

108.Convert Sorted Array to Binary Search Tree

108. Convert Sorted Array to Binary Search Tree Solved

Easy Topics Companies

Given an integer array `nums` where the elements are sorted in **ascending order**, convert it to a **height-balanced** binary search tree.

Example 1:

```
graph TD
    0((0)) --- -3((-3))
    0 --- 9((9))
    -3 --- -10((-10))
    -3 --- 5((5))
    9 --- 5((5))
```

Input: `nums = [-10,-3,0,5,9]`
Output: `[0,-3,9,-10,null,5]`
Explanation: `[0,-10,5,null,-3,null,9]` is also accepted:

```
graph TD
    0((0)) --- -10((-10))
    0 --- 5((5))
    -10 --- -3((-3))
    -10 --- null1[null]
    5 --- null2[null]
    5 --- 9((9))
```

Code:

```
class Solution {
public:
    TreeNode* sortedArrayToBST(vector<int>& nums) {
        return helper(nums, 0, nums.size() - 1);
    }

private:
    TreeNode* helper(vector<int>& nums, int left, int right) {
        if (left > right) return nullptr;
        int mid = left + (right - left) / 2;
        TreeNode* root = new TreeNode(nums[mid]);
        root->left = helper(nums, left, mid - 1);
        root->right = helper(nums, mid + 1, right);
        return root;
    }
};
```

Testcase Test Result

Accepted Runtime: 0 ms

Case 1 Case 2

Input

`nums =`

191.Number of 1 Bits

191. Number of 1 Bits Solved

Easy Topics Companies

Given a positive integer `n`, write a function that returns the number of **set bits** in its binary representation (also known as the **Hamming weight**).

Example 1:

Input: `n = 11`
Output: 3
Explanation: The input binary string `1011` has a total of three set bits.

Example 2:

Input: `n = 128`
Output: 1
Explanation: The input binary string `10000000` has a total of one set bit.

Example 3:

Input: `n = 2147483645`

Code:

```
Accepted 598 / 598 testcases passed
Jaideep Singh submitted at Feb 05, 2025 15:41
```

Runtime: 0 ms | Beats 100.00% | Memory: 8.27 MB | Beats 47.36%

Testcase Test Result

Case 1 Case 2 Case 3 +

`n =`

`11`

912.Sort an Array

Problem List

912. Sort an Array

Solved

Description

Editorial

Solutions

Submissions

Medium

Topics

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Given an array of integers `nums`, sort the array in ascending order and return it.

You must solve the problem **without using any built-in functions** in $O(n \log(n))$ time complexity and with the smallest space complexity possible.

Example 1:

Input: `nums = [5,2,3,1]`
Output: `[1,2,3,5]`
Explanation: After sorting the array, the positions of some numbers are not changed (for example, 2 and 3), while the positions of other numbers are changed (for example, 1 and 5).

Example 2:

Input: `nums = [5,1,1,2,0,0]`
Output: `[0,0,1,1,2,5]`
Explanation: Note that the values of `nums` are not necessarily unique.

Constraints:

- $1 \leq \text{nums.length} \leq 5 \times 10^4$
- $-5 \times 10^4 \leq \text{nums}[i] \leq 5 \times 10^4$

6.7K

330

89 Online

Code

Accepted

All Submissions

Accepted 21 / 21 testcases passed

Jaideep Singh submitted at Mar 19, 2025 15:32

Editorial

Solution

Runtime

508 ms | Beats 31.53%

Analyze Complexity

Memory

78.38 MB | Beats 51.74%

Testcase

Test Result

Accepted

Runtime: 0 ms

Case 1

Case 2

Input

nums =

53.Maximum Subarray

Problem List

53. Maximum Subarray

Solved

Description

Editorial

Solutions

Submissions

Medium

Topics

Companies

Given an integer array `nums`, find the **subarray** with the largest sum, and return *its sum*.

Example 1:

Input: `nums = [-2,1,-3,4,-1,2,1,-5,4]`
Output: 6
Explanation: The subarray `[4,-1,2,1]` has the largest sum 6.

Example 2:

Input: `nums = [1]`
Output: 1
Explanation: The subarray `[1]` has the largest sum 1.

Example 3:

Input: `nums = [5,4,-1,7,8]`
Output: 23
Explanation: The subarray `[5,4,-1,7,8]` has the largest sum 23.

