#include<iostream>

using namespace std;

const int MAX=5;

class stack

{

private: //data member

int t; //variables

int a[MAX];

public: //member function

stack() //constrater

{

t=-1;

}

///////////////////////////////////////////////////

void push(int v) //inserting values in stack but befor check stack is empty or full

{

if(t==5)

cout<<"\nERROR.....>>>>> stack is overflow.\n";

else

a[++t]=v;

}

/////////////////////////////////////////////////////////////

int pop() //delete values in stack but befor check stack is empty or full

{

if(t<0)

cout<<"\nERROR......>>>> stack is underflow.\n";

else

return a[t--];

}

////////////////////////////////////////////////////////

void top()

{

if(t>=0) //check pointer is at top and show that value

cout<<"top most element is : "<<a[t]<<endl;

else

cout<<"\nstack is underflow\n";

}

/////////////////////////////////////////////////////

void empty()

{

if(t<0) //check pointer is at bottom and show that value

cout<<"\nstack is empty\n";

else

cout<<"\nstack is not empty\n";

}

/////////////////////////////////////////////////////

void display()

{

for(int j=0;j<MAX;j++)

cout<<a[j]<<"\t";

}

};

//////////////////////////////////////////////////////////////////

int main()

{

system("color b5");

char ch; //variable for switch statement

stack s1; //class obect

int m; //variavle for input data

cout<<"\t\t\t\The stack code..........\n";

do

{

cout<<"Enter your choice => \npush: A \npop:B ";

cout<<"\nfor top value enter: C \n"

"for check stack empty or not enter:D \n"

"for display all values in push(stack):E\n ";

cin>>ch;

switch(ch)

{

case 'a':

system("color b5");

cout<<"using push() command insert values :\n";

cout<<"\nEnter value : \n";

for(int i=0;i<5;i++)

{

cin>>m;

s1.push(m);

}

break;

case 'b':

cout<<"Now using pop() command extract values :";

cout<<s1.pop();

cout<<endl;

cout<<s1.pop();

cout<<endl;

cout<<s1.pop();

cout<<endl;

cout<<s1.pop();

cout<<endl;

cout<<s1.pop();

cout<<endl;

break;

case 'c':

s1.top();

break;

case 'd':

s1.empty();

break;

case 'e':

s1.display();

break;

}

cout<<"\n\n\t\t\tPROGRAMING MAKE MY LIFE EASY INSHA ALLAHA\n";

cout<<"Enter ur choice : (y/n) : ";

cin>>ch;

}

while(ch=='y');

system("pause");

return 0;

};