Pseudocode for Checking if a Binary Tree is a Sum Tree

This document provides the pseudocode for checking whether a binary tree is a **Sum Tree**. A Sum Tree is a binary tree where the value of every non-leaf node is equal to the sum of its left and right subtrees.

Pseudocode:

```
FUNCTION subtree(node):
    IF node IS NULL:
        RETURN 0

    IF node.left IS NULL AND node.right IS NULL:
        RETURN node.data

    left  = subtree(node.left)
    right = subtree(node.right)

    IF left == -1 OR right == -1:
        RETURN -1

    IF node.data == left + right:
        RETURN node.data + left + right
    ELSE:
        RETURN -1


FUNCTION isSumTree(root):
    result = subtree(root)
    IF result != -1:
        RETURN TRUE
    ELSE:
        RETURN FALSE
```

This pseudocode uses recursion to check each node only once, ensuring an efficient time complexity of **O(N)**.