Problem 682: Baseball Game

Problem Information

Difficulty: Easy
Acceptance Rate: 79.64%
Paid Only: No
Tags: Array, Stack, Simulation

Problem Description

You are keeping the scores for a baseball game with strange rules. At the beginning of the game, you start with an empty record.

You are given a list of strings `operations`, where `operations[i]` is the `ith` operation you must apply to the record and is one of the following:

* An integer `x`. * Record a new score of `x`. * `'+'`. * Record a new score that is the sum of the previous two scores. * `'D'`. * Record a new score that is the double of the previous score. * `'C'`. * Invalidate the previous score, removing it from the record.

Return _the sum of all the scores on the record after applying all the operations_.

The test cases are generated such that the answer and all intermediate calculations fit in a **32-bit** integer and that all operations are valid.

Example 1:

Input: ops = ["5","2","C","D","+"] **Output:** 30 **Explanation:** "5" - Add 5 to the record, record is now [5]. "2" - Add 2 to the record, record is now [5, 2]. "C" - Invalidate and remove the previous score, record is now [5]. "D" - Add 2 * 5 = 10 to the record, record is now [5, 10]. "+" - Add 5 + 10 = 15 to the record, record is now [5, 10, 15]. The total sum is 5 + 10 + 15 = 30.

Example 2:

Input: ops = ["5","-2","4","C","D","9","+","+"] **Output:** 27 **Explanation:** "5" - Add 5 to the record, record is now [5]. "-2" - Add -2 to the record, record is now [5, -2]. "4" - Add 4 to the record, record is now [5, -2, 4]. "C" - Invalidate and remove the previous score, record is now [5, -2]. "D" - Add 2 * -2 = -4 to the record, record is now [5, -2, -4]. "9" - Add 9 to the record, record is now [5, -2, -4, 9]. "+" - Add -4 + 9 = 5 to the record, record is now [5, -2, -4, 9, 5]. "+" - Add 9 + 5 = 14 to the record, record is now [5, -2, -4, 9, 5, 14]. The total sum is 5 + -2 + -4 + 9 + 5 + 14 = 27.

Example 3:

Input: ops = ["1","C"] **Output:** 0 **Explanation:** "1" - Add 1 to the record, record is now [1]. "C" - Invalidate and remove the previous score, record is now []. Since the record is empty, the total sum is 0.

Constraints:

* `1 <= operations.length <= 1000` * `operations[i]` is `"C"`, `"D"`, `"+"`, or a string representing an integer in the range `[-3 * 104, 3 * 104]`. * For operation `"+"`, there will always be at least two previous scores on the record. * For operations `"C"` and `"D"`, there will always be at least one previous score on the record.

Code Snippets

C++:

```
class Solution {
public:
int calPoints(vector<string>& operations) {

}
};
```

Java:

```
class Solution {
public int calPoints(String[] operations) {

}
}
```

Python3:

```
class Solution:
def calPoints(self, operations: List[str]) -> int:
```