

```
1 struct Node
2 {
3     float data;
4     Node *pNext;
5 };
6
7 struct Stack
8 {
9     Node *pTop;
10 };
11
12 Node *initNode(float value)
13 {
14     Node *p = new Node;
15
16     if (p == NULL)
17     {
18         cout << "Khong du bo nho de cap phat" << endl;
19         return NULL;
20     }
21
22     p->data = value;
23     p->pNext = NULL;
24
25     return p;
26 }
27
28 void initStack(Stack &s)
29 {
30     s.pTop = NULL;
31 }
32
33 bool isEmpty(Stack &s)
34 {
35     return s.pTop == NULL;
36 }
37
38 void push(Stack &s, Node *p)
39 {
40     if (s.pTop == NULL)
41     {
42         s.pTop = p;
43     }
44     else
45     {
46         p->pNext = s.pTop;
47         s.pTop = p;
48     }
49 }
```

```
50
51 bool pop(Stack &s)
52 {
53     if (s.pTop == NULL)
54     {
55         return false;
56     }
57
58     Node *p = s.pTop;
59     s.pTop = s.pTop->pNext;
60
61     delete p;
62     return true;
63 }
64
65 bool getTopValue(Stack &s, float &value)
66 {
67     if (s.pTop == NULL)
68     {
69         return false;
70     }
71
72     value = s.pTop->data;
73     return true;
74 }
75
76 void printStack(Stack s)
77 {
78
79     if (s.pTop == NULL)
80     {
81         return;
82     }
83
84     Node *p = s.pTop;
85
86     while (p != NULL)
87     {
88         cout << p->data << " ";
89         p = p->pNext;
90     }
91
92     cout << endl;
```