

```
1  #include<iostream>
2  #define size 10
3  using namespace std;
4  class stack
5  {
6  int *s;
7  int top;
8
9  public:
10 stack() //Constructor
11 {
12 cout<<"\n I am in constructor";
13 s=new int[size]; //creation of dynamic stack
14 top=-1;
15 }
16
17 void push(int item)
18 {
19 top++;
20 s[top]=item;
21 }
22
23 int pop()
24 {
25 int item;
26 if(!stempty())
27 {
28
29 item=s[top];
30
31 top--;
32 return item;
33 }
34 else
35 cout<<"\n stack is empty";
36 return -1;
37 }
38
39 int stempty()
40 {
41 if(top== -1)
42 return 1;
43 else
44 return 0;
```

C:\Users\sonaw\Documents\exp4.cpp - [Executing] - Dev-C++ 5.11

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TDM-GCC 4.9.2 64-bit Release

(globals)

Project Classes Debug

exp4.cpp

```
43     else
44     return 0;
45
46 }
47
48 void display()
49 {
50     if(!stempty())
51     {
52         for(int i=0;i<=top;i++)
53             cout<<" "<<s[i];
54     }
55     else
56         cout<<"\n stack is empty";
57 }
58
59 }
60
61 ~stack() //Destructor
62 {
63     for(int i=0;i<size;i++)
64     {
65         delete []s;
66         delete s;
67     }
68 }
69
70 };
71
72 int main()
73 {
74     stack obj;
75     int choice,val;
76     char ans;
77     do
78     {
79         cout<<"\n\t Main Menu";
80
81         cout<<"\n 1.Push \n2.Pop \n3.Display";
82         cout<<"\n Enter Your choice :";
83         cin>>choice;
84         switch(choice)
85         {
86             case 1: cout<<"\n Enter the value to be pushed :";
```

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```
58 |  
59 | }  
60 |  
61 | ~stack() //Destructor  
62 | {  
63 |     for(int i=0;i<size;i++)  
64 |     {  
65 |         delete []s;  
66 |         delete s;  
67 |     }  
68 | }  
69 |  
70 | };  
71 |  
72 | int main()  
73 | {  
74 |     stack obj;  
75 |     int choice,val;  
76 |     char ans;  
77 |     do  
78 |     {  
79 |         cout<<"\n\t Main Menu";  
80 |  
81 |         cout<<"\n 1.Push \n2.Pop \n3.Display";  
82 |         cout<<"\n Enter Your choice :";  
83 |         cin>>choice;  
84 |         switch(choice)  
85 |         {  
86 |             case 1: cout<<"\n Enter the value to be pushed :";  
87 |                 cin>>val;  
88 |                 obj.push(val);  
89 |                 break;  
90 |             case 2: cout<<"\n popped element :"<<obj.pop();  
91 |                 break;  
92 |             case 3: obj.display();  
93 |                 break;  
94 |         }  
95 |         cout<<"\n Do you want to continue ?";  
96 |         cin >>ans;  
97 |  
98 |     }while(ans=='y' || ans=='Y');  
99 |     return 0;  
100 | }  
101 | }
```

C:\Users\sonaw\Documents\exp4.exe

```
I am in constructor
Main Menu
1.Push
2.Pop
3.Display
Enter Your choice :1

Enter the value to be pushed :25

Do you want to continue ?y
```

```
Main Menu
1.Push
2.Pop
3.Display
Enter Your choice :
```

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