Arrays

217. Contains Duplicate

Given an integer array `nums`, return `true` if any value appears **at least twice** in the array, and return `false` if every element is distinct.

Example 1:

Input: nums = [1,2,3,1]

Output: true

Explanation:

The element 1 occurs at the indices 0 and 3.

Example 2:

Input: nums = [1,2,3,4]

Output: false

Explanation:

All elements are distinct.

Example 3:

Input: nums = [1,1,1,3,3,4,3,2,4,2]

Output: true

Constraints:

- `1 <= nums.length <= 105`
- `109 <= nums[i] <= 109`

242. Valid Anagram

Solved

Easy

Topics

Companies

Given two strings `s` and `t`, return `true` if `t` is an

anagram

of

```
s
```

, and

```
false
```

otherwise.

Example 1:

Input: s = "anagram", t = "nagaram"

Output: true

Example 2:

Input: s = "rat", t = "car"

Output: false

Constraints:

- `1 <= s.length, t.length <= 5 * 104`
- `s` and `t` consist of lowercase English letters.

Follow up: What if the inputs contain Unicode characters? How would you adapt your solution to such a case?

1. Two Sum

Given an array of integers `nums` and an integer `target`, return *indices of the two numbers such that they add up to `target`*.

You may assume that each input would have ***exactly* one solution**, and you may not use the *same* element twice.

You can return the answer in any order.

Example 1:

```
Input: nums = [2,7,11,15], target = 9
Output: [0,1]
Explanation: Because nums[0] + nums[1] == 9, we return [0,
1].
```

Example 2:

```
Input: nums = [3,2,4], target = 6
Output: [1,2]
```

Example 3:

```
Input: nums = [3,3], target = 6
Output: [0,1]
```

Constraints:

- `2 <= nums.length <= 104`
- `109 <= nums[i] <= 109`
- `109 <= target <= 109`
- **Only one valid answer exists.**

Follow-up:

Can you come up with an algorithm that is less than

```
O(n2)
```

time complexity?

49. Group Anagrams

Given an array of strings `strs`, group the anagramstogether. You can return the answer in **any order**

.

Example 1:

Input: strs = ["eat","tea","tan","ate","nat","bat"]

Output: [["bat"],["nat","tan"],["ate","eat","tea"]]

Explanation:

- There is no string in strs that can be rearranged to form `"bat"`.
- The strings `"nat"` and `"tan"` are anagrams as they can be rearranged to form each other.
- The strings `"ate"`, `"eat"`, and `"tea"` are anagrams as they can be rearranged to form each other.

Example 2:

Input: strs = [""]

Output: [[""]]

Example 3:

Input: strs = ["a"]

Output: [["a"]]

Constraints:

- `1 <= strs.length <= 104`
- `0 <= strs[i].length <= 100`
- `strs[i]` consists of lowercase English letters.

347. Top K Frequent Elements

Given an integer array `nums` and an integer `k`, return *the* `k` *most frequent elements*. You may return the answer in **any order**.

Example 1:

```
Input: nums = [1,1,1,2,2,3], k = 2
Output: [1,2]
```

Example 2:

```
Input: nums = [1], k = 1
Output: [1]
```

Constraints:

- `1 <= nums.length <= 105`
- `104 <= nums[i] <= 104`
- `k` is in the range `[1, the number of unique elements in the array]`.
- It is **guaranteed** that the answer is **unique**.

Follow up: Your algorithm's time complexity must be better than `O(n log n)`, where n is the array's size.

659 · Encode and Decode Strings

Description

Design an algorithm to encode a list of strings to a string. The encoded string is then sent over the network and is decoded back to the original list of strings.

Please implement `encode` and `decode`

Because the string may contain any of the **256** legal ASCII characters, your algorithm must be able to handle any character that may appear

Do not rely on any libraries, the purpose of this problem is to implement the "encode" and "decode" algorithms on your own

Example

Example1

```
Input: ["lint","code","love","you"]
Output: ["lint","code","love","you"]
Explanation:
One possible encode method is: "lint:;code:;love:;you"
```

Example2

```
Input: ["we", "say", ":", "yes"]
Output: ["we", "say", ":", "yes"]
Explanation:
One possible encode method is: "we:;say:;:::;yes"
```

238. Product of Array Except Self

Given an integer array `nums`, return *an array* `answer` *such that* `answer[i]` *is equal to the product of all the elements of* `nums` *except* `nums[i]`.

