

Abhishek Pyakurel
Tk3223
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Program Explanations

In particular, find the throughput of each run, in other words, how many items were produced and then consumed in each case. Was the throughput of the second case 3 times as large as the first case? Why or why not?

→ From running my program successfully, the throughput depended on the number of producers. If the producers were more than certainly there were more throughput. When I just give 1 producer and 1 consumer, my program seems to usually produce 1 item. But which is not given too as it depends on the race condition as it might select more value sometime less. From my understanding from this program it all depends on the number of producers rather than consumers. Sometimes even though we might give 3 producers and 2 consumers, due to race conditions the program might only consume 1 value by 1 consumer. Which is also not given. It sometimes might consume more, but which is highly unlikely as the time i tested was only for 30 seconds. We will certainly have more threads with more producers and consumers. But if we take more consumers than producers than the throughput would definitely increase.