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| 14) | Write a C program to implement the Tree Traversals (Inorder, Preorder, Postorder) |

#include<stdio.h>

#include<stdlib.h>

struct node{

struct node\* left;

int data;

struct node\* right;

};

struct node\* createTree();

void preOrder(struct node\* );

void postOrder(struct node\* );

void inOrder(struct node\* );

int main(){

struct node\* root = NULL;

root = createTree();

printf("the pre order is:\n");

preOrder(root);

printf("the post order is:\n");

postOrder(root);

printf("the inoder is :\n");

inOrder(root);

}

struct node\* createTree(){

struct node\* newnode = NULL;

newnode = (struct node\*)malloc(sizeof(struct node));

int data;

printf("enter the data(-1 for no node)");

scanf("%d",&data);

if(data==-1)

return 0;

newnode->data = data;

printf("enter the left child of %d\n",data);

newnode->left = createTree();

printf("enter the right child of %d\n",data);

newnode->right = createTree();

return newnode;

}

void preOrder(struct node\* root)

{

if(root == NULL){

return ;

}

printf("%d ",root->data);

preOrder(root->left);

preOrder(root->right);

}

void postOrder(struct node\* root){

if(root==NULL){

return ;

}

postOrder(root->left);

postOrder(root->right);

printf("%d ",root->data);

}

void inOrder(struct node\* root){

if(root == NULL){

return;

}

inOrder(root->left);

printf("%d ",root->data);

inOrder(root->right);

}

