

[LeetCode] 65. Valid Number



October 23, 2017

Validate if a given string is numeric.

Some examples:

"0" => true  
" 0.1 " => true  
"abc" => false  
"1 a" => false  
"2e10" => true

**Note:** It is intended for the problem statement to be ambiguous. You should gather all requirements up front before implementing one.

Thought process:

There are several rules to enforce:

1. There must be at least one number.

2. e must come after some number and be followed by some number.

3. Point cannot come after e.

4. + and - can only appear in two positions: at the start of the string or right after e.

5. There cannot be characters other than digits, e, point, + or -, or space.

We can use several boolean flags to make these happen.

Solution:

```
1class Solution {  
2    public boolean isNumber(String s) {  
3        s = s.trim();  
4        boolean eSeen = false;  
5        boolean numberSeen = false;  
6        boolean pointSeen = false;  
7        boolean numberAfterE = false;  
8  
9        for (int i = 0; i < s.length(); i++) {  
10           char c = s.charAt(i);  
11           if (Character.isDigit(c)) {  
12               numberSeen = true;  
13               numberAfterE = true;  
14           } else if (c == 'e') {  
15               if (eSeen || !numberSeen) {  
16                   return false;  
17               }  
18               eSeen = true;  
19               numberAfterE = false;  
20           } else if (c == '.') {  
21               if (eSeen || pointSeen) {  
22                   return false;  
23               }  
24               pointSeen = true;  
25           } else if (c == '+' || c == '-') {  
26               if (i != 0 && s.charAt(i - 1) != 'e') {  
27                   return false;  
28               }  
29           } else {  
30               return false;  
31           }  
32       }  
33  
34       return numberSeen && numberAfterE;  
35   }  
36}
```

Time complexity: O(n).



LeetCodeMathString

Location: Philadelphia, PA, USA

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[LeetCode] 269. Alien Dictionary

June 29, 2017

There is a new alien language which uses the latin alphabet. However, the order among letters are unknown to you. You receive a list of non-empty words from the dictionary, where words are sorted lexicographically by the rules of this new language . Derive the order of letters in this language. ...

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[LeetCode] 253. Meeting Rooms II

March 11, 2017

Given an array of meeting time intervals consisting of start and end times [[s1,e1],[s2,e2],...] (s<sub>i</sub> < e<sub>i</sub>), find the minimum number of conference rooms required. For example, Given [[0, 30],[5, 10],[15, 20]] , return 2 . Thought process: The idea is to first sort the array based on start time, so we can ...

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[LeetCode] 261. Graph Valid Tree

July 29, 2017

Given n nodes labeled from 0 to n - 1 and a list of undirected edges (each edge is a pair of nodes), write a function to check whether these edges make up a valid tree. For example: Given n = 5 and edges = [[0, 1], [0, 2], [0, 3], [1, 4]] , return true . Given n = 5 and edges = [[0, 1], [1, 2], [2, 3], ...

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