DEPARTMENT OF
COMPUTER SCIENCE & ENGINEERING

Experiment-1.5

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Subject Code: 20CSP-351

AIM: To demonstrate the concept of Trees.

Problem1: Path Sum
https://leetcode.com/problems/path-sum/

Program Code:

```
class Solution {
public:
    bool hasPathSum(TreeNode* root, int targetSum) {
        if (!root) return false;
        if (!root->left && !root->right) return root->val == targetSum;
        return
            hasPathSum(root->left, targetSum - root->val) ||
            hasPathSum(root->right, targetSum - root->val);
    }
};
```

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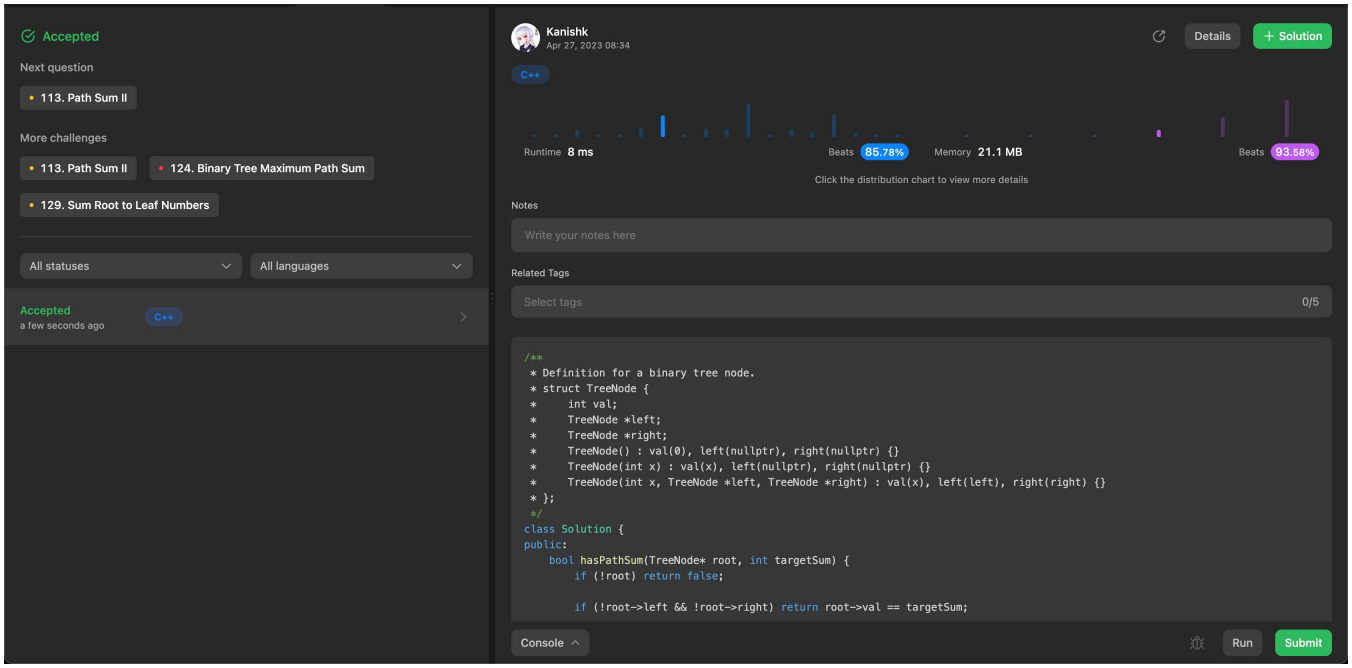
Output:



Probem2: Symmetric Tree
https://leetcode.com/problems/symmetric-tree/

Program Code:

```
class Solution {
private:
    bool isEquivalent(TreeNode* left, TreeNode* right) {
        if (!left || !right) {
            return left == right;
        } else {
            return left->val==right->val && isEquivalent(left->left, right->right) && isEquivalent(right->left, left->right);
        }
    }
```

```
public:
    bool isSymmetric(TreeNode* root) {
        return isEquivalent(root->left, root->right);
    }
};
```

Output: