

# 112. Path Sum

Easy

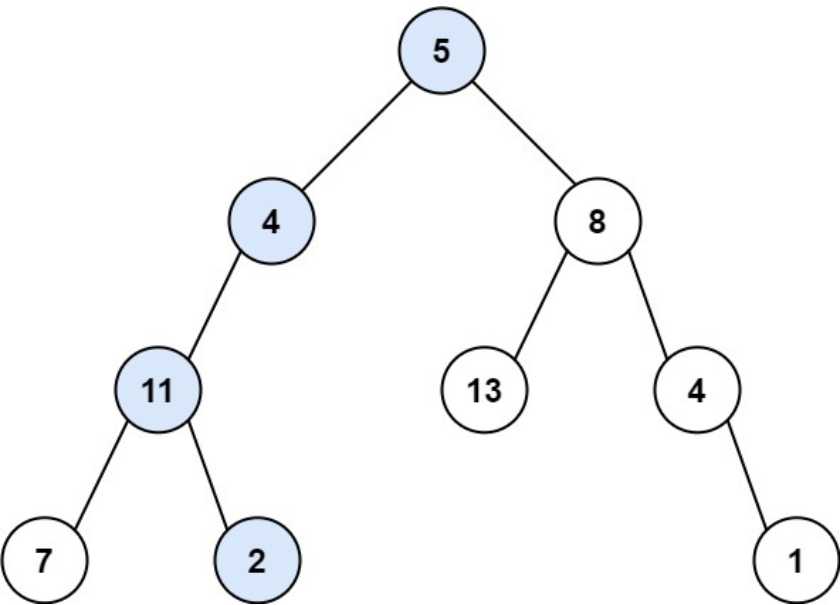
Topics

Companies

Given the `root` of a binary tree and an integer `targetSum`, return `true` if the tree has a **root-to-leaf** path such that adding up all the values along the path equals `targetSum`.

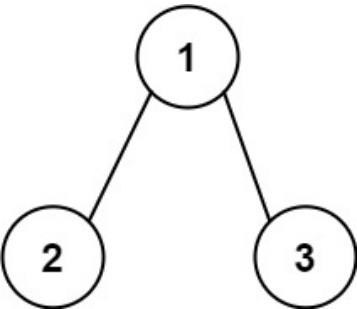
A **leaf** is a node with no children.

Example 1:



**Input:** `root = [5,4,8,11,null,13,4,7,2,null,null,null,1]`, `targetSum = 22`  
**Output:** `true`  
**Explanation:** The root-to-leaf path with the target sum is shown.

Example 2:



**Input:** `root = [1,2,3]`, `targetSum = 5`  
**Output:** `false`  
**Explanation:** There two root-to-leaf paths in the tree:  
(1 --> 2): The sum is 3.  
(1 --> 3): The sum is 4.  
There is no root-to-leaf path with sum = 5.

Example 3:

**Input:** `root = []`, `targetSum = 0`  
**Output:** `false`  
**Explanation:** Since the tree is empty, there are no root-to-leaf paths.

Constraints:

- The number of nodes in the tree is in the range `[0, 5000]`.
- `-1000 <= Node.val <= 1000`
- `-1000 <= targetSum <= 1000`