

## TASK CODE SCREENSHOTS

cs182019\_Lab09\_Task.cpp

cs182019\_Lab09\_Assg.cpp

```
1  #include <iostream>
2  #include <thread>
3  using namespace std;
4  int flag[2];
5
6  // cs182019 Lab 09 Task
7  int turn;
8  const int MAX =100;
9  int ans=0;
10
11 void lock_init()
12 {
13     flag[0] =flag[1]=0;
14     turn =0;
15 }
16
17 void lock (int self)
18 {
19     flag[self] =1;
20     turn = 1-self;
21
22     while(flag[1-self]==1 && turn==1-self);
23 }
24
25 void unlock (int self)
26 {
27     flag[self] =0;
28 }
29
30 void func(int s)
31 {
32     int i =0;
33     int self =s;
34     cout<< "Thread Entered : " << self<<endl;
35
36     lock(self);
37     for(i=0; i<MAX;i++)
38     {
39         ans++;
40     }
41
42     lock(self);
43     for(i=0; i<MAX;i++)
44     {
45         ans++;
46     }
47     unlock(self);
48 }
49
50 int main()
51 {
52     lock_init();
53     thread threadObj1(func,1);
54     threadObj1.join();
55     thread threadObj2(func,2);
56     threadObj2.join();
57     cout<<"Actual Count : " <<ans<< " | Expected Count : "<<MAX*2<<endl;
58     return 0;
59 }
```

## TASK CODE OUTPUT

```
C:\Users\user\Desktop\Semester 4\OS Lab\Lab 09\Task\cs182019_Lab09_Task.exe
Thread Entered : 1
Thread Entered : 2
Actual Count : 200 | Expected Count : 200
:
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Process exited after 0.09474 seconds with return value 0
Press any key to continue . . . █
```