The product of any prefix or suffix of `nums` is **guaranteed** to fit in a **32-bit** integer.

You must write an algorithm that runs in `O(n)` time and without using the division operation.

Example 1:

```
Input: nums = [1,2,3,4]
Output: [24,12,8,6]
```

Example 2:

```
Input: nums = [-1,1,0,-3,3]
Output: [0,0,9,0,0]
```

Constraints:

- `2 <= nums.length <= 105`
- `30 <= nums[i] <= 30`
- The product of any prefix or suffix of `nums` is **guaranteed** to fit in a **32-bit** integer.

Follow up: Can you solve the problem in `O(1)` extra space complexity? (The output array **does not** count as extra space for space complexity analysis.)

36. Valid Sudoku

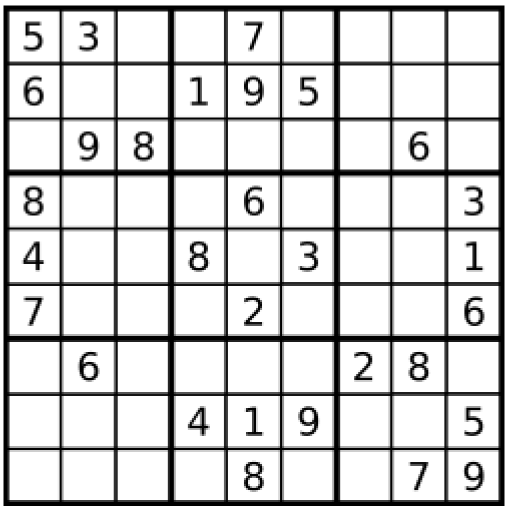
Determine if a `9 x 9` Sudoku board is valid. Only the filled cells need to be validated **according to the following rules**:

1. Each row must contain the digits `1-9` without repetition.
2. Each column must contain the digits `1-9` without repetition.
3. Each of the nine `3 x 3` sub-boxes of the grid must contain the digits `1-9` without repetition.

Note:

- A Sudoku board (partially filled) could be valid but is not necessarily solvable.
- Only the filled cells need to be validated according to the mentioned rules.

Example 1:



5	3			7				
6			1	9	5			
	9	8					6	
8				6				3
4			8		3			1
7				2				6
	6					2	8	
			4	1	9			5
				8			7	9

```
Input: board =
[["5","3",".",".","7",".",".",".","."]
,["6",".",".","1","9","5",".",".","."]
,[".","9","8",".",".",".",".","6","."]
,["8",".",".",".","6",".",".",".","3"]
,["4",".",".","8",".","3",".",".","1"]
,["7",".",".",".","2",".",".",".","6"]
,[".","6",".",".",".",".","2","8","."]
,[".",".",".","4","1","9",".",".","5"]
,[".",".",".",".","8",".",".","7","9"]]
Output: true
```

Example 2:

```
Input: board =
[["8","3",".",".","7",".",".",".","."]
,["6",".",".","1","9","5",".",".","."]
,[".","9","8",".",".",".",".","6","."]
,["8",".",".",".","6",".",".",".","3"]
,["4",".",".","8",".","3",".",".","1"]
,["7",".",".",".","2",".",".",".","6"]
,[".","6",".",".",".",".","2","8","."]
,[".",".",".","4","1","9",".",".","5"]
,[".",".",".",".","8",".",".","7","9"]]
Output: false
Explanation: Same as Example 1, except with the5 in the top
```

```
left corner being modified to8. Since there are two 8's in
the top left 3x3 sub-box, it is invalid.
```

Constraints:

- `board.length == 9`
- `board[i].length == 9`
- `board[i][j]` is a digit `1-9` or `'.'`.

128. Longest Consecutive Sequence

Given an unsorted array of integers `nums`, return *the length of the longest consecutive elements sequence.*

You must write an algorithm that runs in `O(n)` time.

Example 1:

```
Input: nums = [100,4,200,1,3,2]
Output: 4
Explanation: The longest consecutive elements sequence is
[1, 2, 3, 4]. Therefore its length is 4.
```

Example 2:

```
Input: nums = [0,3,7,2,5,8,4,6,0,1]
Output: 9
```

Constraints:

- `0 <= nums.length <= 105`
- `109 <= nums[i] <= 109`