

```

template <class ItemType>
void Sorted<ItemType> :: InsertItem(ItemType item)
{
    if(IsFull())
    {
        cout<< "Out of space in the heap." <<endl;
        throw ListLimitExceed();
    }
    else
    {
        NodeType* newNode = new NodeType;
        newNode->info=item;
        if(head==NULL)
        {
            newNode->next=NULL;
            head =newNode;
            foot =newNode;
        }
        else if(item>foot->info)
        {
            newNode->next=NULL;
            foot->next=newNode;
            foot=newNode;
        }
        else if(item<head->info)
        {
            newNode->next=head;
            head =newNode;
        }
        else
        {
            NodeType* ptr = new NodeType;
            ptr = head;
            while(item>ptr->next->info)
            {
                ptr=ptr->next;
            }
            newNode->next=ptr->next;
            ptr->next=newNode;
        }
        length++;
    }
}

```

$O(n)$