

**S.Y. B. Tech. Academic Year 2022\_23 Trimester: III**

## **Fundamentals of Data Structures**

### **LABORATORY WRITE UP**

**Experiment Number: 08**

### **TITLE: Postfix expression evaluation using stack**

#### **PROBLEM STATEMENT:**

Write a C program to evaluate postfix expression using stack.

#### **OBJECTIVE:**

1. To study Stack and its operations
2. To study the importance of expression evaluation

**THEORY:** *//To be Written by Students*

*// Write theory by elaborating below points*

Describe with examples usage of the stack in Expression evaluation for there expression types

#### **IMPLEMENTATION:**

- **PLATFORM:**

- 64-bit Open source Linux or its derivatives.
- Open Source C Programming tool like gcc/Eclipse Editor.

- **TEST CONDITIONS:-**

1. Input postfix expression and check its evaluation.

- **PSEUDO CODE:**        *//To be Written by Students*

Write pseudo code postfix expression evaluation

- **TIME COMPLEXITY:**        *//To be Written by Students*

Write time complexity of above operation.

- **CONCLUSION:**

Thus, implemented postfix expression evaluation using stack data structure.

- **FAQs**                        *//To be Written by Students*

- How prefix expression evaluation works?
- What is the advantage of prefix and postfix expressions?

- **PRACTICE ASSIGNMENTS**

1. Write a program for evaluation of prefix expressions.