

# 3484. Design Spreadsheet

Solved ●

Medium  Hint

A spreadsheet is a grid with 26 columns (labeled from 'A' to 'Z') and a given number of rows. Each cell in the spreadsheet can hold an integer value between 0 and  $10^5$ .

Implement the `Spreadsheet` class:

- `Spreadsheet(int rows)` Initializes a spreadsheet with 26 columns (labeled 'A' to 'Z') and the specified number of rows. All cells are initially set to 0.
- `void setCell(String cell, int value)` Sets the value of the specified cell. The cell reference is provided in the format "AX" (e.g., "A1", "B10"), where the letter represents the column (from 'A' to 'Z') and the number represents a **1-indexed** row.
- `void resetCell(String cell)` Resets the specified cell to 0.
- `int getValue(String formula)` Evaluates a formula of the form " $=X+Y$ ", where X and Y are **either** cell references or non-negative integers, and returns the computed sum.

**Note:** If `getValue` references a cell that has not been explicitly set using `setCell`, its value is considered 0.

## Example 1:

### Input:

```
["Spreadsheet", "getValue", "setCell", "getValue", "setCell", "getValue", "resetCell", "getValue"]
[[3], ["=5+7"], ["A1", 10], ["=A1+6"], ["B2", 15], ["=A1+B2"], ["A1"], ["=A1+B2"]]
```

### Output:

```
[null, 12, null, 16, null, 25, null, 15]
```

### Explanation

```
Spreadsheet spreadsheet = new Spreadsheet(3); // Initializes a spreadsheet with 3 rows and 26 columns
spreadsheet.getValue("=5+7"); // returns 12 (5+7)
spreadsheet.setCell("A1", 10); // sets A1 to 10
spreadsheet.getValue("=A1+6"); // returns 16 (10+6)
spreadsheet.setCell("B2", 15); // sets B2 to 15
spreadsheet.getValue("=A1+B2"); // returns 25 (10+15)
spreadsheet.resetCell("A1"); // resets A1 to 0
spreadsheet.getValue("=A1+B2"); // returns 15 (0+15)
```

### Constraints:

- $1 \leq \text{rows} \leq 10^3$
- $0 \leq \text{value} \leq 10^5$
- The formula is always in the format " $=X+Y$ ", where X and Y are either valid cell references or **non-negative** integers with values less than or equal to  $10^5$ .
- Each cell reference consists of a capital letter from 'A' to 'Z' followed by a row number between 1 and rows.
- At most  $10^4$  calls will be made in **total** to `setCell`, `resetCell`, and `getValue`.

Seen this question in a real interview before? 1/5

Yes No

Accepted 15.4K Submissions 22.3K Acceptance Rate 68.7%

Hint 1	▼
Hint 2	▼
Hint 3	▼
Hint 4	▼
Similar Questions	▼
Discussion (11)	▼

Copyright © 2025 LeetCode All rights reserved