#include<stdio.h>

int stk[50],top=-1,i,n,x,op;

void Push();

void Pop();

void Peep();

void Display();

void main()

{

printf("Implementation of Stack Using Array\n");

printf("Enter the size of Stack(Max=50):\n");

scanf("%d",&n);

do

{

printf("Stack Operations:\n");

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

scanf("%d",&op);

switch(op)

{

case 1:

Push();

break;

case 2:

Pop();

break;

case 3:

Peep();

break;

case 4:

Display();

break;

case 5:

printf("Exit.\n");

break;

default:

printf("Enter Valid Choice");

break;

}

}while(n>=5);

}

void Push()

{

if(top>=n-1)

{

printf("Stack Overflow\n");

}

else

{

printf("Enter element to be pushed: ");

scanf("%d",&x);

top++;

stk[top]=x;

}

}

void Pop()

{

if(top<0)

{

printf("Stack Underflow\n");

}

else

{

printf("Tne popped element is: %d\n",stk[top]);

top--;

}

}

void Peep()

{

printf("Enter the position of element you from top which you want to peep: ");

scanf("%d",&i);

if(top-i+1<0)

{

printf("Stack Underflow!\n");

}

else

{

printf("The %d element is from top is: %d\n",i,stk[top-i+1]);

}

}

void Display()

{

if(top<0)

{

printf("Stack is Empty!");

}

else

{

printf("The element in stack are:");

for(i=top;i>-1;i--)

{

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

}

}

}



