

Operating Systems Assessed Coursework

Producer Consumer

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Compilation:

```
kbt18@point28:Producer-Consumer$ make
g++ -c -o helper.o helper.cc
g++ -Wall -c helper.cc main.cc
g++ -Wall -pthread -o main helper.o main.o
kbt18@point28:Producer-Consumer$
```

Execution and Output:

```
kbt18@point28:Producer-Consumer$ ./main 5 6 2 3
Consumer(1): job id 1 executing sleep duration 4
Producer(1): job id 1 duration 4
Producer(2): job id 1 duration 7
Consumer(2): job id 1 executing sleep duration 7
Producer(2): job id 1 duration 4
Consumer(3): job id 1 executing sleep duration 4
Producer(2): job id 1 duration 7
Producer(1): job id 2 duration 10
Consumer(1): job id 1 completed.
Consumer(1): job id 1 executing sleep duration 7
Producer(1): job id 2 duration 3
Consumer(3): job id 1 completed.
Consumer(3): job id 2 executing sleep duration 10
Producer(2): job id 2 duration 1
Consumer(2): job id 1 completed.
Consumer(2): job id 2 executing sleep duration 3
```

Producer(1): job id 2 duration 4
Consumer(2): job id 2 completed.
Consumer(2): job id 2 executing sleep duration 1
Producer(1): job id 2 duration 1
Producer(2): job id 3 duration 7
Consumer(1): job id 1 completed.
Consumer(1): job id 2 executing sleep duration 4
Consumer(2): job id 2 completed.
Consumer(2): job id 2 executing sleep duration 1
Producer(2): job id 2 duration 2
Consumer(2): job id 2 completed.
Consumer(2): job id 3 executing sleep duration 7
Producer(1): job id 2 duration 8
Consumer(1): job id 2 completed.
Consumer(3): job id 2 completed.
Consumer(1): job id 2 executing sleep duration 2
Consumer(3): job id 2 executing sleep duration 8
Producer(2): No more jobs to generate.
Consumer(1): job id 2 completed.
Producer(1): No more jobs to generate.
Consumer(2): job id 3 completed.
Consumer(3): job id 2 completed.
Consumer(1): No more jobs left.
Consumer(2): No more jobs left.
Consumer(3): No more jobs left.
kbt18@point28:Producer-Consumer\$