

SOURCE CODE

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#include<iostream>
using namespace std;
class node{
public:
    int data;
    node* next;
    node(int val){
        data=val;
        next=NULL;
    }
};

void insertAtHead(node* &head,int val){
    node* temp=head;
    node* n=new node(val);
    if(temp==NULL){
        head=n;
    }
    n->next=temp;
    head=n;
}

void insertAtTail(node* &head,int val){
    node* n=new node(val);
    node* temp=head;
    if(temp==NULL){
        insertAtHead(head,val);
        return;
    }
    while(temp->next!=NULL){
        temp=temp->next;
    }
    temp->next=n;
}

node* search(node* head,int val){
    while(head!=NULL){
        if(head->data==val){
            return head;
        }
        head=head->next;
    }
    return NULL;
}

void insertAfterLoc(node* &head,int ele,int val){    //This inserts a value after a given term
    node* pos=search(head,ele);
    if(pos==NULL){
        insertAtHead(head,val);
    }
}
```

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        return;
    }
    node* n=new node(val);
    if(pos!=NULL){
        node* temp=head;
        while(temp!=pos){
            temp=temp->next;
        }
        n->next=temp->next;
        temp->next=n;
    }
}

void display(node* head){
    node* temp=head;
    if(temp==NULL){
        return;
    }
    cout<<"List is: ";
    while(temp!=NULL){
        cout<<temp->data<<"->";
        temp=temp->next;
    }
    cout<<"NULL"<<endl;
}

int main(){
    node* head=NULL;
    insertAtTail(head,1);
    insertAtTail(head,2);
    insertAtTail(head,4);
    insertAtTail(head,5);
    display(head);
    insertAfterLoc(head,2,3);
    insertAfterLoc(head,5,12);
    insertAfterLoc(head,6,11); //if not avail add at beginning
    display(head);
    return 0;
}

```

OUTPUT

```

PS C:\Users\anil kumar\Documents\anil\.vscode\DataStructure_in_nsut> cd "c:\Users\anil kumar\
c++17 5_linklist.cpp -o 5_linklist } ; if ($?) { .\5_linklist }
List is: 1->2->4->5->NULL
List is: 11->1->2->3->4->5->12->NULL
PS C:\Users\anil kumar\Documents\anil\.vscode\DataStructure_in_nsut> █

```