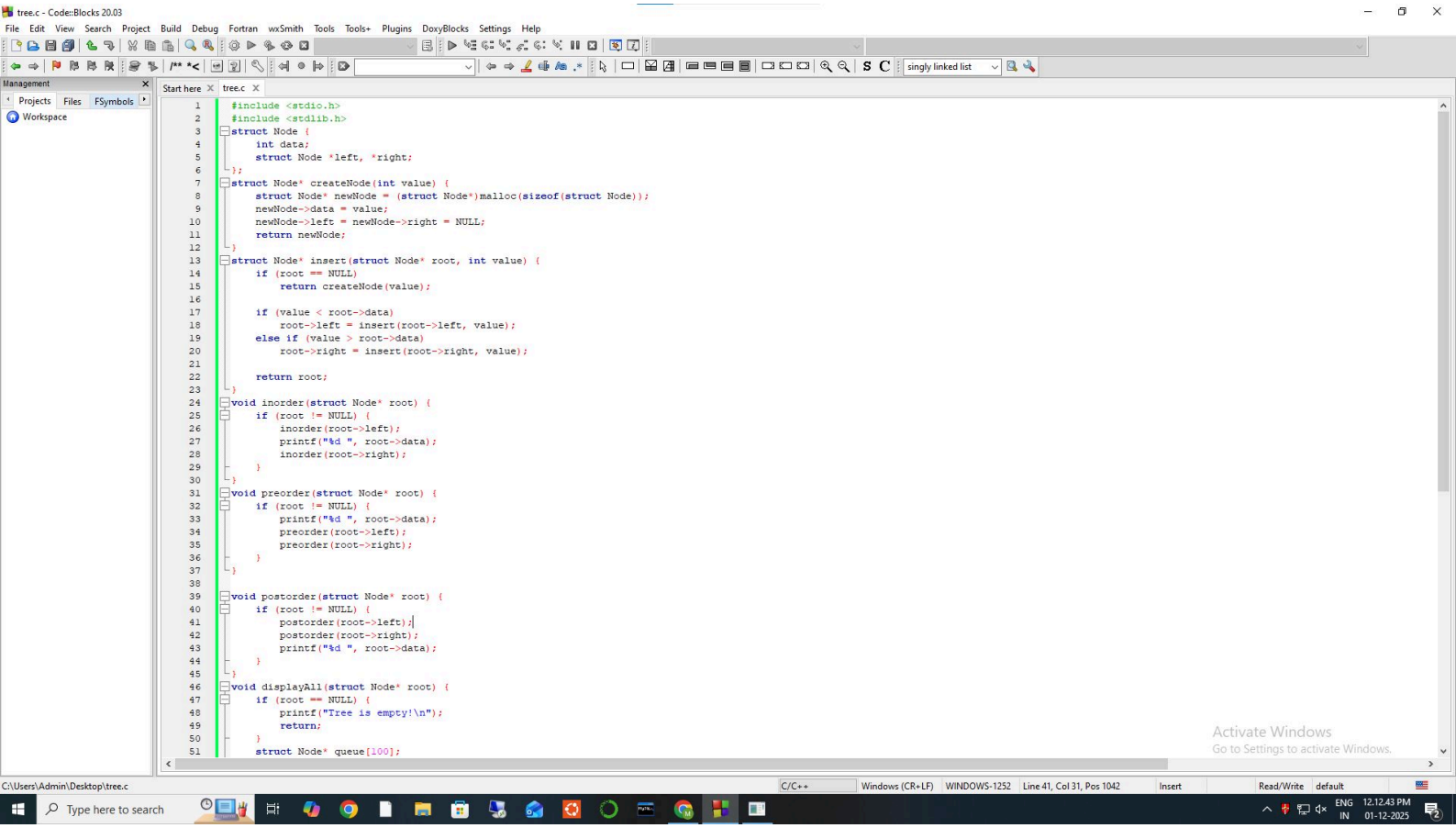
tree.c - Code::Blocks 20.03
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singly linked list
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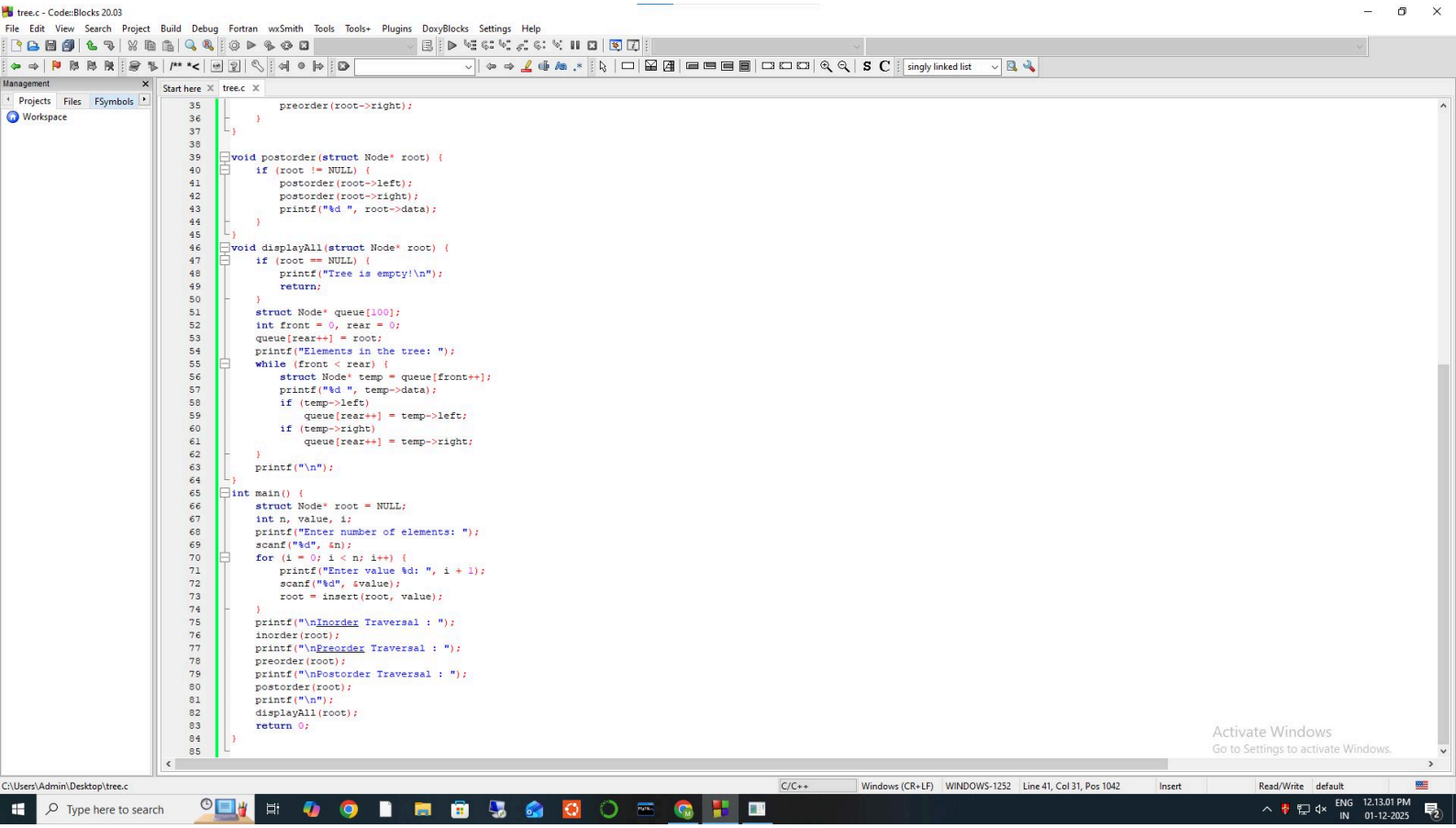
tree.c
#include <stdio.h>
#include <stdlib.h>
struct Node {
int data;
struct Node *left, *right;
};
struct Node* createNode(int value) {
struct Node* newNode = (struct Node*)malloc(sizeof(struct Node));
newNode->data = value;
newNode->left = newNode->right = NULL;
return newNode;
}
struct Node* insert(struct Node* root, int value) {
if (root == NULL)
return createNode(value);
if (value < root->data)
root->left = insert(root->left, value);
else if (value > root->data)
root->right = insert(root->right, value);
return root;
}
void inorder(struct Node* root) {
if (root != NULL) {
inorder(root->left);
