**/\*WAP to show array implementation of stack.\*/**

**#include <iostream>**

**using namespace std;**

**int MAXSIZE = 8;**

**int stack[8];**

**int top = -1;**

**int isempty()**

**{**

**if(top == -1)**

**return 1;**

**else**

**return 0;**

**}**

**int isfull()**

**{**

**if(top == MAXSIZE)**

**return 1;**

**else**

**return 0;**

**}**

**int peek()**

**{**

**cout<<stack[top]<<endl;**

**}**

**void pop()**

**{**

**int data;**

**if(!isempty())**

**{**

**data = stack[top];**

**top--;**

**cout<<data<<endl;**

**}**

**else**

**{**

**cout<<"Could not retrieve data, Stack is empty."<<endl;**

**}**

**}**

**void push()**

**{**

**int data;**

**if (!isfull())**

**{**

**cout<<"Enter data to push: ";**

**cin>>data;**

**top++;**

**stack[top] = data;**

**}**

**else**

**{**

**cout<<"Could not insert data, Stack is full."<<endl;**

**}**

**}**

**int main()**

**{**

**int a;**

**char choice;**

**while(1)**

**{**

**cout<<"Enter followng keys to perform varous operations.\n";**

**cout<<"1 for push item in stack.\n";**

**cout<<"2 for pop item from stack.\n";**

**cout<<"3 for peek first element in stack.\n";**

**cin>>a;**

**if (a==1)**

**{**

**push();**

**}**

**else if (a==2)**

**{**

**pop();**

**}**

**else if (a==3)**

**{**

**peek();**

**}**

**}**

**return 0;**

**}**

**/\*WAP to show array implementation of stack.\*///or**

**#include<iostream>**

**#define max 10**

**using namespace std;**

**template<class T>**

**class Stack**

**{**

**T data[max];**

**int top;**

**public:**

**Stack():top(-1) {}**

**void push(T value)**

**{**

**if(top==max-1)**

**{**

**cout<<"overflow"<<endl;**

**}**

**else**

**data[++top]=value;**

**}**

**void pop()**

**{**

**if(top==-1)**

**{**

**cout<<"underflow"<<endl;**

**}**

**else**

**{**

**cout<<data[top--]<<" is poped" <<endl;**

**}**

**}**

**void peek()**

**{**

**if(top==-1)**

**{**

**cout<<"underflow"<<endl;**

**}**

**else**

**{**

**cout<<data[top]<<" is in top"<<endl;**

**}**

**}**

**void display()**

**{**

**cout<<"------------------XX---------------"<<endl;**

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

**{**

**cout<<data[i]<<endl;**

**}**

**cout<<"------------------XX---------------"<<endl;**

**}**

**};**

**int main()**

**{**

**Stack<int> arr;**

**int val;**

**int choice=-1;**

**while(choice!=0)**

**{**

**cout<<"choose::"<<endl;**

**cout<<"\t1-push"<<endl;**

**cout<<"\t2-pop"<<endl;**

**cout<<"\t3-peek"<<endl;**

**cout<<"\t4-display stack"<<endl;**

**cout<<"\t0-exit"<<endl;**

**cin>>choice;**

**switch(choice)**

**{**

**case 1:**

**cout<<"enter a value: ";**

**cin>>val;**

**arr.push(val);**

**break;**

**case 2:**

**arr.pop();**

**break;**

**case 3:**

**arr.peek();**

**break;**

**case 4:**

**arr.display();**

**break;**

**case 0:**

**cout<<"XXXXXXXXXXXXXXXXXXXXXXXXXX"<<endl;**

**cout<<"\tTHANKS"<<endl;**

**cout<<"XXXXXXXXXXXXXXXXXXXXXXXXXX"<<endl;**

**break;**

**}**

**}**

**return 0;**

**}**