

```

1  #include<stdio.h>
2  #include<stdlib.h>
3
4  struct data{
5      int angka;
6      data *left;
7      data *right;
8  }*root = NULL;
9
10 void insertNode(data **temp,int angka){
11
12     if(*temp==NULL){
13         *temp = (data*)malloc(sizeof(data));
14         (*temp)->angka = angka;
15         (*temp)->left = NULL;
16         (*temp)->right = NULL;
17     }
18     else if(angka > (*temp)->angka) insertNode(&(*temp)->right,angka);
19     else if(angka < (*temp)->angka) insertNode(&(*temp)->left,angka);
20 }
21
22
23 void preorder(data **temp){
24     if(*temp!=NULL){
25         printf("%d ",(*temp)->angka);
26         preorder(&(*temp)->left);
27         preorder(&(*temp)->right);
28     }
29 }
30
31 void inorder(data **temp){
32     if(*temp!=NULL){
33         inorder(&(*temp)->left);
34         printf("%d ",(*temp)->angka);
35         inorder(&(*temp)->right);
36     }
37 }
38
39 void postorder(data **temp){
40     if(*temp!=NULL){
41         postorder(&(*temp)->left);
42         postorder(&(*temp)->right);
43         printf("%d ",(*temp)->angka);
44     }
45 }
46
47
48 data **getAnakKiriPalingKanan(data**temp){
49     if((*temp)->right!=NULL){
50         getAnakKiriPalingKanan(&(*temp)->right);
51     }
52     else{
53         return temp;
54     }
55 }
56
57
58 void popPengganti(data **temp){
59     if((*temp)->left==NULL && (*temp)->right==NULL){
60         free(*temp);
61         *temp=NULL;
62     }
63     else if((*temp)->left!=NULL && (*temp)->right==NULL){
64         data *temp2 = *temp;
65         *temp = (*temp)->left;
66         free(temp2);
67     }
68     else if((*temp)->right!=NULL && (*temp)->left==NULL){
69         data *temp2 = *temp;
70         *temp = (*temp)->right;
71         free(temp2);
72     }
73     else if((*temp)->right!=NULL && (*temp)->left!=NULL){

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74         data **curr = getAnakKiriPalingKanan(&(*temp)->left);
75         (*temp)->angka = (*curr)->angka;
76         popPengganti(curr);
77     }
78 }
79
80
81 void pop(data **curr,int angka){
82     if((*curr)->angka == angka){
83         popPengganti(curr);
84     }
85     else{
86         if(angka>(*curr)->angka) pop(&(*curr)->right,angka);
87         else if(angka<(*curr)->angka) pop(&(*curr)->left,angka);
88     }
89 }
90
91
92
93 int main(){
94     /*insertNode(&root,13);
95     insertNode(&root,15);
96     insertNode(&root,10);*/
97
98     /*insertNode(&root,30);
99     insertNode(&root,15);
100    insertNode(&root,7);
101    insertNode(&root,26);
102    insertNode(&root,19);
103    insertNode(&root,17);
104    insertNode(&root,21);
105    insertNode(&root,37);
106    insertNode(&root,34);
107    insertNode(&root,31);
108    insertNode(&root,45);
109    insertNode(&root,42);*/
110
111    insertNode(&root,15);
112    insertNode(&root,7);
113    insertNode(&root,9);
114    insertNode(&root,8);
115
116
117
118    pop(&root,9);
119    insertNode(&root,9);
120    //pop(&root,30);
121    printf("Preorder : ");
122    preorder(&root);
123    printf("\n");
124    printf("Inorder : ");
125    inorder(&root);
126    printf("\n");
127    printf("Postorder : ");
128    postorder(&root);
129    printf("\n");
130    getchar();
131    return 0;
132 }
133

```