#include<stdio.h>

#include<stdlib.h>

#include<conio.h>

#define MAX 3

int st[MAX],top=-1,i;

void push(int st[],int val);

int pop(int st[]);

int peek(int st[]);

void display(int st[]);

int main(int argc,char \*argv[])

{

int val,option;

do

{

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

printf("\n 1.PUSH\n 2.POP\n 3.PEEK\n 4.DISPLAY\n 5.EXIT");

printf("\nEnter your option: ");

scanf("%d",&option);

switch(option)

{

case 1 :

for(i=0;i<MAX;i++)

{

printf("\n Enter the number to be pushed on stack : ");

scanf("%d",&val);

push(st,val);

}

break;

case 2 :

val = pop(st);

if(val!=-1)

printf("\n The value deleted from the stack is : %d",val);

break;

case 3:

val = peek(st);

if(val=-1)

printf("\n The value stored at top of stack is : %d",val);

break;

case 4 :

display(st);

break;

}

}while(option!=5);

return 0;

}

void push(int st[],int val)

{

if(top==MAX-1)

{

printf("\n STACK OVERFLOW");

}

else

{

top++;

st[top]=val;

}

}

int pop(int st[])

{

int val;

if(top==-1)

{

printf("STACK UNDERFLOW");

return -1;

}

else

{

val=st[top];

top--;

return val;

}

}

int peek(int st[])

{

if(top==-1)

{

printf("\n STACK IS EMPTY");

return -1;

}

else

return (st[top]);

}

void display(int st[])

{

int i;

if(top==-1)

printf("\n STACK IS EMPTY");

else

{

for(i=top;i>=0 ;i--)

printf("\n %d",st[i]);

printf("\n");

}

}