

Lab Assignment: Implement a Stack using Linked List

Problem Statement:

Implement a stack using a singly linked list. The stack should support the basic operations: push, pop, peek, and display.

Learning Objectives:

- Understand how dynamic memory allocation works in C.
- Learn how to represent a stack using linked lists.
- Implement standard stack operations without fixed-size limitations.

Function Signatures:

```
void push(int data);           // Insert an element into the stack
int pop();                     // Remove and return the top element of the stack
int peek();                     // Return the top element without removing it
void display();                 // Display all elements in the stack
```

Example:

```
Push(10)  Stack: 10
Push(20)  Stack: 20 10
Push(30)  Stack: 30 20 10
Pop()     Returns 30, Stack: 20 10
Peek()    Returns 20
```