/#include <stdio.h>

#include<stdlib.h>

struct node{

int data;

struct node \*next;

};

typedef struct node\* position;

typedef struct node\* temp;

typedef struct node\* list;

struct node \*top = NULL;

int main(void) {

int option;

checkpoint:

printf("Choose the option\n1.Push\n2.Pop\n3.Top\n4.Display\n5.Exit\n");

scanf("%d", &option);

switch(option) {

case 1: {

int x;

position temp;

temp=malloc(sizeof(struct node));

printf("Enter the element to push");

scanf("%d", &x);

temp->data=x;

temp->next=NULL;

if(top==NULL) {

top=temp;

} else {

temp->next=top;

top=temp;

}

goto checkpoint;

}break;

case 2: {

int x;

position temp;

if(top==NULL) {

printf("stack is underflow");

} else {

temp=top;

top = top->next;

x=temp->data;

temp->next=NULL;

free(temp);

}

printf("The popped element is %d\n", x);

goto checkpoint;

}break;

case 3: {

printf("Top pointer is pointing to: %d\n", top->data);

goto checkpoint;

}break;

case 4: {

position temp;

temp=top;

printf("The contents of the Stack are :\n");

while(temp != NULL) {

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

temp = temp->next;

}

printf("NULL\n");

goto checkpoint;

}break;

default: {

printf("Thank you for using Stack");

exit(0);

}

}

return 0;

}