The Interpreter defines an internal structure to store and interpret an expression in a language.

Jane and Mary happily bought and quickly gave mom and dad their gifts and cards.

The structure of the Interpreter for a language mirrors the structure of the formal definition.

**Formal Definition**

Expression ::= Plus-exp | Minus-exp | Literal

Plus-exp ::= Literal ‘+‘ Expression

Minus-exp ::= Literal ‘–‘ Expression

Literal ::= ‘A‘ | ‘B‘ | ‘C‘ | ‘D‘

**Interpreter Structure**

Expression
  - Plus-exp
    - Evaluate()
  - Literal
    - Evaluate()
  - Minus-exp
    - Evaluate()
To “execute” the expression you traverse the instance of the interpreter.

Expression
A+B-A+C-D

Instance of Expression
A+B-A+C-D

Plus-exp
Evaluate()

Minus-exp
Evaluate()

Literal - A
Evaluate()

Literal - B
Evaluate()

Literal - A
Evaluate()

Literal - C
Evaluate()

Literal - D
Evaluate()