National University of Computer and Emerging Sciences



# Lab Manual

*for*

# Data Structure

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**Lab Manual 05**

**Objectives:**

After performing this lab, students shall be able to revise:

* Stack using link list

## Problem 1

## Implement a Struct ‘Node’ that contains two data members: A template variable ‘data’ and Node pointer ‘next’.

## Create a Stack that contain two data members, A Node variable ‘top’ and template variable ‘size’.

## Now implement the following operations for stack class:

## It delete top element from stack. void pop();

## Insert in stack void push(T const element);

## Return true if top is pointing to NULL otherwise false. bool IsEmpty();

## Get top element from stack T gettopelement();

## Make appropriate function according to your need.

**Now implement the following problem of stack using link list**

* Sort stack using temporary stack
* Delete middle element of stack
* Check stacks IsPalindrome?
* Find two element in stack whose sum is K