|  |  |
| --- | --- |
| **Problem Statement** [Single Round Match 283 Round 1 - Division II, Level One](http://community.topcoder.com/tc?module=ProblemDetail&rd=8080&pm=6003) | |
|  | *Note: this problem statement contains images that may not display properly if viewed outside the applet.*  You are to calculate the diagonal disproportion of a square matrix. The diagonal disproportion of a square matrix is the sum of the elements of its main diagonal minus the sum of the elements of its collateral diagonal. The main and collateral diagonals of a square matrix are shown in figures 1 and 2 respectively.  http://www.topcoder.com/contest/problem/DiagonalDisproportion/DiagonalDisproportion1.GIF http://www.topcoder.com/contest/problem/DiagonalDisproportion/DiagonalDisproportion2.GIF  The elements of the main diagonal are shown in green in figure 1, and the elements of the collateral diagonal are shown in cyan in figure 2.  Given a String[] **matrix**, return its diagonal disproportion. The j'th character of the i'th element of**matrix** should be treated as the element in the i'th row and j'th column of the matrix. |
|  | |
| **Definition** | |
|  | |  |  | | --- | --- | | Class: | DiagonalDisproportion | | Method: | getDisproportion | | Parameters: | String[] | | Returns: | int | | Method signature: | int getDisproportion(String[] matrix) | | (be sure your method is public) | | |
|  |  |
|  |  |
|  | |
| **Constraints** | |
| - | **matrix** will contain between 1 and 50 elements, inclusive. |
| - | Each element of **matrix** will contain only digits ('0'-'9'). |
| - | The number of characters in each element of **matrix** will be equal to the number of elements in **matrix**. |
|  | |
| **Examples** | |
| 0) |  |
|  | |  |  | | --- | --- | | |  | | --- | | {"190","828","373"} | | | Returns: 1 | | |  | | --- | | The sum of the elements of the main diagonal is 1+2+3 = 6. The sum of the elements of the collateral diagonal is 0+2+3 = 5. So, the answer is 6-5 = 1. | | |
| 1) |  |
|  | |  |  | | --- | --- | | |  | | --- | | {"9000","0120","0000","9000"} | | | Returns: -1 | |  | |
| 2) |  |
|  | |  |  | | --- | --- | | |  | | --- | | {"6"} | | | Returns: 0 | | |  | | --- | | The matrix has only one element, and this element lies on both the main and collateral diagonals. | | |
| 3) |  |
|  | |  |  | | --- | --- | | |  | | --- | | {"7748297018","8395414567","7006199788","5446757413","2972498628",  "0508396790","9986085827","2386063041","5687189519","7729785238"} | | | Returns: -24 | |

|  |  |
| --- | --- |
| **Problem Statement** [Single Round Match 571 Round 1 - Division II, Level One](http://community.topcoder.com/tc?module=ProblemDetail&rd=15491&pm=12438) | |
|  | Fox Ciel is playing the popular game 'Cut the Rope' on her smartphone. The game has multiple stages, and for each stage the player can gain between 0 and 3 stars, inclusive. You are given a String[]**result** containing Fox Ciel's current results: For each stage, **result** contains an element that specifies Ciel's result in that stage. More precisely, **result**[i] will be "---" if she got 0 stars in stage i, "o--" if she got 1 star, "oo-" if she got 2 stars and "ooo" if she managed to get all 3 stars. Return the total number of stars Ciel has at the moment. |
|  | |
| **Definition** | |
|  | |  |  | | --- | --- | | Class: | FoxAndGame | | Method: | countStars | | Parameters: | String[] | | Returns: | int | | Method signature: | int countStars(String[] result) | | (be sure your method is public) | | |
|  |  |
|  |  |
|  | |
| **Constraints** | |
| - | **result** will contain between 1 and 50 elements, inclusive. |
| - | Each element in **result** will be one of "---", "o--", "oo-", "ooo". |
|  | |
| **Examples** | |
| 0) |  |
|  | |  |  | | --- | --- | | |  | | --- | | {"ooo",  "ooo"} | | | Returns: 6 | | |  | | --- | | There are two stages. In each of them, Ciel got all three stars. Together, she now has 3+3 = 6 stars. | | |
| 1) |  |
|  | |  |  | | --- | --- | | |  | | --- | | {"ooo",  "oo-",  "o--"} | | | Returns: 6 | | |  | | --- | | This time the answer is 3 + 2 + 1 = 6. | | |
| 2) |  |
|  | |  |  | | --- | --- | | |  | | --- | | {"ooo",  "---",  "oo-",  "---",  "o--"} | | | Returns: 6 | | |  | | --- | |  | | |
| 3) |  |
|  | |  |  | | --- | --- | | |  | | --- | | {"o--",  "o--",  "o--",  "ooo",  "---"} | | | Returns: 6 | |  | | |  | | --- | |  | | |
| 4) |  |
|  | |  |  | | --- | --- | | |  | | --- | | {"---",  "o--",  "oo-",  "ooo",  "ooo",  "oo-",  "o--",  "---"} | | | Returns: 12 | | |  | | --- | |  | | |
| 5) |  |
|  | |  |  | | --- | --- | | |  | | --- | | {"---",  "---",  "---",  "---",  "---",  "---"} | | | Returns: 0 | | |  | | --- | |  | | |
| 6) |  |
|  | |  |  | | --- | --- | | |  | | --- | | {"oo-"} | | | Returns: 2 | | |  | | --- | |  | | |