printf("%d ", root->data);
inorder(root->right);
}
}
void preorder(struct Node* root) {
if (root != NULL) {
printf("%d ", root->data);
preorder(root->left);
preorder(root->right);
}
}
void postorder(struct Node* root) {
if (root != NULL) {
postorder(root->left);
postorder(root->right);
printf("%d ", root->data);
}
}
void displayAll(struct Node* root) {
if (root == NULL) {
printf("Tree is empty!\n");
return;
}
struct Node* queue[100];
Activate Windows
Go to Settings to activate Windows.
C:\Users\Admin\Desktop\tree.c
C/C++
Windows (CR+LF)
WINDOWS-1252
Line 41, Col 31, Pos 1042
Insert
Read/Write
default
Type here to search
ENG
IN
12.12.43 PM
01-12-2025


tree.c - Code::Blocks 20.03
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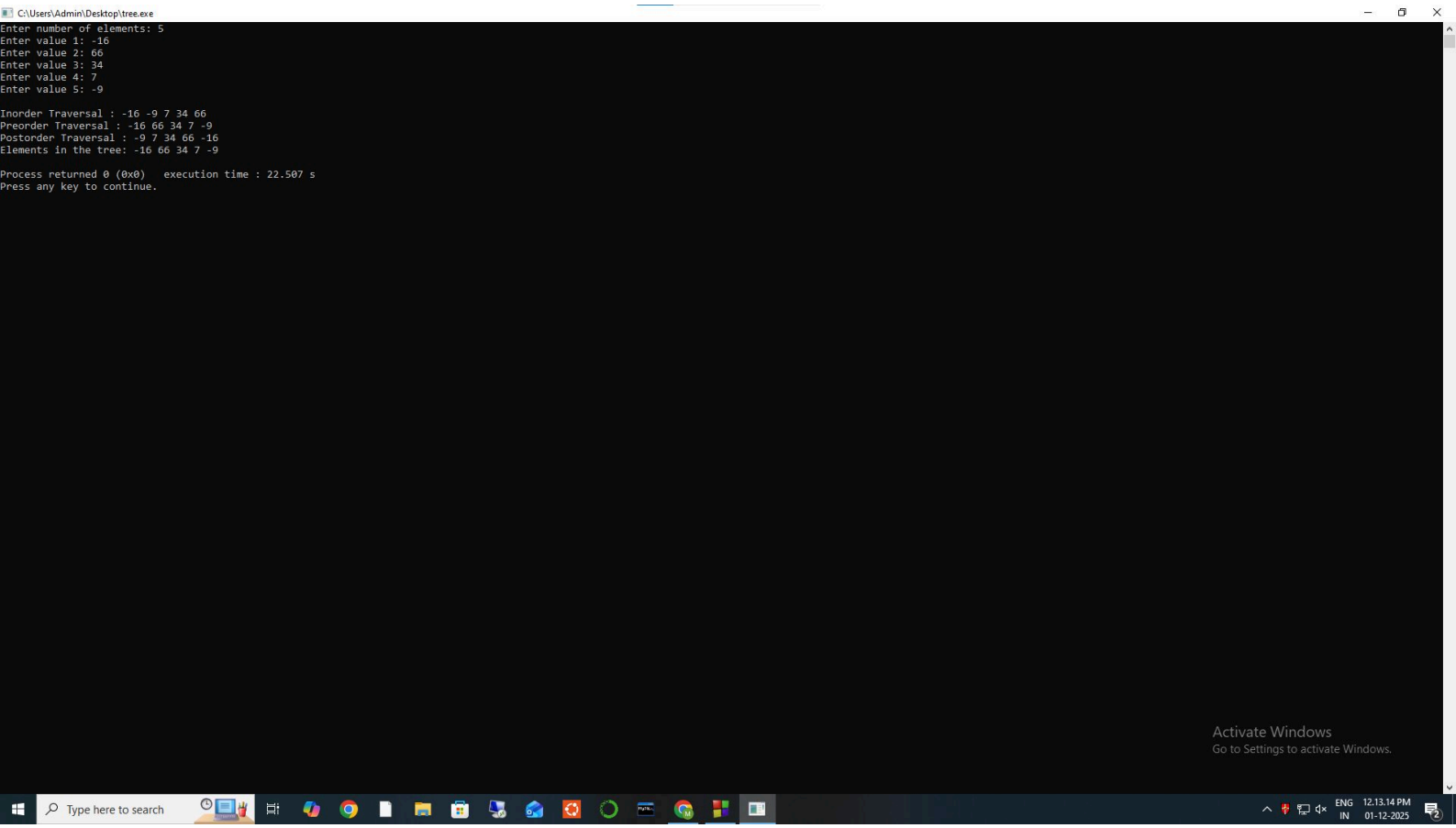
Workspace
Start here
tree.c
preorder(root->right);
