CENG 2002 - Data Structures - Spring 2021
Homework #3

Due date : 08/05/2021 - 23:59

Assignment: Write an arithmetic expression evaluator using a binary expression tree and other data structures (Stacks, Queues, Lists etc).

- The evaluator first reads an expression from user input in the form
  - Example : 3*24*(12 + 3)/4
- It parses the expression
- It converts the expression to either prefix or suffix (Search for what prefix or suffix notation is for expression evaluation)
- It then constructs a binary expression tree from this prefix or suffix expression
- It evaluates the expression on binary expression tree (By using proper traversals)

Notes:

- You do not have to check if expression is proper. (Like missing *, operator without operands)
- You can use the parser I provided.
- You must create a base node class and two inherited classes, one for operator and one for operands. (You can check the textbook for an example)
- Evaluation must be done on the binary expression tree
- Your evaluator must be able to handle parentheses as well.

Submit:

- All cpp and header files.

Late submission:

- You get no credits.