

ACCOLITE UNIVERSITY, JULY 2020

Java Multi-Threading Concepts

Assignment Submission

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I have shared 4 executions of my Blocking-Queue code. In order to capture the execution of the code I had restricted the producer to produce only 100 times. In the code which I have submitted these changes have been commented out. The producer produces continuously in the submitted code.

Note: No program execution terminates because the consumers continue to wait for the producer to produce some code.

Execution 1

```
"C:\Program Files\Java\jdk1.8.0_144\bin\java.exe" ...
Enter the No. of consumer threads you wish to create:
10
Enter the size of the Blocking Queue you wish to create:
10
No. of producer thread: 1
No. of consumer threads: 10
Producer adding Task 1 to the queue.
Producer adding Task 2 to the queue.
Producer adding Task 3 to the queue.
Producer adding Task 4 to the queue.
Producer adding Task 5 to the queue.
Producer adding Task 6 to the queue.
Producer adding Task 7 to the queue.
Producer adding Task 8 to the queue.
Producer adding Task 9 to the queue.
Producer adding Task 10 to the queue.
Queue is full. No task is already taken by any of the consumer.
Consumer Thread-1 removing Task 1 from the queue
Consumer Thread-1 removing Task 2 from the queue
Consumer Thread-1 removing Task 3 from the queue
Consumer Thread-1 removing Task 4 from the queue
Consumer Thread-1 removing Task 5 from the queue
Consumer Thread-1 removing Task 6 from the queue
Consumer Thread-1 removing Task 7 from the queue
Consumer Thread-1 removing Task 8 from the queue
Consumer Thread-1 removing Task 9 from the queue
Consumer Thread-1 removing Task 10 from the queue
Queue is empty. There is no task present in the Queue.
Queue is empty. There is no task present in the Queue.
Queue is empty. There is no task present in the Queue.
Queue is empty. There is no task present in the Queue.
Producer adding Task 11 to the queue.
Producer adding Task 12 to the queue.
Producer adding Task 13 to the queue.
Producer adding Task 14 to the queue.
Producer adding Task 15 to the queue.
Producer adding Task 16 to the queue.
Producer adding Task 17 to the queue.
Producer adding Task 18 to the queue.
Producer adding Task 19 to the queue.
Producer adding Task 20 to the queue.
Queue is full. No task is already taken by any of the consumer.
Consumer Thread-7 removing Task 11 from the queue
Consumer Thread-7 removing Task 12 from the queue
Consumer Thread-7 removing Task 13 from the queue
Consumer Thread-7 removing Task 14 from the queue
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Consumer Thread-7 removing Task 15 from the queue
Consumer Thread-7 removing Task 16 from the queue
Consumer Thread-7 removing Task 17 from the queue
Consumer Thread-7 removing Task 18 from the queue
Consumer Thread-7 removing Task 19 from the queue
Consumer Thread-7 removing Task 20 from the queue
Queue is empty. There is no task present in the Queue.
Queue is empty. There is no task present in the Queue.
Queue is empty. There is no task present in the Queue.
Queue is empty. There is no task present in the Queue.
Producer adding Task 21 to the queue.
Producer adding Task 22 to the queue.
Producer adding Task 23 to the queue.
Producer adding Task 24 to the queue.
Producer adding Task 25 to the queue.
Producer adding Task 26 to the queue.
Producer adding Task 27 to the queue.
Producer adding Task 28 to the queue.
Producer adding Task 29 to the queue.
Producer adding Task 30 to the queue.
Queue is full. No task is already taken by any of the consumer.
Consumer Thread-8 removing Task 21 from the queue
Consumer Thread-8 removing Task 22 from the queue
Consumer Thread-8 removing Task 23 from the queue
Consumer Thread-8 removing Task 24 from the queue
Consumer Thread-8 removing Task 25 from the queue
Consumer Thread-8 removing Task 26 from the queue
Consumer Thread-8 removing Task 27 from the queue
Consumer Thread-8 removing Task 28 from the queue
Consumer Thread-8 removing Task 29 from the queue
Consumer Thread-8 removing Task 30 from the queue
Queue is empty. There is no task present in the Queue.
Queue is empty. There is no task present in the Queue.
Producer adding Task 31 to the queue.
Producer adding Task 32 to the queue.
Producer adding Task 33 to the queue.
Producer adding Task 34 to the queue.
Producer adding Task 35 to the queue.
Producer adding Task 36 to the queue.
Producer adding Task 37 to the queue.
Producer adding Task 38 to the queue.
Producer adding Task 39 to the queue.
Producer adding Task 40 to the queue.
Queue is full. No task is already taken by any of the consumer.
Consumer Thread-10 removing Task 31 from the queue
Consumer Thread-10 removing Task 32 from the queue
Consumer Thread-10 removing Task 33 from the queue
Consumer Thread-10 removing Task 34 from the queue
Consumer Thread-10 removing Task 35 from the queue
Consumer Thread-10 removing Task 36 from the queue
Consumer Thread-10 removing Task 37 from the queue
Consumer Thread-10 removing Task 38 from the queue
Consumer Thread-10 removing Task 39 from the queue
Consumer Thread-10 removing Task 40 from the queue
Queue is empty. There is no task present in the Queue.
Producer adding Task 41 to the queue.
Producer adding Task 42 to the queue.
Producer adding Task 43 to the queue.
Producer adding Task 44 to the queue.
Producer adding Task 45 to the queue.
Producer adding Task 46 to the queue.
Producer adding Task 47 to the queue.
Producer adding Task 48 to the queue.
Producer adding Task 49 to the queue.
Producer adding Task 50 to the queue.
