

## Lab 3 Programming Assignments

**Note: Do these problems in the order that they appear.**

**Problem 1:** Write a python program to check if an input expression has matching opening and closing symbols. First implement the **Stack** class in the file **mystack.py** and then use it to solve this problem.

Sample Runs:

Enter the expression: [ ((a+b) \* {c-d}) / (a - f) ]

Matched symbols.

Enter the expression: [ ((a+b) \* {c-d}) / (a - f) ]

Unmatched symbols.

**Problem 2:** Write a python program to evaluate a postfix expression. Use the Stack class built in the previous problem.

Sample Run:

Enter the postfix expression: 10 3 \* 5 / 32 2 - +

The value of the expression is 36.0

**Problem 3:** Write a program to convert a prefix expression to a postfix expression

**Problem 4:** Write a program to evaluate a prefix expression.

**Problem 5:** Write a program to convert an infix expression to a postfix expression.