

Problem 224: Basic Calculator

Problem Information

Difficulty: Hard

Acceptance Rate: 46.34%

Paid Only: No

Tags: Math, String, Stack, Recursion

Problem Description

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()`.

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

Constraints:

* `1 <= s.length <= 3 * 105` * `s` consists of digits, `'+'`, `'-'`, `'('`, `')'`, and `' '`. * `s` represents a valid expression. * `'+'` is **not** used as a unary operation (i.e., `"+1"` and `"+(2 + 3)"` is invalid). * `'-'` could be used as a unary operation (i.e., `"-1"` and `"-(2 + 3)"` is valid). * There will be no two consecutive operators in the input. * Every number and running calculation will fit in a signed 32-bit integer.

Code Snippets

C++:

```
class Solution {  
public:  
    int calculate(string s) {  
  
    }  
};
```

Java:

```
class Solution {  
    public int calculate(String s) {  
  
    }  
}
```

Python3:

```
class Solution:  
    def calculate(self, s: str) -> int:
```