**Stack implementation and various operations.**

#include <iostream>

#define MAX 20

using namespace std;

struct stacks{

int data[MAX];

int top;

};

void initialise(stacks \*s){

s->top=-1;

}

int isFull(stacks \*s){

if(s->top==MAX-1)

return 1;

else

return 0;

}

int isEmpty(stacks \*s){

if(s->top==-1)

return 1;

else

return 0;

}

void push(stacks \*s){

int data;

cout<<endl<<"Enter data:";

cin>>data;

s->top=s->top+1;

s->data[s->top]=data;

cout<<endl<<"Data inserted successfully!!!";

}

void pop(stacks \*s){

int x=s->data[s->top];

s->top=s->top-1;

cout<<endl<<"Data deleted successfully!!! "<<x;

}

void display(stacks \*s){

cout<<endl<<"Stack elements:";

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

cout<<s->data[i]<<"\t";

}

}

int main()

{

stacks a;

int ch;

initialise(&a);

do{

cout<<endl<<"\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*STACK OPERATIONS\*\*\*\*\*\*\*\*\*\*";

cout<<endl<<"1.Push element....\n2.Pop element....\n3.display.....\n4.Exit....";

cout<<endl<<"Enter your choice:";

cin>>ch;

switch(ch){

case 1:

if(isFull(&a)==1)

cout<<endl<<"Stack is alreday full!!!cant insert elements..";

else

push(&a);

break;

case 2:

if(isEmpty(&a)==1)

cout<<endl<<"Stack is Empty!!!cant read elements..";

else

pop(&a);

break;

case 3:

display(&a);

break;

case 4:

break;

default:

cout<<endl<<"Invalid choice!!!!";

}

}while(ch!=4);

return 0;

}