Constraints:

- $1 \leq \text{nums.length} \leq 10^5$

35.4K

342

516 Online

Code

Accepted

All Submissions

Accepted 210 / 210 testcases passed

Jaideep Singh submitted at Feb 05, 2025 15:42

Editorial

Solution

Runtime

0 ms | Beats 100.00%

Analyze Complexity

Memory

71.76 MB | Beats 53.26%

Testcase

Test Result

Case 1

Case 2

Case 3

+

nums =

[-2,1,-3,4,-1,2,1,-5,4]

Source

932.Beautiful Array

932. Beautiful Array Solved

Medium Topics Companies

An array `nums` of length `n` is **beautiful** if:

- `nums` is a permutation of the integers in the range `[1, n]`.
- For every $0 \leq i < j < n$, there is no index `k` with $i < k < j$ where $2 * \text{nums}[k] == \text{nums}[i] + \text{nums}[j]$.

Given the integer `n`, return **any beautiful array** `nums` of length `n`. There will be at least one valid answer for the given `n`.

Example 1:
Input: `n = 4`
Output: `[2, 1, 4, 3]`

Example 2:
Input: `n = 5`
Output: `[3, 1, 2, 5, 4]`

Constraints:

- $1 \leq n \leq 1000$

1.1K 32 9 Online

Accepted 38 / 38 testcases passed
Jaideep Singh submitted at Feb 05, 2025 16:04

Runtime: 2 ms Beats: 45.66%
Memory: 9.95 MB Beats: 75.63%

Testcase: Case 1 Case 2 +
n = 4

372.Super Pow

372. Super Pow Solved

Medium Topics Companies

Your task is to calculate $a^b \bmod 1337$ where `a` is a positive integer and `b` is an extremely large positive integer given in the form of an array.

Example 1:
Input: `a = 2, b = [3]`
Output: 8

Example 2:
Input: `a = 2, b = [1,0]`
Output: 1024

Example 3:
Input: `a = 1, b = [4,3,3,8,5,2]`
Output: 1

Constraints:

- $1 \leq a \leq 2^{31} - 1$
- $1 \leq b.length \leq 2000$
- $b[i] \in \{0, 1, \dots, 9\}$

1K 25 6 Online

Accepted 57 / 57 testcases passed
Jaideep Singh submitted at Feb 05, 2025 16:03

Runtime: 5 ms Beats: 10.20%
Memory: 15.27 MB Beats: 51.50%

Testcase: Case 1 Case 2 Case 3 +
a = 2

218.The Skyline Problem

Problem List

218. The Skyline Problem

Solved

Hard

Topics

Companies

A city's **skyline** is the outer contour of the silhouette formed by all the buildings in that city when viewed from a distance. Given the locations and heights of all the buildings, return the **skyline** formed by these buildings collectively.

The geometric information of each building is given in the array `buildings` where `buildings[i] = [lefti, righti, heighti]`:

- `lefti` is the x coordinate of the left edge of the `ith` building.
- `righti` is the x coordinate of the right edge of the `ith` building.
- `heighti` is the height of the `ith` building.

You may assume all buildings are perfect rectangles grounded on an absolutely flat surface at height 0.

The **skyline** should be represented as a list of "key points" sorted by their x-coordinate in the form `[[x1, y1], [x2, y2], ...]`. Each key point is the left endpoint of some horizontal segment in the skyline except the last point in the list, which always has a y-coordinate 0 and is used to mark the skyline's termination where the rightmost building ends. Any ground between the leftmost and rightmost buildings should be part of the skyline's contour.

Note: There must be no consecutive horizontal lines of equal height in the output skyline. For instance, `[[...], [2, 3], [4, 5], [7, 5], [11, 5], [12, 7], ...]` is not acceptable; the three lines of height 5 should be merged into one in the final output as such: `[[...], [2, 3], [4, 5], [12, 7], ...]`

6K

31

44 Online

Code

Accepted

All Submissions

Accepted 44 / 44 testcases passed

Jaideep Singh submitted at Feb 05, 2025 16:05

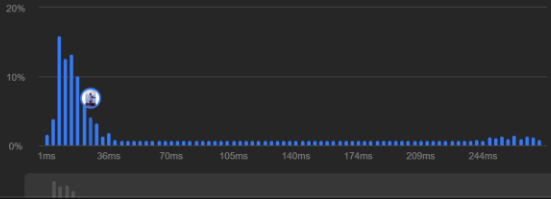
Runtime

28 ms | Beats: 32.45%

Analyze Complexity

Memory

30.95 MB | Beats: 33.19%



Testcase

Test Result

Case 1 Case 2

buildings =

[[2, 9, 10], [3, 7, 15], [5, 12, 12], [15, 20, 10], [19, 24, 8]]

Source