North South University
Department of Computer Science and Engineering

CSE 225: LAB 03 (Handout)
Course Instructor: Dr. Mohammad Rezwanul Huq

Problem Solving on Singly Linked List and Implementing Stack ADT

Lab Objective

Understanding and Implementing Stack ADT (Abstract Data Type) in C++.

Lab Outcomes

After completing this lab successfully, students will be able to:

1. **Understand** the structure of Stack ADT.
2. **Implement** different operations on a Stack.

Psychomotor Learning Levels

This lab involves activities that encompass the following learning levels in psychomotor domain.

Level	Category	Meaning	Keywords
P1	Imitation	Copy action of another; observe and replicate.	Relate, Repeat, Choose, Copy, Follow, Show, Identify, Isolate.
P2	Manipulation	Reproduce activity from instruction or memory	Copy, response, trace, Show, Start, Perform, Execute, Recreate.

Lab Activities

Problem Solving on Singly Linked List

Task 1 Given a SinglyLinkedList, print all keys except the first one. Sample Input/Output is given below.

Sample Input	Sample Output
1 → 2 → 3 → 4 → NULL	2 3 4
NULL	Nothing to print
1 → NULL	Nothing to print

Task 2 Given a SinglyLinkedList, print the number of elements in that list. Sample Input/Output is given below.

Sample Input	Sample Output
1 → 2 → 3 → 4 → NULL	4
NULL	0
1 → NULL	1

Task 3 Given a SinglyLinkedList, print the difference between two adjacent keys. Sample Input/Output is given below.

Sample Input	Sample Output
10 → 5 → 9 → 15 → NULL	5 -4 6
NULL	Nothing to print
1 → NULL	Nothing to print