with following operations  
Create, Insert, Delete, Display
3. Write a program to implement STACK using linked list with PUSH, POP and  
DISPLAY operations
4. Write a program to implement Linear Queue using linked list with INSERT,  
DELETE and DISPLAY operations
5. Write a program to implement Circular Queue using linked list with INSERT,  
DELETE and DISPLAY operations
6. Write a program to implement Priority Queue using linked list with INSERT,  
DELETE and DISPLAY
7. Write a program to Reverse a string using stack
8. Write a program to check for balanced parentheses of an expression by using  
stacks
9. Write a program to reverse stack using queue.
10. Write a program to implement binary search tree with its operations.
11. Write a program to implement graph traversals.
12. Write a program to implement linear search.
13. Write a program to implement binary search.
14. Write a program to implement Rain Terrace problem.
15. Write a program to implement Recursive Staircase problem.
16. Write a program to find Maximum subarray in a given array.
17. Write a program to find Minimum number of jumps to reach end.

18. Write a program to implement Quick Sort.
19. Write a program to implement Merge Sort.
20. Write a program to implement Tower of Hanoi problem.
21. Write a program to generate sequence of Fibonacci numbers using Dynamic Programming.
22. Write a program to count all possible unique paths from top left to bottom right of a  $m \times n$  matrix.
23. Write a program to print LCS (Longest Common Subsequence)
24. Write a program to display Power Set of a given set using backtracking approach.