

```

1  #include <iostream>
2  #include <vector>
3
4  using namespace std;
5
6  struct Node {
7      char value;
8      vector<Node*> children;
9      Node(char val) : value(val) {}
10 };
11
12 Node* createNode(char val) {
13     return new Node(val);
14 }
15
16 void preOrderTraversal(Node* node) {
17     if (node == nullptr) {
18         return;
19     }
20     cout << node->value << " ";
21     for (Node* child : node->children) {
22         preOrderTraversal(child);
23     }
24 }
25
26 void deleteTree(Node* node) {
27     if (node == nullptr) {
28         return;
29     }
30     for (Node* child : node->children) {
31         deleteTree(child);
32     }
33     delete node;
34 }
35
36 int main() {
37     cout << "Tree Traversal Implementation" << endl;
38     cout << "Membangun Pohon (Root: A)" << endl;
39
40     Node* A = createNode('A');
41     Node* B = createNode('B');
42     Node* C = createNode('C');
43     Node* D = createNode('D');
44     Node* E = createNode('E');
45     Node* F = createNode('F');
46     Node* G = createNode('G');
47     Node* H = createNode('H');
48     Node* I = createNode('I');
49     Node* J = createNode('J');
50
51     A->children.push_back(B);
52     A->children.push_back(C);
53
54     B->children.push_back(D);
55     B->children.push_back(E);
56
57     C->children.push_back(F);
58     C->children.push_back(G);
59     C->children.push_back(H);
60
61     E->children.push_back(I);
62     E->children.push_back(J);
63
64     cout << "\n Hasil Traversal" << endl;
65     cout << "Pre-order Traversal (Parent, Kiri, Kanan): " << endl;
66
67     preOrderTraversal(A);
68
69     cout << "\n\n(Output yang diharapkan: A B D E I J C F G H)" << endl;
70
71     deleteTree(A);
72     cout << "\nMemori pohon telah dibersihkan." << endl;
73
74     return 0;
75 }

```

PS C:\shellyn\kuliah\semester3\strukturData> cd "c:\shellyn\kuliah\semester3\strukturData\teori\tugasTree\"
; if (\$?) { g++ minggu9.cpp -o minggu9 } ; if (\$?) { .\minggu9 }

- Tree Traversal Implementation

Membangun Pohon (Root: A)

Hasil Traversal
Pre-order Traversal (Parent, Kiri, Kanan):
A B D E I J C F G H

(Output yang diharapkan: A B D E I J C F G H)

Memori pohon telah dibersihkan.

- PS C:\shellyn\kuliah\semester3\strukturData\teori\tugasTree> █