}
}
void postorder(struct Node* root) {
if (root != NULL) {
postorder(root->left);
postorder(root->right);
printf("%d ", root->data);
}
}
void displayAll(struct Node* root) {
if (root == NULL) {
printf("Tree is empty!\n");
return;
}
struct Node* queue[100];
int front = 0, rear = 0;
queue[rear++] = root;
printf("Elements in the tree: ");
while (front < rear) {
struct Node* temp = queue[front++];
printf("%d ", temp->data);
if (temp->left)
queue[rear++] = temp->left;
if (temp->right)
queue[rear++] = temp->right;
}
printf("\n");
}
int main() {
struct Node* root = NULL;
int n, value, i;
printf("Enter number of elements: ");
scanf("%d", &n);
for (i = 0; i < n; i++) {
printf("Enter value %d: ", i + 1);
scanf("%d", &value);
root = insert(root, value);
}
printf("\nInorder Traversal : ");
inorder(root);
printf("\nPreorder Traversal : ");
preorder(root);
printf("\nPostorder Traversal : ");
postorder(root);
printf("\n");
displayAll(root);
return 0;
}
Activate Windows
Go to Settings to activate Windows.
C:\Users\Admin\Desktop\tree.c
C/C++
Windows (CR+LF)
WINDOWS-1252
Line 41, Col 31, Pos 1042
Insert
Read/Write
default
Type here to search
ENG
IN
12.13.01 PM
01-12-2025


C:\Users\Admin\Desktop\tree.exe
Enter number of elements: 5
Enter value 1: -16
Enter value 2: 66
Enter value 3: 34
Enter value 4: 7
Enter value 5: -9
Inorder Traversal : -16 -9 7 34 66
Preorder Traversal : -16 66 34 7 -9
Postorder Traversal : -9 7 34 66 -16
Elements in the tree: -16 66 34 7 -9
Process returned 0 (0x0)   execution time : 22.507 s
Press any key to continue.
Activate Windows
Go to Settings to activate Windows.
Type here to search
ENG
IN
12.13.14 PM
01-12-2025