

Interpreter of arithmetic expressions

Implement an arithmetic expression interpreter that supports proper execution of operations on integers. The necessary functionalities are:

- addition, subtraction, multiplication, and integer division,
- printing the value of expressions and variable values using the print command, which takes an expression or variable name as input,
- properly interpreting negative numbers in expressions,
- grouping arithmetic expressions using parentheses, and
- assigning values to variables and using variables within expressions.

It should be possible to construct a parsing tree (which can be viewed in debugging mode). Properly cover functionalities with unit tests. Only the standard library is allowed to be used. The use of lexical analyzer generators and parser generators is not allowed.