Queue is full. No task is already taken by any of the consumer.
Consumer Thread-8 removing Task 41 from the queue
Consumer Thread-8 removing Task 42 from the queue
Consumer Thread-8 removing Task 43 from the queue
Consumer Thread-8 removing Task 44 from the queue
Consumer Thread-8 removing Task 45 from the queue
Consumer Thread-8 removing Task 46 from the queue
Consumer Thread-8 removing Task 47 from the queue
Consumer Thread-8 removing Task 48 from the queue

Consumer Thread-8 removing Task 49 from the queue
Consumer Thread-8 removing Task 50 from the queue
Queue is empty. There is no task present in the Queue.
Producer adding Task 51 to the queue.
Producer adding Task 52 to the queue.
Producer adding Task 53 to the queue.
Producer adding Task 54 to the queue.
Producer adding Task 55 to the queue.
Producer adding Task 56 to the queue.
Producer adding Task 57 to the queue.
Producer adding Task 58 to the queue.
Producer adding Task 59 to the queue.
Producer adding Task 60 to the queue.
Queue is full. No task is already taken by any of the consumer.
Consumer Thread-10 removing Task 51 from the queue
Consumer Thread-10 removing Task 52 from the queue
Consumer Thread-10 removing Task 53 from the queue
Consumer Thread-10 removing Task 54 from the queue
Consumer Thread-10 removing Task 55 from the queue
Consumer Thread-10 removing Task 56 from the queue
Consumer Thread-10 removing Task 57 from the queue
Consumer Thread-10 removing Task 58 from the queue
Consumer Thread-10 removing Task 59 from the queue
Consumer Thread-10 removing Task 60 from the queue
Queue is empty. There is no task present in the Queue.
Producer adding Task 61 to the queue.
Producer adding Task 62 to the queue.
Producer adding Task 63 to the queue.
Producer adding Task 64 to the queue.
Producer adding Task 65 to the queue.
Producer adding Task 66 to the queue.
Producer adding Task 67 to the queue.
Producer adding Task 68 to the queue.
Producer adding Task 69 to the queue.
Producer adding Task 70 to the queue.
Queue is full. No task is already taken by any of the consumer.
Consumer Thread-8 removing Task 61 from the queue
Consumer Thread-8 removing Task 62 from the queue
Consumer Thread-8 removing Task 63 from the queue
Consumer Thread-8 removing Task 64 from the queue
Consumer Thread-8 removing Task 65 from the queue
Consumer Thread-8 removing Task 66 from the queue
Consumer Thread-8 removing Task 67 from the queue
Consumer Thread-8 removing Task 68 from the queue
Consumer Thread-8 removing Task 69 from the queue
Consumer Thread-8 removing Task 70 from the queue
Queue is empty. There is no task present in the Queue.
Producer adding Task 71 to the queue.
Producer adding Task 72 to the queue.
Producer adding Task 73 to the queue.
Producer adding Task 74 to the queue.
Producer adding Task 75 to the queue.
Producer adding Task 76 to the queue.
Producer adding Task 77 to the queue.
Producer adding Task 78 to the queue.
Producer adding Task 79 to the queue.
Producer adding Task 80 to the queue.
Queue is full. No task is already taken by any of the consumer.
Consumer Thread-10 removing Task 71 from the queue
Consumer Thread-10 removing Task 72 from the queue
Consumer Thread-10 removing Task 73 from the queue
Consumer Thread-10 removing Task 74 from the queue
Consumer Thread-10 removing Task 75 from the queue
Consumer Thread-10 removing Task 76 from the queue
Consumer Thread-10 removing Task 77 from the queue
Consumer Thread-10 removing Task 78 from the queue
Consumer Thread-10 removing Task 79 from the queue
Consumer Thread-10 removing Task 80 from the queue
Queue is empty. There is no task present in the Queue.
Producer adding Task 81 to the queue.
Producer adding Task 82 to the queue.
Producer adding Task 83 to the queue.
Producer adding Task 84 to the queue.
Producer adding Task 85 to the queue.

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Producer adding Task 86 to the queue.
Producer adding Task 87 to the queue.
Producer adding Task 88 to the queue.
Producer adding Task 89 to the queue.
Producer adding Task 90 to the queue.
Queue is full. No task is already taken by any of the consumer.
Consumer Thread-8 removing Task 81 from the queue
Consumer Thread-8 removing Task 82 from the queue
Consumer Thread-8 removing Task 83 from the queue
Consumer Thread-8 removing Task 84 from the queue
Consumer Thread-8 removing Task 85 from the queue
Consumer Thread-8 removing Task 86 from the queue
Consumer Thread-8 removing Task 87 from the queue
Consumer Thread-8 removing Task 88 from the queue
Consumer Thread-8 removing Task 89 from the queue
Consumer Thread-8 removing Task 90 from the queue
Queue is empty. There is no task present in the Queue.
Producer adding Task 91 to the queue.
Producer adding Task 92 to the queue.
Producer adding Task 93 to the queue.
Producer adding Task 94 to the queue.
Producer adding Task 95 to the queue.
Producer adding Task 96 to the queue.
Producer adding Task 97 to the queue.
Producer adding Task 98 to the queue.
Producer adding Task 99 to the queue.
Producer adding Task 100 to the queue.
Consumer Thread-10 removing Task 91 from the queue
Consumer Thread-10 removing Task 92 from the queue
Consumer Thread-10 removing Task 93 from the queue
Consumer Thread-10 removing Task 94 from the queue
Consumer Thread-10 removing Task 95 from the queue
Consumer Thread-10 removing Task 96 from the queue
Consumer Thread-10 removing Task 97 from the queue
Consumer Thread-10 removing Task 98 from the queue
Consumer Thread-10 removing Task 99 from the queue
Consumer Thread-10 removing Task 100 from the queue
Queue is empty. There is no task present in the Queue.

