

```
1
2 #include <string>
3 #include <thread>
4 #include <iostream>
5 #include <functional>
6 #include <mutex>
7 using namespace std;
8 thread_local int globalVar = 0;
9 mutex mu;
10 void PrettyPrint(int valueToPrint)
11 {
12     lock_guard<mutex> lock(mu);
13     cout << "Value of valueToPrint in thread " <<
        this_thread::get_id() << " is " << valueToPrint << endl;
14 }
15 void thread_Local_Test_Func(int newVal)
16 {
17     globalVar = newVal;
18     PrettyPrint(globalVar);
19 }
20
21 struct C{
22     void foo(){
23         v++;
24         PrettyPrint(v);
25     }
26     static thread_local int v;
27 };
28 thread_local int C::v =0;
29
30 int f() {
31     thread_local int v =0;
32     v++;
33     return v;
34 }
35 void entry()
36 {
37     f();
38     PrettyPrint( f());
39 }
40
41 int main()
42 {
43     globalVar = 1;
44     thread t1(thread_Local_Test_Func, 5);
```



```

45     thread t2(thread_Local_Test_Func, 20);
46     t1.join();
47     t2.join();
48     cout << "Value of globalVar in MAIN thread is " <<
globalVar << endl;
49
50     C c;
51     thread t3(&C::foo, c );
52     t3.join();
53     cout << "Value of C::v in MAIN thread is " << C::v <<
endl;
54     ///
55     thread t4(entry );
56     t4.join();
57     cout << "Value in f() " <<f() << endl;
58     return 0;
59 }
60 /* Value of valueToPrint in thread 140354145572608 is 5
61 Value of valueToPrint in thread 140354135082752 is 20
62 Value of globalVar in MAIN thread is 1
63 Value of valueToPrint in thread 140354135082752 is 1
64 Value of C::v in MAIN thread is 0
65 Value of valueToPrint in thread 140354135082752 is 2
66 Value in f() 1
67 */

```