Assignment1
(Introduction to LEX/Yacc)
06/01/2023

Time: 1 hr

Question:

Implement the calculator as below, and terminate when the user inputs the 'exit' command:

> user: 3 * (4.5 + 5.5)
> calc: 30
> user: x = 3 * (4.2 + 5.8)
> user: y = 5
> user: x
> calc: 30
> user: y
> calc: 5
> user: x + 2*y
> calc: 40
> user: x+2*y == 3*x-10*y
> calc: yes
> user: x+2*y+z
> calc: invalid input
> user: postfix(a+b*c)
> calc: abc*+
> user: prefix(a+b*c)
> calc: +a*bc
> user:exit
> calc:exiting…

Instructions:
1. Operator supported: +,-,*,/,%,^,unary minus,==,=.
2. Two special keyword postfix & prefix to get postfix & prefix form of a infix expression.
3. Parenthesis supported.
4. Input can also be float.
5. Give proper error message in case of invalid/wrong input.

Marks break-up:
1. Correct Lex implementation → 10
2. Correct Yacc implementation → 25
3. Test cases(10 cases) → 50
4. Error handling → 15

Partial marks will be awarded where applicable.