```

Execution 2

```

"C:\Program Files\Java\jdk1.8.0_144\bin\java.exe" ...
Enter the No. of consumer threads you wish to create:
8
Enter the size of the Blocking Queue you wish to create:
5
No. of producer thread: 1
No. of consumer threads: 8
Producer adding Task 1 to the queue.
Producer adding Task 2 to the queue.
Producer adding Task 3 to the queue.
Producer adding Task 4 to the queue.
Producer adding Task 5 to the queue.
Queue is full. No task is already taken by any of the consumer.
Consumer Thread-1 removing Task 1 from the queue
Consumer Thread-1 removing Task 2 from the queue
Consumer Thread-1 removing Task 3 from the queue
Consumer Thread-1 removing Task 4 from the queue
Consumer Thread-1 removing Task 5 from the queue
Queue is empty. There is no task present in the Queue.
Queue is empty. There is no task present in the Queue.
Queue is empty. There is no task present in the Queue.
Queue is empty. There is no task present in the Queue.
Producer adding Task 6 to the queue.
Producer adding Task 7 to the queue.
Producer adding Task 8 to the queue.
Producer adding Task 9 to the queue.
Producer adding Task 10 to the queue.
Queue is full. No task is already taken by any of the consumer.
Consumer Thread-6 removing Task 6 from the queue
Consumer Thread-6 removing Task 7 from the queue
Consumer Thread-6 removing Task 8 from the queue

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Consumer Thread-6 removing Task 9 from the queue
Consumer Thread-6 removing Task 10 from the queue
Queue is empty. There is no task present in the Queue.
Queue is empty. There is no task present in the Queue.
Queue is empty. There is no task present in the Queue.
Queue is empty. There is no task present in the Queue.
Producer adding Task 11 to the queue.
Producer adding Task 12 to the queue.
Producer adding Task 13 to the queue.
Producer adding Task 14 to the queue.
Producer adding Task 15 to the queue.
Queue is full. No task is already taken by any of the consumer.
Consumer Thread-7 removing Task 11 from the queue
Consumer Thread-7 removing Task 12 from the queue
Consumer Thread-7 removing Task 13 from the queue
Consumer Thread-7 removing Task 14 from the queue
Consumer Thread-7 removing Task 15 from the queue
Queue is empty. There is no task present in the Queue.
Producer adding Task 16 to the queue.
Producer adding Task 17 to the queue.
Producer adding Task 18 to the queue.
Producer adding Task 19 to the queue.
Producer adding Task 20 to the queue.
Queue is full. No task is already taken by any of the consumer.
Consumer Thread-6 removing Task 16 from the queue
Consumer Thread-6 removing Task 17 from the queue
Consumer Thread-6 removing Task 18 from the queue
Consumer Thread-6 removing Task 19 from the queue
Consumer Thread-6 removing Task 20 from the queue
Queue is empty. There is no task present in the Queue.
Producer adding Task 21 to the queue.
Producer adding Task 22 to the queue.
Producer adding Task 23 to the queue.
Producer adding Task 24 to the queue.
Producer adding Task 25 to the queue.
Queue is full. No task is already taken by any of the consumer.
Consumer Thread-7 removing Task 21 from the queue
Consumer Thread-7 removing Task 22 from the queue
Consumer Thread-7 removing Task 23 from the queue
Consumer Thread-7 removing Task 24 from the queue
Consumer Thread-7 removing Task 25 from the queue
Queue is empty. There is no task present in the Queue.
Producer adding Task 26 to the queue.
Producer adding Task 27 to the queue.
Producer adding Task 28 to the queue.
Producer adding Task 29 to the queue.
Producer adding Task 30 to the queue.
Queue is full. No task is already taken by any of the consumer.
Consumer Thread-6 removing Task 26 from the queue
Consumer Thread-6 removing Task 27 from the queue
Consumer Thread-6 removing Task 28 from the queue
Consumer Thread-6 removing Task 29 from the queue
