# Assignment 3 - Threads and Mutexes

In this assignment you need to write a program that creates three threads. These threads access a shared integer, called *buffer*, one at a time. The buffer will initially be set to 0. Each thread should print its thread ID, process ID and the buffer's current value in one statement, then increment the buffer by one. Use a mutex to ensure this whole process is not interrupted. Have the threads modify the buffer a total of 15 times. When each thread is done, it should return the number of times it modified the buffer to the main thread.

```
$ ./assignment3
TID: 3077897072, PID: 30656, Buffer: 0
TID: 3069504368, PID: 30656, Buffer: 1
TID: 3059014512, PID: 30656, Buffer: 2
TID: 3077897072, PID: 30656, Buffer: 3
TID: 3069504368, PID: 30656, Buffer: 4
TID: 3077897072, PID: 30656, Buffer: 5
TID: 3059014512, PID: 30656, Buffer: 6
TID: 3069504368, PID: 30656, Buffer: 7
TID: 3077897072, PID: 30656, Buffer: 8
TID: 3059014512, PID: 30656, Buffer: 9
TID: 3069504368, PID: 30656, Buffer: 10
TID: 3077897072, PID: 30656, Buffer: 11
TID: 3069504368, PID: 30656, Buffer: 12
TID: 3059014512, PID: 30656, Buffer: 13
TID: 3069504368, PID: 30656, Buffer: 14
TID 3077897072 worked on the buffer 5 times
TID 3069504368 worked on the buffer 6 times
TID 3059014512 worked on the buffer 4 times
Total buffer accesses: 15
```

**How to submit the assignment**
You should zip all your source code and upload it through the edmodo forum.
Please use the following format to name your file:
os_assignment<num>_group<num>.zip
For example, if your group number is 5, you should submit:
os_assignment3_group5.zip
The deadline to submit this assignment is 1393/8/10 at 23:59.