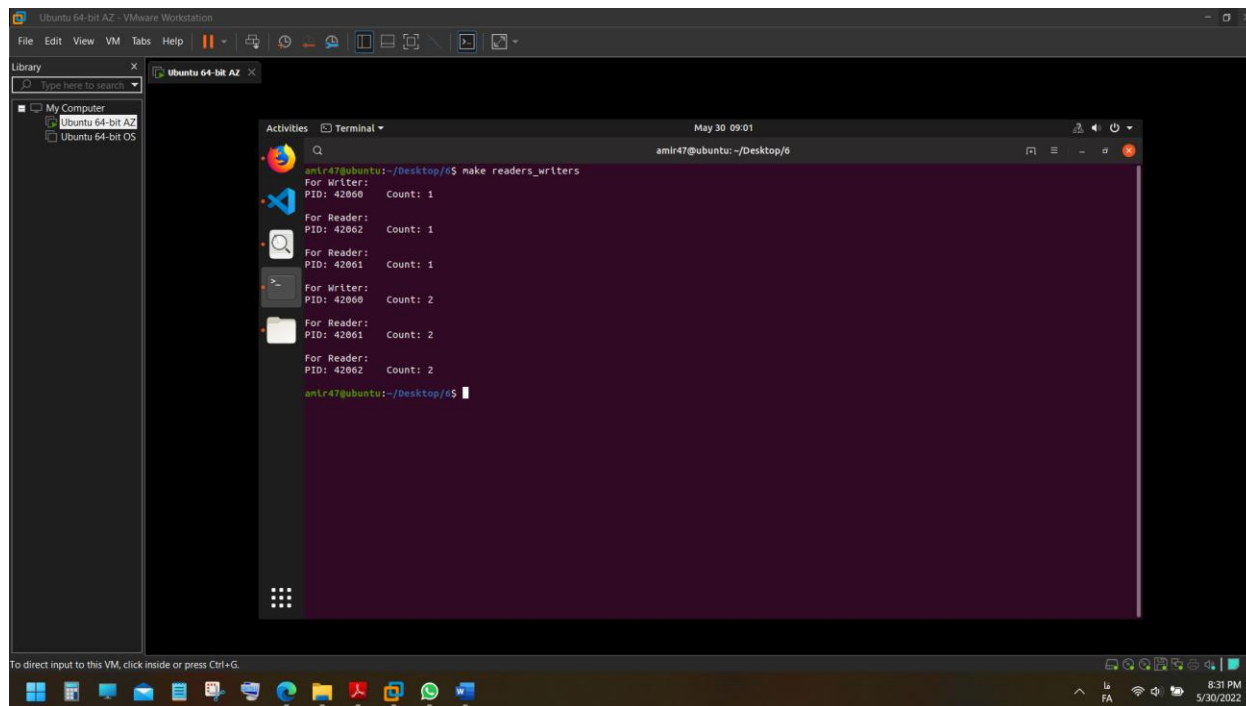


Part1:

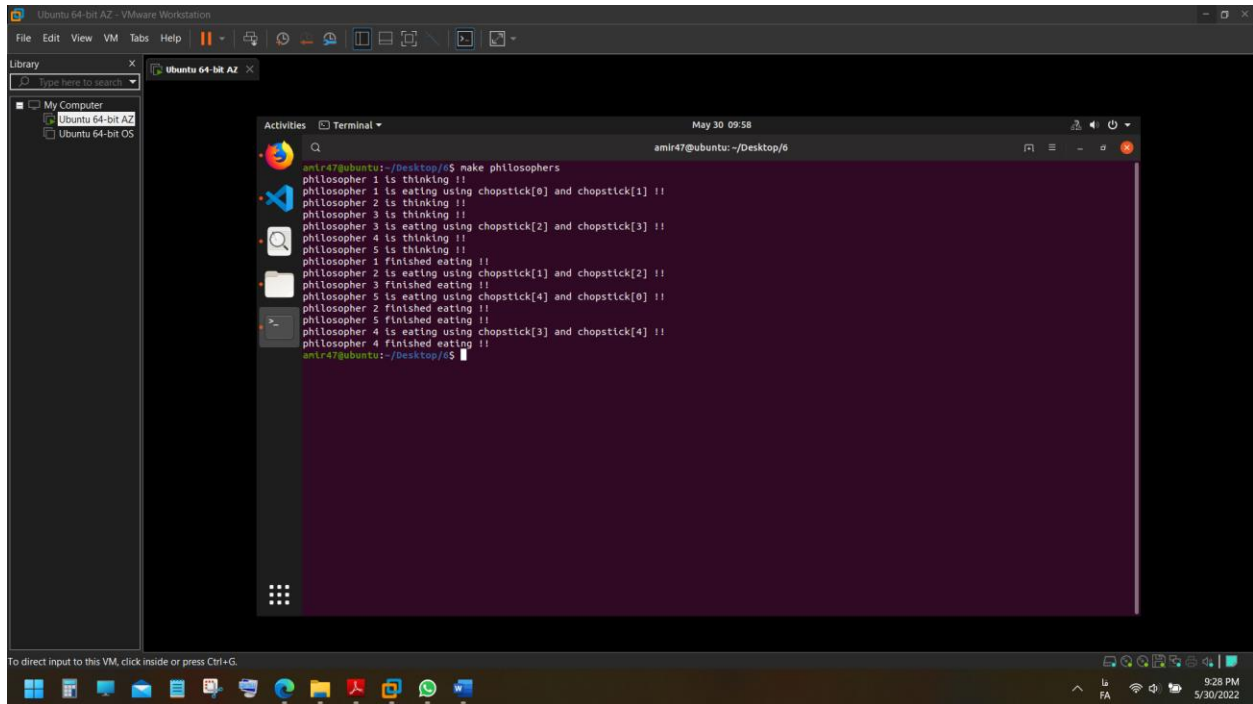
ناهماهنگی‌ای وجود ندارد زیرا از قفل mutex استفاده می‌کنیم.

بدین صورت که اولین reader قفل را acquire می‌کند و آخرین reader آن را release می‌کند.



Part2:

الف) بله ممکن است مثلاً اگر همه همزمان چوب سمت راست خود را بردارند، به همه یک چوب می‌رسد و هیچکس نمی‌تواند غذا بخورد.



The screenshot shows a VMware Workstation interface with a single virtual machine named 'Ubuntu 64-bit AZ'. The terminal window is open, displaying the output of the 'make philosophers' command. The output shows five philosophers (1 to 5) thinking, eating, and finishing eating, using chopsticks in a circular fashion. The terminal output is as follows:

```
amir47@ubuntu:~/Desktop/6$ make philosophers
philosopher 1 is thinking !!
philosopher 1 is eating using chopstick[0] and chopstick[1] !!
philosopher 2 is thinking !!
philosopher 3 is thinking !!
philosopher 3 is eating using chopstick[2] and chopstick[3] !!
philosopher 4 is thinking !!
philosopher 5 is thinking !!
philosopher 1 finished eating !!
philosopher 2 is eating using chopstick[1] and chopstick[2] !!
philosopher 3 finished eating !!
philosopher 5 is eating using chopstick[4] and chopstick[0] !!
philosopher 2 finished eating !!
philosopher 5 finished eating !!
philosopher 4 is eating using chopstick[3] and chopstick[4] !!
philosopher 4 finished eating !!
amir47@ubuntu:~/Desktop/6$
```