Consumer Thread-6 removing Task 30 from the queue
Queue is empty. There is no task present in the Queue.
Producer adding Task 31 to the queue.
Producer adding Task 32 to the queue.
Producer adding Task 33 to the queue.
Producer adding Task 34 to the queue.
Producer adding Task 35 to the queue.
Queue is full. No task is already taken by any of the consumer.
Consumer Thread-7 removing Task 31 from the queue
Consumer Thread-7 removing Task 32 from the queue
Consumer Thread-7 removing Task 33 from the queue
Consumer Thread-7 removing Task 34 from the queue
Consumer Thread-7 removing Task 35 from the queue
Queue is empty. There is no task present in the Queue.
Producer adding Task 36 to the queue.
Producer adding Task 37 to the queue.
Producer adding Task 38 to the queue.
Producer adding Task 39 to the queue.
Producer adding Task 40 to the queue.
Queue is full. No task is already taken by any of the consumer.
Consumer Thread-6 removing Task 36 from the queue
Consumer Thread-6 removing Task 37 from the queue

[illegible]

Consumer Thread-6 removing Task 70 from the queue
Queue is empty. There is no task present in the Queue.
Producer adding Task 71 to the queue.
Producer adding Task 72 to the queue.
Producer adding Task 73 to the queue.
Producer adding Task 74 to the queue.
Producer adding Task 75 to the queue.
Queue is full. No task is already taken by any of the consumer.
Consumer Thread-7 removing Task 71 from the queue
Consumer Thread-7 removing Task 72 from the queue
Consumer Thread-7 removing Task 73 from the queue
Consumer Thread-7 removing Task 74 from the queue
Consumer Thread-7 removing Task 75 from the queue
Queue is empty. There is no task present in the Queue.
Producer adding Task 76 to the queue.
Producer adding Task 77 to the queue.
Producer adding Task 78 to the queue.
Producer adding Task 79 to the queue.
Producer adding Task 80 to the queue.
Queue is full. No task is already taken by any of the consumer.
Consumer Thread-6 removing Task 76 from the queue
Consumer Thread-6 removing Task 77 from the queue
Consumer Thread-6 removing Task 78 from the queue
Consumer Thread-6 removing Task 79 from the queue
Consumer Thread-6 removing Task 80 from the queue
Queue is empty. There is no task present in the Queue.
Producer adding Task 81 to the queue.
Producer adding Task 82 to the queue.
Producer adding Task 83 to the queue.
Producer adding Task 84 to the queue.
Producer adding Task 85 to the queue.
Queue is full. No task is already taken by any of the consumer.
Consumer Thread-7 removing Task 81 from the queue
Consumer Thread-7 removing Task 82 from the queue
Consumer Thread-7 removing Task 83 from the queue
Consumer Thread-7 removing Task 84 from the queue
Consumer Thread-7 removing Task 85 from the queue
Queue is empty. There is no task present in the Queue.
Producer adding Task 86 to the queue.
Producer adding Task 87 to the queue.
Producer adding Task 88 to the queue.
Producer adding Task 89 to the queue.
Producer adding Task 90 to the queue.
Queue is full. No task is already taken by any of the consumer.
Consumer Thread-6 removing Task 86 from the queue
Consumer Thread-6 removing Task 87 from the queue
Consumer Thread-6 removing Task 88 from the queue
Consumer Thread-6 removing Task 89 from the queue
Consumer Thread-6 removing Task 90 from the queue
Queue is empty. There is no task present in the Queue.
Producer adding Task 91 to the queue.
Producer adding Task 92 to the queue.
Producer adding Task 93 to the queue.
Producer adding Task 94 to the queue.
Producer adding Task 95 to the queue.
Queue is full. No task is already taken by any of the consumer.
Consumer Thread-7 removing Task 91 from the queue
Consumer Thread-7 removing Task 92 from the queue
Consumer Thread-7 removing Task 93 from the queue
Consumer Thread-7 removing Task 94 from the queue
Consumer Thread-7 removing Task 95 from the queue
Queue is empty. There is no task present in the Queue.
