

/*WAP to reverse a list using stack*/

#include <iostream>

#define MAXSIZE 8

using namespace std;

int stack[MAXSIZE];

int top = -1,data;

int isempty()

{

if(top == -1)

return 1;

else

return 0;

}

int isfull()

{

if(top == MAXSIZE)

return 1;

else

return 0;

}

void pop()

{

cout<<"Reverse list is \n";

while (!isempty())

{

data=stack[top];

top--;

cout<<data<<endl;

}

}

void push()

{

if (!isfull())

{

cout<<"Enter data to push: ";

cin>>data;

top++;

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        stack[top]=data;
    }
    else
    {
        cout<<"Could not insert data, Stack is full."<<endl;
    }
}
int main()
{
    int a;
    while(1)
    {
        cout<<"Enter following keys to perform various operations.\n";
        cout<<"1 for push item in stack.\n";
        cout<<"2 reverse your list.\n";
        cin>>a;
        if (a==1)
        {
            push();
        }
        else if (a==2)
        {
            pop();
        }
        cout<<endl<<endl;
    }
    return 0;
}

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/*WAP to reverse a list using stack*///or
#include<iostream>
#define max 10
using namespace std;
template<class T>
class Stack
{
    T data[max];

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    int top;
public:
    Stack():top(-1) {}
    void push(T value)
    {
        if(top==max-1)
        {
            cout<<"overflow"<<endl;
        }
        else
            data[++top]=value;
    }
    T pop()
    {
        if(top== -1)
        {
            cout<<"underflow"<<endl;
            return -1;
        }
        else
        {
            return data[top--];
        }
    }
    void peek()
    {
        if(top== -1)
        {
            cout<<"underflow"<<endl;
        }
        else
        {
            cout<<data[top]<<" is in top"<<endl;
        }
    }
    void display()
    {

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        cout<<"-----XX-----"<<endl;
        for(int i=top; i>-1; i--)
        {
            cout<<data[i]<<endl;
        }
        cout<<"-----XX-----"<<endl;
    }
};
int main()
{
    Stack<int> arr;
    int list[5];
    int revlist[5];
    cout<<"enter 5 integers for your list: ";
    for(int i=0; i<5; i++)
    {
        cin>>list[i];
        arr.push(list[i]);
    }
    for(int i=0; i<5; i++)
    {
        revlist[i]=arr.pop();
    }
    cout<<"its reverse is::"<<endl;
    for(int i=0; i<5; i++)
    {
        cout<<revlist[i]<<endl;
    }
    return 0;
}

```