

Start here X binarysearchtree.c X

```
1 #include<stdio.h>
2 #include<stdlib.h>
3
4 struct Node {
5     int data;
6     struct Node *left, *right;
7 };
8
9 struct Node *createNode(int value) {
10     struct Node *newNode = (struct Node*)malloc(sizeof(struct Node));
11     newNode->data = value;
12     newNode->left = newNode->right = NULL;
13     return newNode;
14 }
15 struct Node *insert(struct Node* root, int value) {
16     if(root == NULL) return createNode(value);
17     if(value < root->data) {
18         root->left = insert(root->left, value);
19     }
20     else if(value > root->data) {
21         root->right = insert(root->right, value);
22     }
23     return root;
24 }
25
26 void inorder(struct Node* root) {
27     if(root != NULL) {
28         inorder(root->left);
29         printf("%d ",root->data);
30         inorder(root->right);
31     }
32 }
33 void preorder(struct Node* root) {
34     if(root != NULL) {
35         printf("%d ",root->data);
36         preorder(root->left);
37         preorder(root->right);
38     }
39 }
40 void postorder(struct Node* root) {
41     if(root != NULL) {
42         postorder(root->left);
43         postorder(root->right);
44         printf("%d ",root->data);
45     }
46 }
```

```
47
48  int main() {
49      struct Node *root = NULL;
50      int n, value;
51      printf("Enter number of elements to insert into Binary Search Tree: ");
52      scanf("%d", &n);
53
54      printf("Enter %d elements: \n", n);
55      for(int i = 0; i < n; i++) {
56          scanf("%d", &value);
57          root = insert(root, value);
58      }
59
60      printf("\nInorder Traversal: ");
61      inorder(root);
62
63      printf("\nPreorder Traversal: ");
64      preorder(root);
65
66      printf("\nPostorder Traversal: ");
67      postorder(root);
68
69      return 0;
70
71 }
```

```
C:\Users\admin\Desktop\1BM X + ▾  
Enter number of elements to insert into Binary Search Tree: 6  
Enter 6 elements:  
12  
-23  
-3  
100  
56  
95  
  
Inorder Traversal: -23 -3 12 56 95 100  
Preorder Traversal: 12 -23 -3 100 56 95  
Postorder Traversal: -3 -23 95 56 100 12  
Process returned 0 (0x0) execution time : 36.795 s  
Press any key to continue.
```