

Embarcadero Dev-C++ 6.3 interface showing the execution of a C++ program.

Project: OS20.cpp

Compiler: TDM-GCC 9.2.0 64-bit Release

Code (OS20.cpp):

```
1 #include <stdio.h>
2 #include <pthread.h>
3 #include <semaphore.h>
4 #include <unistd.h>
5
6 int data = 0;
7 int readCount = 0;
8
9 sem_t mutex;
10 sem_t wrt;
11 void* reader(void* arg) {
12     int id = *(int*)arg;
13
14     sem_wait(&mutex);
15     readCount++;
16     if (readCount == 1)
17         sem_wait(&wrt);
18     sem_post(&mutex);
19
20     printf("Reader %d is reading data: %d\n", id, data);
21     sleep(1);
22
23     sem_wait(&mutex);
24     readCount--;
25     if (readCount == 0)
26         sem_post(&wrt);
27     sem_post(&mutex);
28 }
29
```

Output:

```
Reader 2 is reading data: 0
Reader 1 is reading data: 0
Reader 3 is reading data: 0
Writer 2 is writing data: 10
Writer 1 is writing data: 20

-----
Process exited after 5.165 seconds with return value 0
Press any key to continue . . .
```

Compiler (6) Resources:

- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\vmudir\OneDrive\Documents\OS20.exe
- Output Size: 404.998046875 Kib
- Compilation Time: 0.17s

System Information:

Line: 20 Col: 3 Sel: 0 Lines: 72 Length: 1513 Insert Done parsing in 0 seconds

28°C Mostly cloudy

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