Stack-4

Assignment Questions

1. Given a string s which represents an expression, evaluate this expression and return its value.The integer division should truncate toward zero.
You may assume that the given expression is always valid. All intermediate results will be in the range of [-231, 231 – 1].

   Note: You are not allowed to use any built-in function which evaluates strings as mathematical expressions, such as eval(). [Leetcode-227]

   Example 1:
   Input: s = "3+2*2"
   Output: 7

   Example 2:
   Input: s = " 3/2 "
   Output: 1

   Example 3:
   Input: s = " 3+5 / 2 "
   Output: 5

2. Given a string s representing a valid expression, implement a basic calculator to evaluate it, and return the result of the evaluation.

   Note: You are not allowed to use any built-in function which evaluates strings as mathematical expressions, such as eval(). [Leetcode-224]

   Example 1:
   Input: s = "1 + 1"
   Output: 2

   Example 2:
   Input: s = " 2-1 + 2 "
   Output: 3

   Example 3:
   Input: s = "(1+(4+5+2)-3)+(6+8)"
   Output: 23

3. **You are given an array of strings tokens that represents an arithmetic expression in a** [Reverse Polish Notation.](#)
   Evaluate the expression. Return an integer that represents the value of the expression.

   Note that:
   - The valid operators are '+', '-', '*', and '/'.
   - Each operand may be an integer or another expression.
   - The division between two integers always truncates toward zero.
   - There will not be any division by zero.
   - The input represents a valid arithmetic expression in a reverse polish notation.
   - The answer and all the intermediate calculations can be represented in a 32-bit integer.
     [Leetcode-150]

   Example 1:
   Input: tokens = ["2","1","+","3","*"]
   Output: 9
   Explanation: ((2 + 1) * 3) = 9

   Example 2:
   Input: tokens = ["4","13","5","/","+"]
   Output: 6
   Explanation: (4 + (13 / 5)) = 6

   Example 3:
   Input: tokens = ["10","6","9","3","+","-11","*","/","*","17","+","5","+"]
   Output: 22
   Explanation: ((10 * (6 / ((9 + 3) * -11))) + 17) + 5
   = ((10 * (6 / (12 * -11))) + 17) + 5
   = ((10 * (6 / -132)) + 17) + 5
   = ((10 * 0) + 17) + 5
   = (0 + 17) + 5
   = 17 + 5
   = 22

PW SKILLS

THANK YOU !