

CAUsers\mudir\OneDrive\Documents\OS19.cpp - [Executing] - Embarcadero Dev-C++ 6.3

File Edit Search View Project Execute Tools AStyle Window Help

TDM-GCC 9.2.0 64-bit Release

(globals)

Project Class

os11.cpp x OS12.cpp x OS13.cpp x OS14.cpp x OS15.cpp x OS16.cpp x OS17.cpp x OS18.cpp x OS19.cpp x

```
1 #include <stdio.h>
2 #include <pthread.h>
3 #include <unistd.h>
4
5 int counter = 0;
6 pthread_mutex_t lock;
7
8 void* increment(void* arg) {
9     for (int i = 0; i < 5; i++) {
10         pthread_mutex_lock(&lock);
11         counter++;
12         printf("Thread %d incremented counter to %d\n", *(int*)arg, counter);
13         pthread_mutex_unlock(&lock);
14         sleep(1);
15     }
16     return NULL;
17 }
18
19 void* decrement(void* arg) {
20     for (int i = 0; i < 5; i++) {
21         pthread_mutex_lock(&lock);
22         counter--;
23         printf("Thread %d decremented counter to %d\n", *(int*)arg, counter);
24         pthread_mutex_unlock(&lock);
25         sleep(1);
26     }
27     return NULL;
28 }
29
```

Thread 1 incremented counter to 1
Thread 2 decremented counter to 0
Thread 2 decremented counter to -1
Thread 1 incremented counter to 0
Thread 1 incremented counter to 1
Thread 2 decremented counter to 0
Thread 1 incremented counter to 1
Thread 2 decremented counter to 0
Thread 2 decremented counter to -1
Thread 1 incremented counter to 0
Final counter value: 0

Process exited after 5.149 seconds with return value 0
Press any key to continue . . .

Compiler (6) Resources Compile Log Debug Find Results Console Close

Abort Compilation

Errors: 0
Warnings: 0
Output Filename: C:\Users\mudir\OneDrive\Documents\OS19.exe
Output Size: 401.8505859375 KiB
Compilation Time: 0.17s

Shorten compiler pat

Line: 24 Col: 38 Sel: 0 Lines: 47 Length: 1114 Insert Done parsing in 0.015 seconds

28°C Mostly cloudy

23:04 30-09-2025