#include<iostream>

#define max 5

using namespace std;

int top=-1;

int arr[max];

int full(){

if(top==max-1)

return 1;

else

return 0;

}

int empty(){

if(top==-1)

return 1;

else

return 0;

}

void push(int n){

if(full())

{

cout<<"\nstack is full";

}

else

{

top+=1;

arr[top]=n;

}

}

int pop(){

int value;

if(empty())

{

cout<<"\nStack is empty";

}

else{

value=arr[top];

top--;

return value;

}

}

void print(){

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

cout<<arr[i]<<" ";

}

int peak(){

if(empty())

{

cout<<"stack over flow ";

exit(1);

}

else

{

return arr[top];

}

}

int main(){

int choice,data;

while (1){

cout<<"\n1-Push";

cout<<"\n2-Pop";

cout<<"\n3-check whether stack is full";

cout<<"\n4-print all element of stack";

cout<<"\n5-print top element of stack";

cout<<"\n6-exist";

cout<<"\nEnter your choice:";

cin>>choice;

switch (choice)

{

case 1:

cout<<"Enter Element to be pushed:";

cin>>data;

push(data);

break;

case 2:

data=pop();

cout<<"Deleted element is "<<data;

break;

case 3:

cout<<full();

break;

case 4:

print();

break;

case 5:

cout<<"top most element is:\t"<<peak();

break;

case 6:

exit(1);

default:

cout<<"wrong choice";

break;

}

}

return 0;

}