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#include<stdlib.h>
#include<stdio.h>

typedef struct odll {
    int data;
    struct odll * left ;
    struct odll * right;
}odll;

odll * head = NULL;
int count = 0;

odll * createnode() {
    odll * newnode = (odll*)malloc(sizeof(odll));
    printf("Enter the element : ");
    scanf("%d",&newnode->data);
    newnode->left = NULL;
    newnode->right = NULL;
    count++;
    return newnode;
}

void push() {
    if(head == NULL)
        head = createnode();
    else {
        odll * temp = createnode();
        int j = count;
        odll * trav = head;
        if(temp->data <= head->data) {
            temp->right = head;
            head->left = temp;
            head = temp;
        }
        else {
            while(temp->data > trav->data ) {
                if(trav->right == NULL ) {
                    trav->right = temp;
                    temp->left = trav;
                    return;
                }
                else
                    trav = trav->right;
            }
            temp->left = trav->left;
            trav->left = temp;
            trav = temp->left;
            temp->right = trav->right;
            trav->right = temp;
        }
    }
}

void display() {
    if(head == NULL)
        printf("Doubly Linked list is empty.\n");

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else {
    odll * strt = head;
    printf("Elements of Ordered DLL are : ");
    while(strt != NULL) {
        printf("%d ", strt->data);
        strt = strt->right;
    }
    printf("\n");
}

}

void main() {
    int choice , flag = 1 ;
    printf("Ordered Doubly Linked List.\n");
    printf("Enter the operation to be performed.\n");
    while(flag) {
        printf("1.Push \t 2.Display \t 3.Exit   : ");
        scanf("%d" , &choice);
        switch(choice) {
            case 1 : push();
                    break;

            case 2 : display();
                    break;

            case 3 : flag = 0 ;
                    break;

            default : printf("Invalid input.\n");
                     break;
        }
    }
}

```