**Expt - 6**

**Consider a warehouse where the items have to be arranged in an ascending order. Develop and execute a program in C using suitable data structures to implement warehouse such that items can be traced easily.**

#include<stdio.h>

#include<stdlib.h>

struct node{

int item;

struct node \*left;

struct node \*right;

};

struct node\* createnode(int item){

struct node\* newnode =(struct node\*)malloc(sizeof(struct node));

newnode->item = item;

newnode->left =NULL;

newnode->right=NULL;

return newnode;

};

struct node \* insert(struct node\* root,int item){

if (root==NULL)

return createnode(item);

if(item<root->item)

root->left=insert(root->left,item);

if(item>root->item)

root->right=insert(root->right,item);

}

struct node\* search(struct node\* root,int item){

if(root==NULL || root->item == item)

return root;

if(item<root->item)

return(root->left,item);

return(root->right,item);

};

void inorder(struct node\* root){

inorder(root->left);

printf("item is:%d",root->item);

inorder(root->right);

}

int main(){

struct node\* root=NULL;

int choice,i,n,item;

while(1){

printf("WareGouse Items \n");

printf("1.Insert the items");

printf("2.display the item is ascending order");

printf("3.Search the item");

printf("4.Exit\n");

printf("Enter the Choice:");

scanf("%d",&choice);

switch(choice){

case 1:

printf("Enter the number of items to insert:");

scanf("%d",&n);

for(i=0;i<n;i++){

printf("Enter items are:%d",i+1);

scanf("%d",&item);

root=insert(root,item);

}

break;

case 2:

printf("Items in ascending order:");

inorder(root);

printf("\n");

break;

case 3:

printf("Enter the item to be searched:");

scanf("%d",&item);

if(search(root,item)!=NULL)

printf("Item %d found at warehouse.\n",item);

else

printf("Item is not present or not found in the warehouse\n",item);

break;

case 4:

printf("Exiting...");

exit(0);

default:

printf("Invalid choice:Try again.\n");

}

}

return 0;

}