Producer adding Task 96 to the queue.
Producer adding Task 97 to the queue.
Producer adding Task 98 to the queue.
Producer adding Task 99 to the queue.
Producer adding Task 100 to the queue.
Consumer Thread-6 removing Task 96 from the queue
Consumer Thread-6 removing Task 97 from the queue
Consumer Thread-6 removing Task 98 from the queue
Consumer Thread-6 removing Task 99 from the queue
Consumer Thread-6 removing Task 100 from the queue
Queue is empty. There is no task present in the Queue.

Execution 3

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"C:\Program Files\Java\jdk1.8.0_144\bin\java.exe" ...
Enter the No. of consumer threads you wish to create:
2
Enter the size of the Blocking Queue you wish to create:
2
No. of producer thread: 1
No. of consumer threads: 2
Producer adding Task 1 to the queue.
Producer adding Task 2 to the queue.
Queue is full. No task is already taken by any of the consumer.
Consumer Thread-1 removing Task 1 from the queue
Consumer Thread-1 removing Task 2 from the queue
Queue is empty. There is no task present in the Queue.
Queue is empty. There is no task present in the Queue.
Producer adding Task 3 to the queue.
Producer adding Task 4 to the queue.
Queue is full. No task is already taken by any of the consumer.
Consumer Thread-2 removing Task 3 from the queue
Consumer Thread-2 removing Task 4 from the queue
Queue is empty. There is no task present in the Queue.
Producer adding Task 5 to the queue.
Producer adding Task 6 to the queue.
Queue is full. No task is already taken by any of the consumer.
Consumer Thread-1 removing Task 5 from the queue
Consumer Thread-1 removing Task 6 from the queue
Queue is empty. There is no task present in the Queue.
Producer adding Task 7 to the queue.
Producer adding Task 8 to the queue.
Queue is full. No task is already taken by any of the consumer.
Consumer Thread-2 removing Task 7 from the queue
Consumer Thread-2 removing Task 8 from the queue
Queue is empty. There is no task present in the Queue.
Producer adding Task 9 to the queue.
Producer adding Task 10 to the queue.
Queue is full. No task is already taken by any of the consumer.
Consumer Thread-1 removing Task 9 from the queue
Consumer Thread-1 removing Task 10 from the queue
Queue is empty. There is no task present in the Queue.
Producer adding Task 11 to the queue.
Producer adding Task 12 to the queue.
Queue is full. No task is already taken by any of the consumer.
Consumer Thread-2 removing Task 11 from the queue
Consumer Thread-2 removing Task 12 from the queue
Queue is empty. There is no task present in the Queue.
Producer adding Task 13 to the queue.
Producer adding Task 14 to the queue.
Queue is full. No task is already taken by any of the consumer.
Consumer Thread-1 removing Task 13 from the queue
Consumer Thread-1 removing Task 14 from the queue
Queue is empty. There is no task present in the Queue.
Producer adding Task 15 to the queue.
Producer adding Task 16 to the queue.
Queue is full. No task is already taken by any of the consumer.
Consumer Thread-2 removing Task 15 from the queue
Consumer Thread-2 removing Task 16 from the queue
Queue is empty. There is no task present in the Queue.
Producer adding Task 17 to the queue.
Producer adding Task 18 to the queue.
Queue is full. No task is already taken by any of the consumer.
Consumer Thread-1 removing Task 17 from the queue
Consumer Thread-1 removing Task 18 from the queue
Queue is empty. There is no task present in the Queue.
Producer adding Task 19 to the queue.
Producer adding Task 20 to the queue.
Queue is full. No task is already taken by any of the consumer.
Consumer Thread-2 removing Task 19 from the queue
Consumer Thread-2 removing Task 20 from the queue
Queue is empty. There is no task present in the Queue.
Producer adding Task 21 to the queue.
Producer adding Task 22 to the queue.
```


