Simple Spreadsheet

# The Problem

## Description

You're given a task of writing a simple program where an end user will be able performing some basic spreadsheet operation (i.e. sum).

In a nutshell, the program should work as follows:

* Create a new spread sheet
* Add numbers in different cells and perform some calculation on top of specific row or column
* Quit

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| --- | --- |
| Command | Description |
| C w h | Should create a new spread sheet of width w and height h (i.e. the spreadsheet can hold w \* h cells). |
| N x1 y1 v1 | Should insert a number in specified cell (x1, y1) |
| S x1 y1 x2 y2 x3 y3 | Should perform sum of all cells in rectangle from (x1, y1) to (x2, y2) and store the result in (x3, y3) |
| Q | Should quit the program. |

Assume each cell will allocate at most 3 characters, thus numbers given here should be right justified accordingly.

## Sample I/O

enter command: C 20 4

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enter command: N 1 2 2

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|                                                                 |

|  2                                                              |

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enter command: N 1 3 4

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|                                                                 |

|  2                                                              |

|  4                                                              |

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enter command: S 1 2 1 3 1 4

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|  2                                                              |

|  4                                                              |

|  6                                                              |

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enter command: Q

# Submission Guideline

## Technology

* You can write a console or browser application that will provide the interactive user experience in C# or JavaScript, mentioned in the problem statement.
* You can consider your choice of testing framework.

## Documentation

* Please provide a read me document or text file, along with the submitted code, detailing instruction of running the application and tests, design considerations etc

## Code Access

* The code is required to be hosted in a private repository using git source control. Personal project in <https://git.epam.com> should work nicely.
* Please don’t post the code in any public repository.
* Besides the code quality, we’ll also check how your commit code (i.e. frequency, quality of commit comment, quality unit of code being committed etc).

## Assessment Criteria

The following assessment criteria’s will be considered on the submitted code:

* + Code quality – readability, following design principles, usage of patterns, algorithms
  + Program structure – class/function design and separation, validation of user data, edge cases
  + Unit tests - should cover main use cases and should AAA pattern
  + Git usage - approach will be evaluated
  + Functionality – application should be usable and should implement the requirements

Good luck!