

C Untitled-1.c X

C: > Users > dhruvam02 > OneDrive > Desktop > C Untitled-1.c > main(void)

```
1  #include <stdio.h>
2  #include <stdlib.h>
3
4  typedef struct Node {
5      int data;
6      struct Node *left, *right;
7  } node;
8
9  node *create(int data) {
10     node *temp;
11     temp = (node*)malloc(sizeof(node));
12     temp->data = data;
13     temp->left = temp->right = NULL;
14     return temp;
15 }
16
17 void inorder(node *root) {
18     if (root != NULL) {
19         inorder(root->left);
20         printf("%d ", root->data);
21         inorder(root->right);
22     }
23 }
24
25 void preorder(node *root) {
26     if (root != NULL) {
27         printf("%d ", root->data);
28         preorder(root->left);
29         preorder(root->right);
30     }
31 }
32
```

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```
30 }
31 }
32
33 void postorder(node *root) {
34     if (root != NULL) {
35         postorder(root->left);
36         postorder(root->right);
37         printf("%d ", root->data);
38     }
39 }
40
41 void insert(node *root, node *temp) {
42     if(temp->data<root->data){
43         if(root->left!=NULL)
44             insert(root->left,temp);
45         else
46             root->left = temp;
47     }
48     if(temp->data>root->data)
49     {
50         if(root->right!=NULL)
51             insert(root->right,temp);
52         else
53             root->right=temp;
54     }
55 }
56
57 int main(void) {
58     node *root = NULL,*temp;
59
60     int choice = 0;
61     while(choice != 2)
62     {
```


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```
60 int choice = 0;
61 while(choice != 2)
62 {
63     temp =
64     printf("1 - Insert\n");
65     printf("2 - Exit\n");
66
67     printf("Enter your choice:");
68     scanf("%d",&choice);
69     if(choice==1)
70     {
71         int val;
72         printf("Enter value:");
73         scanf("%d",&val);
74         temp = create(val);
75         if(root==NULL)
76             root=temp;
77         else
78             insert(root,temp);
79     }
80     else if(choice==2)
81         break;
82     else
83         printf("Invalid choice\n");
84
85 }
86
87 printf("Inorder traversal: ");
88 inorder(root);
89
90 printf("\nPreorder traversal: ");
91 preorder(root);
```

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```
76     root=temp;
77     else
78         insert(root,temp);
79 }
80 else if(choice==2)
81     break;
82 else
83     printf("Invalid choice\n");
84
85 }
86
87 printf("Inorder traversal: ");
88 inorder(root);
89
90 printf("\nPreorder traversal: ");
91 preorder(root);
92
93 printf("\nPostorder traversal: ");
94 postorder(root);
95 }
```