DAYANAND
1BM19CS043

```
#include <stdio.h>
#include <stdlib.h>
    struct  node {
        int  info;
        struct node *link, *rlink;
  }; typedef  struct  node  *Node;
    Node  getnode (int  item) {
     Node  temp = (Node) malloc (sizeof (struct  node));
      temp->info = item;
      temp->link = temp->rlink = NULL;
        return temp; }
      Node    insert (Node node, int info) {
        if (node==NULL)
        return  getnode (info);
        if  (info< node->info)
         node->llink= insert (node->llink, info);
        else
         node->rlink  =insert(node->rlink , info);
          return   node; }
        Void  Preorder (Node  root) {
          if (root==NULL) {
            return;
          }
          Printf ("%d ->", root->info);
           Preorder (root->llink);
           Preorder( root->rlink); }
        void  inorder (Node root) {
          if (root == NULL) {
             return;
            }
```

Rathod

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```
inorder (root -> llink);
 Printf("%d ->", root -> info);
  inorder (root -> rlink); }
  void postorder (Node root) {
   if(root == NULL) {
    return; }
   Post order (root -> llink);
   Postorder (root -> rlink);
    Printf("%d ->", root -> info); }
 Void display (Node robt, int i )
 {   int j;
     if (root != NULL)
   { display (root -> rlink, i+1);
      for(j=0; j<1; j++)
          Printf(" ");
        Printf(" %d\n", root -> info);
        display (root -> llink, i+1);
   } }
   int main() {
     Node root = NULL;
     int choice, item;
      for(;;){
     Printf("\n1.Insert \n2.Preorder \n3.Inorder \n4.postorder
                \n5.Display \n6.exit\n");
      printf(" Enter choice: ");
       scanf("%d", &item);
        ~~root = inser~~ switch (choice){
      case 1 : printf("Enter item to be inserted:");
```

Rathod

```
scanf("%d",&item);
 root = insert (root, item);
  break;
case 2: printf("Preorder traversal:");
        Preorder(root);
        break;
  case 3: printf(" Inorder traversal:");
         inorder(root);
          break;
   case 4: printf("postorder traversal:");
            Postorder(root);
              break;
    case 5:  display (root,0);
              break;
     case 6:  exit(0);
     default: printf("Enter Proper instructions!!\n");
             break;
     } }
      return 0;
    }
```

Rathod