Program 10

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#include <stdio.h>
#include <stdlib.h>
typedef struct Node {
    struct Node * left;
    int data;
    struct Node * right;
} * node;
node getnode (int item) {
    node temp = (node) malloc (sizeof (struct node));
    temp -> left = NULL;
    temp -> data = item;
    temp -> right = NULL;
    return temp;
}
node insert (node root, int ele) {
    if (root == NULL)
        return getnode(ele);
    else if (ele < root -> data)
        root -> right = insert (root -> left, ele);
    else if (ele > root -> data)
        root -> right = insert (root -> right, ele);

    return root;
}
void inorder (node root) {
    if (root == NULL)
        return;
    inorder (root -> left);
    printf ("%d", root -> data);
```

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        inorder(root->right);
    }
void preorder(node root){
    if(root==NULL)
        return;
    printf("%d",root->data);
    preorder(root->left);
    preorder(root->right);
}
void postorder(node root){
    if(root==NULL)
        return;
    postorder(root->left);
    postorder(root->right);
    printf("%d",root->data);
}
int main(){
    node root=NULL;
    int c, ch=1;
    while(ch==1){
        printf("\n1.Insert\n2.Preorder\n3.Inorder\n4.Postorder
                                        \n");
        printf("5.Exit\n");
        scanf("%d",&ch);
        printf("\n");
        switch(ch){
            case 1:printf("Element:");
                scanf("%d",&c);
                root=insert(root,c);
                break;
```

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case 2: preorder(root);
        break;
case 3: inorder(root);
        break;
case 4: postorder(root);
        break;
case 5: printf("Exiting.");
        exit(0);
default: printf("Wrong input!");
    }
  }
}
```