

Problem1 : output

The screenshot shows the VS Code interface with the terminal tab selected. The terminal window displays the output of a Python script named `main.py`. The script runs three producer threads and one consumer thread. The producers are labeled P0-A, P1-A, and P2-A, while the consumer is labeled C0-A. The output shows each producer producing items and the consumer packaging them into item pairs.

```

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 1] Produced P1-A, P1-B
[Consumer] Packaged P1-A, P1-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 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 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 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 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

The screenshot shows the VS Code interface with the terminal tab selected. The terminal window displays the output of a Python script named `hello_semaphore.py`. The script prints "HELLO" to the console. The output shows the command run and the resulting text.

```

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>