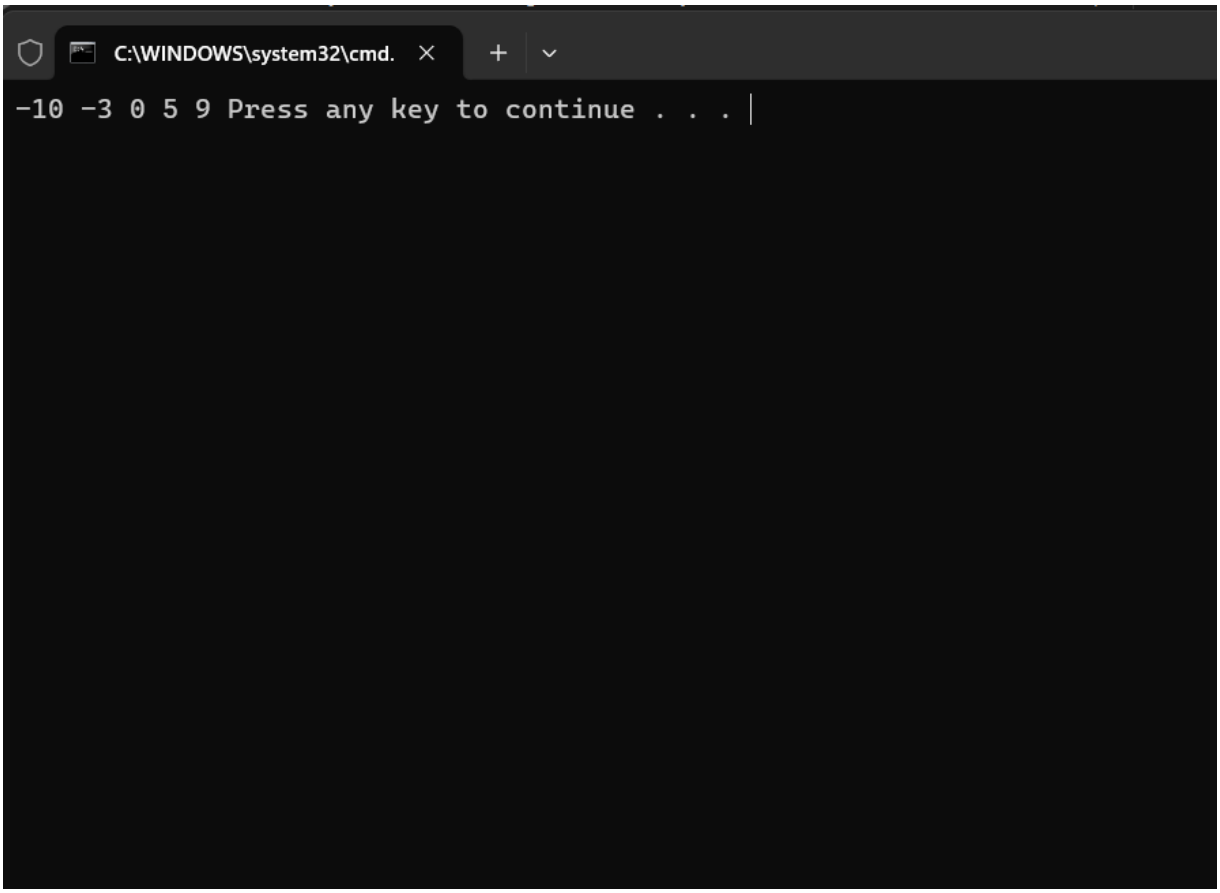
49) Convert Sorted Array to Binary Search Tree Given an integer array nums where the elements are sorted in ascending order, convert it to a height-balanced binary search tree.

CODE:

```
class TreeNode:
    def __init__(self, val=0, left=None, right=None):
        self.val = val
        self.left = left
        self.right = right

def sortedArrayToBST(nums):
    if not nums:
        return None

    mid = len(nums) // 2

    # Create the root node with the middle element
    root = TreeNode(nums[mid])

    # Recursively construct the left and right subtrees
    root.left = sortedArrayToBST(nums[:mid])
    root.right = sortedArrayToBST(nums[mid+1:])

    return root

def inorderTraversal(root):
    if root:
        inorderTraversal(root.left)
        print(root.val, end=" ")
        inorderTraversal(root.right)

# Example usage:
nums = [-10, -3, 0, 5, 9]
root = sortedArrayToBST(nums)
inorderTraversal(root)
```

OUTPUT:



TIME COMPLEXITY : O(n)