[illegible]

[illegible]

[illegible]

Queue is full. No task is already taken by any of the consumer.
 Consumer Thread-2 removing Task 95 from the queue
 Consumer Thread-2 removing Task 96 from the queue
 Queue is empty. There is no task present in the Queue.
 Producer adding Task 97 to the queue.
 Producer adding Task 98 to the queue.
 Queue is full. No task is already taken by any of the consumer.
 Consumer Thread-1 removing Task 97 from the queue
 Consumer Thread-1 removing Task 98 from the queue
 Queue is empty. There is no task present in the Queue.
 Producer adding Task 99 to the queue.
 Producer adding Task 100 to the queue.
 Consumer Thread-2 removing Task 99 from the queue
 Consumer Thread-2 removing Task 100 from the queue
 Queue is empty. There is no task present in the Queue.

Execution 4

"C:\Program Files\Java\jdk1.8.0_144\bin\java.exe" ...
 Enter the No. of consumer threads you wish to create:
 5
 Enter the size of the Blocking Queue you wish to create:
 10
 No. of producer thread: 1
 No. of consumer threads: 5
 Producer adding Task 1 to the queue.
 Producer adding Task 2 to the queue.
 Producer adding Task 3 to the queue.
 Producer adding Task 4 to the queue.
 Producer adding Task 5 to the queue.
 Producer adding Task 6 to the queue.
 Producer adding Task 7 to the queue.
 Producer adding Task 8 to the queue.
 Producer adding Task 9 to the queue.
 Producer adding Task 10 to the queue.
 Queue is full. No task is already taken by any of the consumer.
 Consumer Thread-1 removing Task 1 from the queue
 Consumer Thread-1 removing Task 2 from the queue
 Consumer Thread-1 removing Task 3 from the queue
 Consumer Thread-1 removing Task 4 from the queue
 Consumer Thread-1 removing Task 5 from the queue
 Consumer Thread-1 removing Task 6 from the queue
 Consumer Thread-1 removing Task 7 from the queue
 Consumer Thread-1 removing Task 8 from the queue
 Consumer Thread-1 removing Task 9 from the queue
 Consumer Thread-1 removing Task 10 from the queue
 Queue is empty. There is no task present in the Queue.
 Queue is empty. There is no task present in the Queue.
 Queue is empty. There is no task present in the Queue.
 Queue is empty. There is no task present in the Queue.
 Queue is empty. There is no task present in the Queue.
 Producer adding Task 11 to the queue.
 Producer adding Task 12 to the queue.
 Producer adding Task 13 to the queue.
 Producer adding Task 14 to the queue.
 Producer adding Task 15 to the queue.
 Producer adding Task 16 to the queue.
 Producer adding Task 17 to the queue.
 Producer adding Task 18 to the queue.
 Producer adding Task 19 to the queue.
 Producer adding Task 20 to the queue.
 Queue is full. No task is already taken by any of the consumer.
 Consumer Thread-2 removing Task 11 from the queue
 Consumer Thread-2 removing Task 12 from the queue
 Consumer Thread-2 removing Task 13 from the queue
 Consumer Thread-2 removing Task 14 from the queue
 Consumer Thread-2 removing Task 15 from the queue
 Consumer Thread-2 removing Task 16 from the queue
 Consumer Thread-2 removing Task 17 from the queue
 Consumer Thread-2 removing Task 18 from the queue
 Consumer Thread-2 removing Task 19 from the queue

