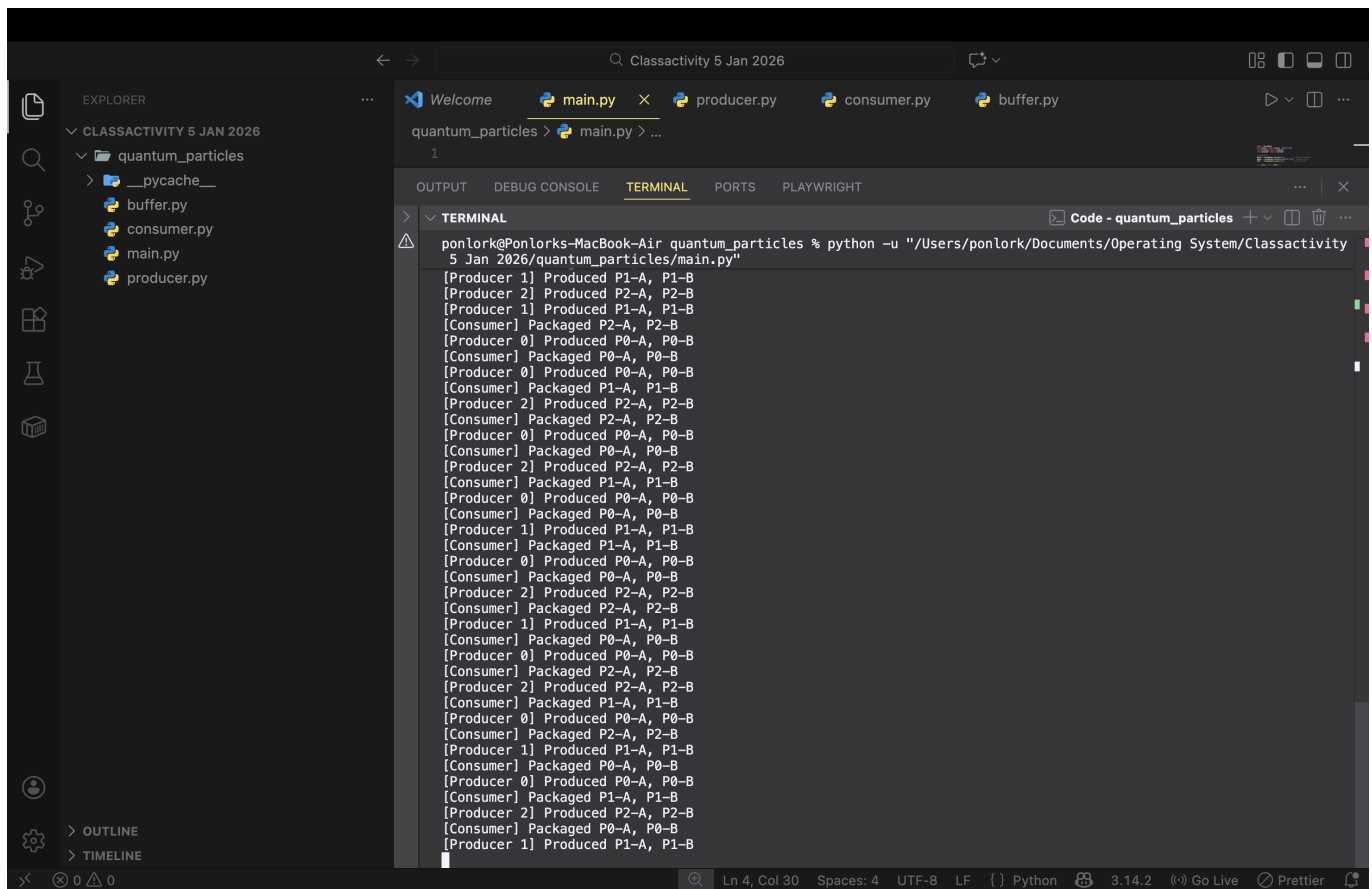


Problem1 : output



```
ponlork@Ponlorks-MacBook-Air quantum_particles % python -u "/Users/ponlork/Documents/Operating System/Classactivity 5 Jan 2026/quantum_particles/main.py"
[Producer 1] Produced P1-A, P1-B
[Producer 2] Produced P2-A, P2-B
[Producer 1] Produced P1-A, P1-B
[Consumer] Packaged P2-A, P2-B
[Producer 0] Produced P0-A, P0-B
[Consumer] Packaged P0-A, P0-B
[Producer 0] Produced P0-A, P0-B
[Consumer] Packaged P1-A, P1-B
[Producer 2] Produced P2-A, P2-B
[Consumer] Packaged P2-A, P2-B
[Producer 0] Produced P0-A, P0-B
[Consumer] Packaged P0-A, P0-B
[Producer 2] Produced P2-A, P2-B
[Consumer] Packaged P1-A, P1-B
[Producer 0] Produced P0-A, P0-B
[Consumer] Packaged P0-A, P0-B
[Producer 1] Produced P1-A, P1-B
[Consumer] Packaged P1-A, P1-B
[Producer 0] Produced P0-A, P0-B
[Consumer] Packaged P2-A, P2-B
[Producer 2] Produced P2-A, P2-B
[Consumer] Packaged P2-A, P2-B
[Producer 1] Produced P1-A, P1-B
[Consumer] Packaged P0-A, P0-B
[Producer 0] Produced P0-A, P0-B
[Consumer] Packaged P2-A, P2-B
[Producer 2] Produced P2-A, P2-B
[Consumer] Packaged P1-A, P1-B
[Producer 0] Produced P0-A, P0-B
[Consumer] Packaged P2-A, P2-B
[Producer 1] Produced P1-A, P1-B
[Consumer] Packaged P0-A, P0-B
[Producer 0] Produced P0-A, P0-B
[Consumer] Packaged P1-A, P1-B
[Producer 2] Produced P2-A, P2-B
[Consumer] Packaged P0-A, P0-B
[Producer 1] Produced P1-A, P1-B
```

Problem2 : output



```
ponlork@Ponlorks-MacBook-Air quantum_particles % python hello_semaphore.py
HELLO
ponlork@Ponlorks-MacBook-Air quantum_particles %
```

Git hub link:

<https://github.com/PONLORK19/Operating-System-/tree/semaphoreP1-P2>