#include<stdio.h>

#include<stdlib.h>

struct Node

{

int data;

struct Node \*next;

}\*top = NULL;

void push(int);

void pop();

void display();

void search();

void main()

{

int choice, value;

printf("\n:: Stack using Linked List ::\n");

while(1){

printf("\n\*\*\*\*\*\* MENU \*\*\*\*\*\*\n");

printf("1. Push\n2. Pop\n3. Display\n4. Search\n5. Exit\n");

printf("Enter your choice: ");

scanf("%d",&choice);

switch(choice){

case 1: printf("Enter the value to be insert: ");

scanf("%d", &value);

push(value);

break;

case 2: pop(); break;

case 3: display(); break;

case 4: search(); break;

case 5: exit(0); break;

default: printf("\nWrong selection!!! Please try again!!!\n");

}

}

}

void push(int value)

{

struct Node \*newNode;

newNode = (struct Node\*)malloc(sizeof(struct Node));

newNode->data = value;

if(top == NULL)

newNode->next = NULL;

else

newNode->next = top;

top = newNode;

printf("\nInsertion is Success!!!\n");

}

void pop()

{

if(top == NULL)

printf("\nStack is Empty!!!\n");

else{

struct Node \*temp = top;

printf("\nDeleted element: %d", temp->data);

top = temp->next;

free(temp);

}

}

void display()

{

if(top == NULL)

printf("\nStack is Empty!!!\n");

else{

struct Node \*temp = top;

while(temp->next != NULL){

printf("%d--->",temp->data);

temp = temp -> next;

}

printf("%d--->NULL",temp->data);

}

}

void search()

{

struct Node \*ptr;

int item,i=0,flag;

ptr = top;

if(ptr == NULL)

{

printf("\nEmpty List\n");

}

else

{

printf("\nEnter item which you want to search:");

scanf("%d",&item);

while (ptr!=NULL)

{

if(ptr->data == item)

{

printf("item found at location %d ",i+1);

flag=1;

}

else

{

flag=0;

}

i++;

ptr = ptr -> next;

}

if(flag==0)

{

printf("Item not found\n");

}

}

} 





