#include<stdio.h> //standard I/O header file

#include<stdlib.h> //standard library header file

#define size 4//declaring the size to 5

int top=-1,inp\_arr[size],i;//declaring variables

void push();

void pop();

void display();

int main()//main fuction

{

int choice;

while(1)//checks the condition and enters the while loop

{

printf("Operation performed by stack\n");//printing statement

printf("1.PUSH\n2.POP\n3.DISPLAY\n4.EXIT\n");//printing statement

printf("Enter the choice\n");//printing statement

scanf("%d",&choice);//store of value in variable

switch(choice)//switch statement initialization

{

case 1:push();//if option 1 go o push

break;

case 2:pop();//if option is 2 go to pop

break;

case 3:display();//if option is 3 go to display

break;

case 4:exit(0);//if option is 4 exit the loop

default:printf("Invalid choice\n");//printing staement

}

}

}

void push()//push function

{

int x;

if(top==size-1)//condition check

printf("Overflow\n");

else

{

printf("Enter the element to be inserted:\n");

scanf("%d",&x);//the element to be inserted in stack

top=top+1;//top value increased

inp\_arr[top]=x;

}

}

void pop() //pop function

{

if(top==-1)//condition check

printf("Underflow\n");

else

{

printf("Popped the element %d\n",inp\_arr[top]);

top=top-1;//decrement of top

}

}

void display()//display function

{

if(top>=0)//condition check

{

printf("Elements in the stack:\n");

for(i=top;i>=0;i--)// loop for printing the elements in stack

{

printf("%d\n",inp\_arr[i]);// I value decides the place of top

}

}

else

printf("Stack is empty\n");//empty stack, no elements present

}