

```

1 //=====
2 //      * Letsch Informatik *      www.LetsInfo.ch      CH-8636 Wald
3 //      Beratung, Ausbildung und Realisation in Software-Engineering
4 //=====
5 // Project   : Master of Advanced Studies in Software-Engineering MAS-SE 2019
6 // Title     : Übung 1 / Aufgabe 3: Swap
7 // Author    : Thomas Letsch
8 // Tab-Width : 2
9 /**/=====
10 * Description: Einfache Anwendungen von Referenzen u. Zeigern.
11 * $Revision : 1.10 $   $Date: 2019/10/30 17:19:47 $
12 /**/=====
13 //      1      2      3      4      5      6      7      8
14 //34567890123456789012345678901234567890123456789012345678901234567890
15 //=====
16
17 #include <iostream>
18 using std::cout;
19 using std::endl;
20
21 int swapMaxRefs(int&, int&);
22 int swapMaxPtrs(int*, int*);
23
24 int main() {
25
26     cout << "Swap with References:" << endl;
27     int i1 = 1;
28     int i2 = 2;
29     int max = swapMaxRefs(i1, i2);
30
31     cout << max << endl;    // Ausgabe: 2
32     cout << i1 << endl;    // Ausgabe: 2
33     cout << i2 << endl;    // Ausgabe: 1
34
35     cout << "Swap with Pointers:" << endl;
36     i1 = 1;
37     i2 = 2;
38     max = swapMaxPtrs(&i1, &i2);
39     cout << max << endl;    // Ausgabe: 2
40     cout << i1 << endl;    // Ausgabe: 2
41     cout << i2 << endl;    // Ausgabe: 1
42
43     return 0;
44 }
45
46 int swapMaxRefs(int& i1, int& i2) {
47     int buffer = i1;
48     i1 = i2;
49     i2 = buffer;
50     return i1 > i2 ? i1 : i2;
51 }
52
53 int swapMaxPtrs(int* i1, int* i2) {
54     int buffer = *i1;
55     *i1 = *i2;
56     *i2 = buffer;
57     return *i1 > *i2 ? *i1 : *i2;
58 }
59
60
61
62
63
64 /* Session-Log:
65
66 Swap with References:
67 2
68 2
69 1
70 Swap with Pointers:
71 2
72 2
73 1
74
75 */

```