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Aim:	To study and implement binary search tree(BST). Write a function for inorder , preorder and postorder traversal on a BST.

Source Code:

```
#include<stdio.h>
#include<conio.h>
#include<malloc.h>
struct node{
   struct node *left;
   int data;
   struct node *right;
};
struct node *newNode(int data);
struct node *insert(struct node *root,int data);
void preorder (struct node *root);
void inorder(struct node *root);
void postorder (struct node *root);

struct node *root = NULL;

void main(){
   int data;
   printf("Enter data: ");
   while(1){
      scanf("%d",&data);
      if(data==-1)
         break;
      root = insert(root,data);
   }
   printf("Preorder Traversal: ");
   preorder(root);
   printf("\n");
   printf("Inorder Traversal: ");
   inorder(root);
   printf("\n");
   printf("Postorder Traversal: ");
   postorder(root);
   printf("\n");
```

```
}
struct node *newNode(int data){
   struct node *nn;
   nn=(struct node *)malloc(sizeof(struct node));
   nn->data=data;
   nn->left=NULL;
   nn->right=NULL;
   return nn;
};
struct node *insert(struct node *root,int data){
   if(root==NULL)
      return newNode(data);
   if(root -> data > data)
      root->left = insert(root->left,data);
      else
      if(root->data<data)
      root->right=insert(root->right,data);
      return root;
};
void preorder(struct node *root){
   if(root==NULL)
      return;
   printf("%d",root->data);
   preorder(root->left);
   preorder(root->right);
}
void inorder(struct node *root){
   if(root==NULL)
      return;
   inorder(root->left);
   printf("%d",root->data);
   inorder(root->right);
}
void postorder(struct node *root){
   if(root==NULL)
      return;
   postorder(root->left);
   postorder(root->right);
   printf("%d",root->data);
}
```

Output:

```
Enter data: 7 8 9 3 4 5 2 1 -1
Preorder Traversal: 7 3 2 1 4 5 8 9
Inorder Traversal: 1 2 3 4 5 7 8 9
Postorder Traversal: 1 2 5 4 3 9 8 7


...Program finished with exit code 0
Press ENTER to exit console.
```

Result: The concept of Binary Search Tree has been studied and various allowable operationsof singly linked list have been implemented.