Consumer Thread-2 removing Task 20 from the queue
Queue is empty. There is no task present in the Queue.
Producer adding Task 21 to the queue.
Producer adding Task 22 to the queue.
Producer adding Task 23 to the queue.
Producer adding Task 24 to the queue.
Producer adding Task 25 to the queue.
Producer adding Task 26 to the queue.
Producer adding Task 27 to the queue.
Producer adding Task 28 to the queue.
Producer adding Task 29 to the queue.
Producer adding Task 30 to the queue.
Queue is full. No task is already taken by any of the consumer.
Consumer Thread-1 removing Task 21 from the queue
Consumer Thread-1 removing Task 22 from the queue
Consumer Thread-1 removing Task 23 from the queue
Consumer Thread-1 removing Task 24 from the queue
Consumer Thread-1 removing Task 25 from the queue
Consumer Thread-1 removing Task 26 from the queue
Consumer Thread-1 removing Task 27 from the queue
Consumer Thread-1 removing Task 28 from the queue
Consumer Thread-1 removing Task 29 from the queue
Consumer Thread-1 removing Task 30 from the queue
Queue is empty. There is no task present in the Queue.
Producer adding Task 31 to the queue.
Producer adding Task 32 to the queue.
Producer adding Task 33 to the queue.
Producer adding Task 34 to the queue.
Producer adding Task 35 to the queue.
Producer adding Task 36 to the queue.
Producer adding Task 37 to the queue.
Producer adding Task 38 to the queue.
Producer adding Task 39 to the queue.
Producer adding Task 40 to the queue.
Queue is full. No task is already taken by any of the consumer.
Consumer Thread-2 removing Task 31 from the queue
Consumer Thread-2 removing Task 32 from the queue
Consumer Thread-2 removing Task 33 from the queue
Consumer Thread-2 removing Task 34 from the queue
Consumer Thread-2 removing Task 35 from the queue
Consumer Thread-2 removing Task 36 from the queue
Consumer Thread-2 removing Task 37 from the queue
Consumer Thread-2 removing Task 38 from the queue
Consumer Thread-2 removing Task 39 from the queue
Consumer Thread-2 removing Task 40 from the queue
Queue is empty. There is no task present in the Queue.
Producer adding Task 41 to the queue.
Producer adding Task 42 to the queue.
Producer adding Task 43 to the queue.
Producer adding Task 44 to the queue.
Producer adding Task 45 to the queue.
Producer adding Task 46 to the queue.
Producer adding Task 47 to the queue.
Producer adding Task 48 to the queue.
Producer adding Task 49 to the queue.
Producer adding Task 50 to the queue.
Queue is full. No task is already taken by any of the consumer.
Consumer Thread-1 removing Task 41 from the queue
Consumer Thread-1 removing Task 42 from the queue
Consumer Thread-1 removing Task 43 from the queue
Consumer Thread-1 removing Task 44 from the queue
Consumer Thread-1 removing Task 45 from the queue
Consumer Thread-1 removing Task 46 from the queue
Consumer Thread-1 removing Task 47 from the queue
Consumer Thread-1 removing Task 48 from the queue
Consumer Thread-1 removing Task 49 from the queue
Consumer Thread-1 removing Task 50 from the queue
Queue is empty. There is no task present in the Queue.
Producer adding Task 51 to the queue.
Producer adding Task 52 to the queue.
Producer adding Task 53 to the queue.
Producer adding Task 54 to the queue.
Producer adding Task 55 to the queue.
Producer adding Task 56 to the queue.

