CS677 Lab 1 Tests

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March 4, 2019

1 Test Scenarios

The following are possible scenarios:

1. A buy transaction (Trivial case)
   Expected result - Product count of seller decreased by 1, and reset if hits 0.

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Sending prompt to node - P1
Selling boars Product Count 2
Sending prompt to node - P1
Selling boars Product Count 1
```

Figure 1: Test Case 1

2. 2 buy requests at the same time
   Expected result - First buyer should make the transaction
   Because of the use of locks, shared resources are accessed in a first-come first-serve manner, yielding correct results.

3. A buy request for an item that got sold before the buyer could buy
   Expected result - Should not throw exception or cause untoward behaviour
   We have a check that ensures that the transaction is carried out only when the buyer node's **current** required item matches the seller node's offered item.

4. No seller responds in the given amount of time
   Expected result - Do not buy. Output 'Could not buy'

5. A sell reply for an item that already got bought
   Expected result - The buyer informs the seller that it will not buy the item

6. Positive product counts at all times for sellers

7. Name server and all peers on the same machine

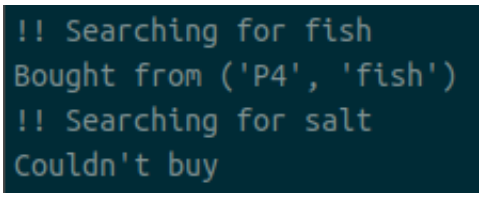

Figure 2: Test Case 4

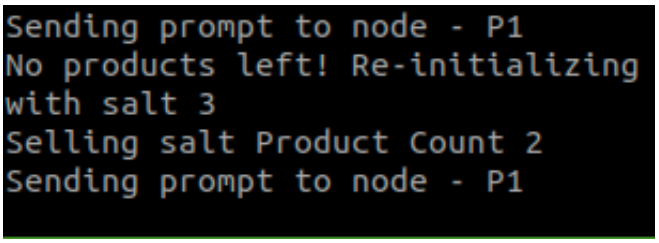

Figure 3: Test Case 6

8. Name server on one machine and all peers on another machine

9. All buyers on one machine and all sellers on another machine
   Scenarios such as 8,9 and 10 were tried out extensively. Only the case where the name server and peers are on local/EdLab or Edlab/local did not work. This could be fixed by port forwarding from the router.