Problem Link:

<https://leetcode.com/problems/convert-sorted-array-to-binary-search-tree/?envType=daily-question&envId=2025-01-26>

Solution:

/\*\*

\* Definition for a binary tree node.

\* struct TreeNode {

\* int val;

\* TreeNode \*left;

\* TreeNode \*right;

\* TreeNode() : val(0), left(nullptr), right(nullptr) {}

\* TreeNode(int x) : val(x), left(nullptr), right(nullptr) {}

\* TreeNode(int x, TreeNode \*left, TreeNode \*right) : val(x), left(left), right(right) {}

\* };

\*/

class Solution {

public:

TreeNode\* sortedArrayToBSTHelper(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 = sortedArrayToBSTHelper(nums, left, mid - 1);

root->right = sortedArrayToBSTHelper(nums, mid + 1, right);

return root;

}

TreeNode\* sortedArrayToBST(vector<int>& nums)

{

return sortedArrayToBSTHelper(nums, 0, nums.size() - 1);

}

};