Producer adding Task 57 to the queue.
Producer adding Task 58 to the queue.
Producer adding Task 59 to the queue.
Producer adding Task 60 to the queue.
Queue is full. No task is already taken by any of the consumer.
Consumer Thread-2 removing Task 51 from the queue
Consumer Thread-2 removing Task 52 from the queue
Consumer Thread-2 removing Task 53 from the queue
Consumer Thread-2 removing Task 54 from the queue
Consumer Thread-2 removing Task 55 from the queue
Consumer Thread-2 removing Task 56 from the queue
Consumer Thread-2 removing Task 57 from the queue
Consumer Thread-2 removing Task 58 from the queue
Consumer Thread-2 removing Task 59 from the queue
Consumer Thread-2 removing Task 60 from the queue
Queue is empty. There is no task present in the Queue.
Producer adding Task 61 to the queue.
Producer adding Task 62 to the queue.
Producer adding Task 63 to the queue.
Producer adding Task 64 to the queue.
Producer adding Task 65 to the queue.
Producer adding Task 66 to the queue.
Producer adding Task 67 to the queue.
Producer adding Task 68 to the queue.
Producer adding Task 69 to the queue.
Producer adding Task 70 to the queue.
Queue is full. No task is already taken by any of the consumer.
Consumer Thread-1 removing Task 61 from the queue
Consumer Thread-1 removing Task 62 from the queue
Consumer Thread-1 removing Task 63 from the queue
Consumer Thread-1 removing Task 64 from the queue
Consumer Thread-1 removing Task 65 from the queue
Consumer Thread-1 removing Task 66 from the queue
Consumer Thread-1 removing Task 67 from the queue
Consumer Thread-1 removing Task 68 from the queue
Consumer Thread-1 removing Task 69 from the queue
Consumer Thread-1 removing Task 70 from the queue
Queue is empty. There is no task present in the Queue.
Producer adding Task 71 to the queue.
Producer adding Task 72 to the queue.
Producer adding Task 73 to the queue.
Producer adding Task 74 to the queue.
Producer adding Task 75 to the queue.
Producer adding Task 76 to the queue.
Producer adding Task 77 to the queue.
Producer adding Task 78 to the queue.
Producer adding Task 79 to the queue.
Producer adding Task 80 to the queue.
Queue is full. No task is already taken by any of the consumer.
Consumer Thread-2 removing Task 71 from the queue
Consumer Thread-2 removing Task 72 from the queue
Consumer Thread-2 removing Task 73 from the queue
Consumer Thread-2 removing Task 74 from the queue
Consumer Thread-2 removing Task 75 from the queue
Consumer Thread-2 removing Task 76 from the queue
Consumer Thread-2 removing Task 77 from the queue
Consumer Thread-2 removing Task 78 from the queue
Consumer Thread-2 removing Task 79 from the queue
Consumer Thread-2 removing Task 80 from the queue
Queue is empty. There is no task present in the Queue.
Producer adding Task 81 to the queue.
Producer adding Task 82 to the queue.
Producer adding Task 83 to the queue.
Producer adding Task 84 to the queue.
Producer adding Task 85 to the queue.
Producer adding Task 86 to the queue.
Producer adding Task 87 to the queue.
Producer adding Task 88 to the queue.
Producer adding Task 89 to the queue.
Producer adding Task 90 to the queue.
Queue is full. No task is already taken by any of the consumer.
Consumer Thread-1 removing Task 81 from the queue
Consumer Thread-1 removing Task 82 from the queue
Consumer Thread-1 removing Task 83 from the queue

Consumer Thread-1 removing Task 84 from the queue
Consumer Thread-1 removing Task 85 from the queue
Consumer Thread-1 removing Task 86 from the queue
Consumer Thread-1 removing Task 87 from the queue
Consumer Thread-1 removing Task 88 from the queue
Consumer Thread-1 removing Task 89 from the queue
Consumer Thread-1 removing Task 90 from the queue
Queue is empty. There is no task present in the Queue.
Producer adding Task 91 to the queue.
Producer adding Task 92 to the queue.
Producer adding Task 93 to the queue.
Producer adding Task 94 to the queue.
Producer adding Task 95 to the queue.
Producer adding Task 96 to the queue.
Producer adding Task 97 to the queue.
Producer adding Task 98 to the queue.
Producer adding Task 99 to the queue.
Producer adding Task 100 to the queue.
Consumer Thread-2 removing Task 91 from the queue
Consumer Thread-2 removing Task 92 from the queue
Consumer Thread-2 removing Task 93 from the queue
Consumer Thread-2 removing Task 94 from the queue
Consumer Thread-2 removing Task 95 from the queue
Consumer Thread-2 removing Task 96 from the queue
Consumer Thread-2 removing Task 97 from the queue
Consumer Thread-2 removing Task 98 from the queue
Consumer Thread-2 removing Task 99 from the queue
Consumer Thread-2 removing Task 100 from the queue
Queue is empty. There is no task present in the Queue.