

DATE:-21/09/22

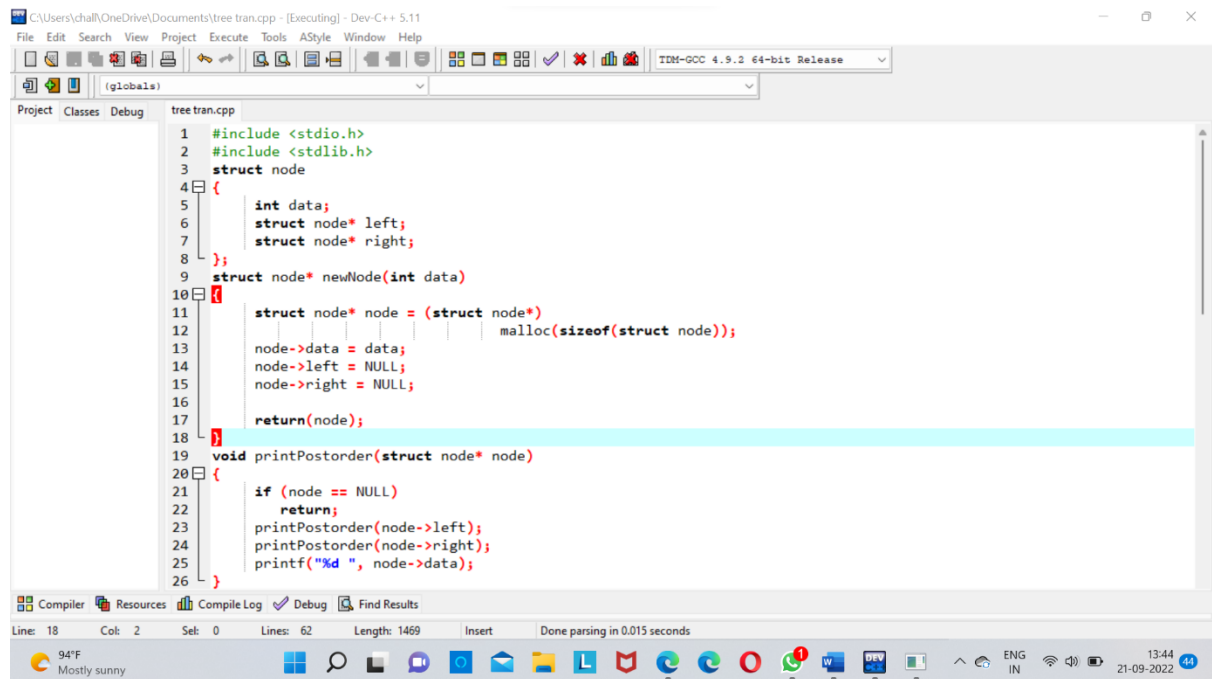
COURSE NAME:-DATA STRUCTURES FOR EXPRESSION EVALUATION

COURSE CODE:-CSA0374

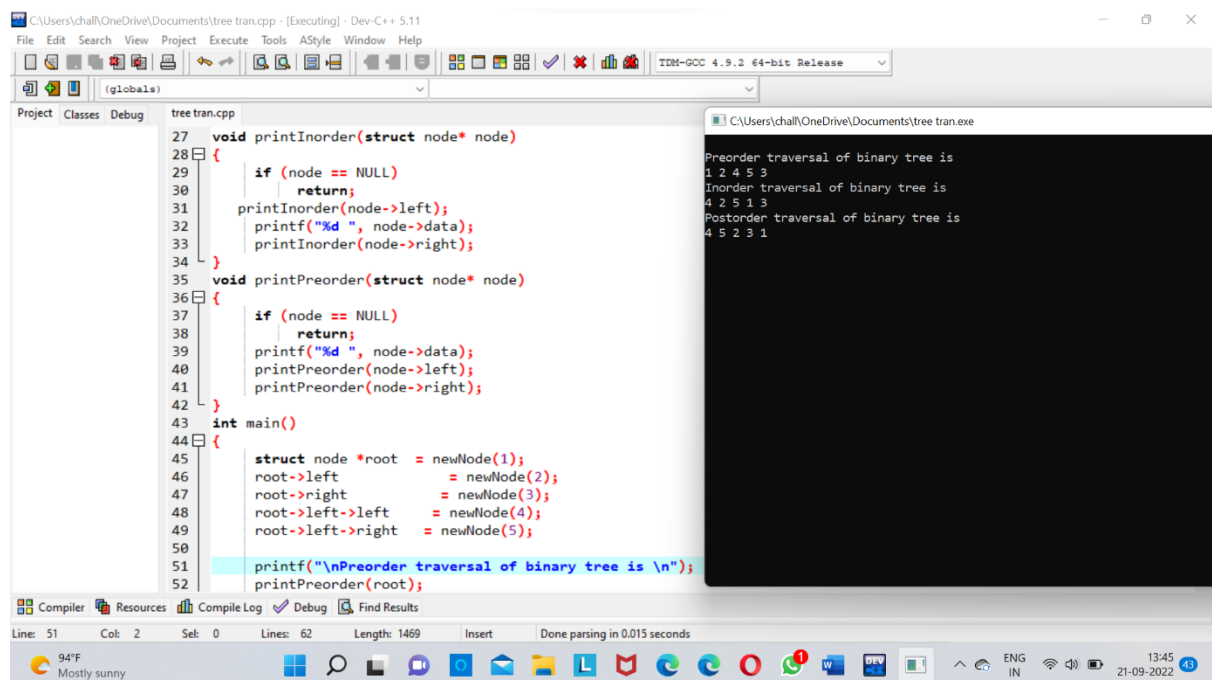
NAME OF THE STUDENT:-USHA NANDHINI.B

REGNO:-192111159

EXPERIMENT:-15(TREE TRANSVAL)



```
1 #include <stdio.h>
2 #include <stdlib.h>
3 struct node
4 {
5     int data;
6     struct node* left;
7     struct node* right;
8 };
9 struct node* newNode(int data)
10 {
11     struct node* node = (struct node*)
12         malloc(sizeof(struct node));
13     node->data = data;
14     node->left = NULL;
15     node->right = NULL;
16     return(node);
17 }
18 void printPostorder(struct node* node)
19 {
20     if (node == NULL)
21         return;
22     printPostorder(node->left);
23     printPostorder(node->right);
24     printf("%d ", node->data);
25 }
```



```
27 void printInorder(struct node* node)
28 {
29     if (node == NULL)
30         return;
31     printInorder(node->left);
32     printf("%d ", node->data);
33     printInorder(node->right);
34 }
35 void printPreorder(struct node* node)
36 {
37     if (node == NULL)
38         return;
39     printf("%d ", node->data);
40     printPreorder(node->left);
41     printPreorder(node->right);
42 }
43 int main()
44 {
45     struct node *root = newNode(1);
46     root->left = newNode(2);
47     root->right = newNode(3);
48     root->left->left = newNode(4);
49     root->left->right = newNode(5);
50
51     printf("\nPreorder traversal of binary tree is \n");
52     printPreorder(root);
53 }
```

Preorder traversal of binary tree is
1 2 4 5 3
Inorder traversal of binary tree is
4 2 5 1 3
Postorder traversal of binary tree is
4 5 2 3 1

```
53  
54  
55     printf("\nInorder traversal of binary tree is \n");  
56     printInorder(root);  
57  
58     printf("\nPostorder traversal of binary tree is \n");  
59     printPostorder(root);  
60  
61     getchar();  
62     return 0;
```

Compiler Resources Compile Log Debug Find Results

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Mostly sunny



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IN
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21-09-2022