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EX 8 : PERFORMING TREE TRAVERSAL TECHNIQUES

Tree traversal

```
#include <stdio.h>
#include <stdlib.h>
struct node
{
    struct node *left;
    int element;
    struct node *right;
};
typedef struct node Node;
Node *Insert(Node *Tree, int e);
void Inorder(Node *Tree); void
Preorder(Node *Tree); void
Postorder(Node *Tree); int
main()
{
    Node *Tree = NULL;
    int n, i, e, ch; printf("Enter number of nodes
in the tree : "); scanf("%d", &n); printf("Enter
the elements :\n"); for (i = 1; i <= n; i++)
{
    scanf("%d", &e);
    Tree = Insert(Tree, e);
}
do
{
    printf("1. Inorder \n2. Preorder \n3. Postorder \n4. Exit\n");
    printf("Enter your choice : "); scanf("%d", &ch); switch (ch)
    {
        case 1:
            Inorder(Tree);
            printf("\n"); break;
        case 2:
```

```

Preorder(Tree);
printf("\n");
break; case 3:
Postorder(Tree);
printf("\n"); break;
}
} while (ch <= 3);
return 0;
}
Node *Insert(Node *Tree, int e)
{
Node *NewNode = malloc(sizeof(Node));
if (Tree == NULL)
{
NewNode->element = e;
NewNode->left = NULL;
NewNode->right = NULL;
Tree = NewNode;
}
else if (e < Tree->element)
{
Tree->left = Insert(Tree->left, e);
}
else if (e > Tree->element)
{
Tree->right = Insert(Tree->right, e);
}
return Tree;
}
void Inorder(Node *Tree)
{
if (Tree != NULL)
{
Inorder(Tree->left); printf("%d\t",
Tree->element);
Inorder(Tree->right);
}
}
void Preorder(Node *Tree)
{
if (Tree != NULL)

```

```
{  
printf("%d\t", Tree->element); Preorder(Tree->left);  
Preorder(Tree->right);  
}  
}  
void Postorder(Node *Tree)  
{  
if (Tree != NULL)  
{  
Postorder(Tree->left);  
Postorder(Tree->right); printf("%d\t",  
Tree->element);  
}  
}
```