



University of Engineering and Management (UEM), Kolkata

Department of Computer Applications

Stream: MCA

Session: 2024-2026

Subject Name: Data Structures with C Laboratory

Subject Code: MCA193

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Topic: Stack

- 1) Write a Menu driven C program to accomplish the following functionalities in Stack using an Array:
 - a. Insert an element into the stack using an array (Push Operation).
 - b. Delete an element from the stack using an array (Pop Operation).
 - c. Return the value of the topmost element of the stack (without deleting it from the stack) using an array.
 - d. Display the elements of a stack using an array.
- 2) Write a Menu driven C program to accomplish the following functionalities in Stack using Linked List:
 - a. Insert an element into the stack using a Linked List (Push Operation).
 - b. Delete an element from the stack using a Linked List (Pop Operation).
 - c. Return the value of the topmost element of the stack (without deleting it from the stack) using a Linked List.
 - d. Display the elements of the stack using a Linked List.
- 3) Write a program to convert an infix expression into its equivalent postfix notation.
- 4) Write a program to convert an infix expression into its equivalent prefix notation.
- 5) Write a program to evaluate a postfix expression.
- 6) Write a program to evaluate a prefix expression.
- 7) Write a program to print the Fibonacci series using recursion.
- 8) Write a program to solve the tower of Hanoi problem using recursion.