

2011. Final Value of Variable After Performing Operations

Easy

Topics

Companies

Hint

There is a programming language with only **four** operations and **one** variable `x`:

- `++x` and `x++` **increments** the value of the variable `x` by `1`.
- `--x` and `x--` **decrements** the value of the variable `x` by `1`.

Initially, the value of `x` is `0`.

Given an array of strings `operations` containing a list of operations, return *the **final** value of `x` after performing all the operations.*

Example 1:

Input: `operations = ["--x","x++","x++]`

Output: `1`

Explanation: The operations are performed as follows:

Initially, `x = 0`.

`--x`: `x` is decremented by `1`, `x = 0 - 1 = -1`.

`x++`: `x` is incremented by `1`, `x = -1 + 1 = 0`.

`x++`: `x` is incremented by `1`, `x = 0 + 1 = 1`.

Example 2:

Input: operations = ["++X", "++X", "X++"]

Output: 3

Explanation: The operations are performed as follows:
Initially, X = 0.

++X: X is incremented by 1, $X = 0 + 1 = 1$.

++X: X is incremented by 1, $X = 1 + 1 = 2$.

X++: X is incremented by 1, $X = 2 + 1 = 3$.

Example 3:

Input: operations = ["X++", "++X", "--X", "X--"]

Output: 0

Explanation: The operations are performed as follows:
Initially, X = 0.

X++: X is incremented by 1, $X = 0 + 1 = 1$.

++X: X is incremented by 1, $X = 1 + 1 = 2$.

--X: X is decremented by 1, $X = 2 - 1 = 1$.

X--: X is decremented by 1, $X = 1 - 1 = 0$.

Constraints:

- `1 <= operations.length <= 100`
- `operations[i]` will be either `"++X"`, `"X++"`, `"--X"`, or `"X--"`.

Python:

class Solution:

```
def finalValueAfterOperations(self, operations: List[str]) -> int:  
    return sum(1 if op[1] == "+" else -1 for op in operations)
```

JavaScript:

```
var finalValueAfterOperations = function (operations) {  
    let x = 0;  
    for (const op of operations) {  
        if ("X++" === op || "++X" === op) {  
            x++;  
        }  
    }  
    return x;  
};
```

```
        } else {  
            x--;  
        }  
    }  
    return x;  
};
```

Java:

```
class Solution {  
    public int finalValueAfterOperations(String[] operations) {  
        int x = 0;  
        for(String o : operations) x += (44 - o.charAt(1));  
        return x;  
    }  
}
```