Quality criteria:

1. Robustness - the IT system should be able to handle multi users without complains, evading deadlocks. If a failure occurs, it should restart in less than a minute. Also it shouldn’t corrupt any data. (Changes made should be abandoned if the action wasn’t finished.)
2. Reliability - the percentage of uptime should be around 98%. If the server is not working, the system should try to reconnect every minute. (A local copy should be created so the data would be accessible even when the server is down.)
3. Ease of Use - employees should take no more than two hours to learn the new software. (A help button should be implemented in case of any questions.)
4. Security – password protection for all three types of employees was implemented.

Test Scenarios:

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| --- | --- | --- |
| Test Scenario | Step in Flow | Alternative |
| Scenario 1 - Successful Sale | Basis |  |
| Scenario 2 - Customer non-existent | Basis | 1a |
| Scenario 3 - Product non-existent | Basis | 3a |
| Scenario 4 – Invalid quantity | Basis | 3b |

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| --- | --- | --- | --- | --- | --- |
| Test Case ID | Scenario | Expected Result | | | |
| customer | product | quantity | Expected scenario | |
| Q 1 | Successful Sale | V | V | V | * Customer is found in the system. * Product is found in the system. * Legitimate quantity is inserted. * A sale is made | |
| Q 2 | Customer doesn’t exist | I | V | V | A message should be sent to the user that there is no such customer. | |
| Q 3 | Product doesn’t exist | V | I | V | A message should be sent to the user that there is no such product. | |
| Q 4 | Invalid quantity input | V | V | I | A message should be sent to the user that there is not enough items for the order. | |

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| --- | --- | --- | --- |
| Method: public int AddSaleLine(barcode, quantity) | | | |
| Test Case No. | Initialisation State  item.InStock() | Input  Amount | Expected Output |
| 1 | 20 | 1 | Return 1  In stock: 19 |
| 2 | 20 | 20 | Return 20  In stock: 0 |
| 3 | 20 | 0 | Return 0  In stock: 20 |
| 4 | 20 | 21 | Return 0  In stock: 20 |
| 5 | 20 | -1 | Return 0  In stock: 20 |
| 6 | 0 | 1 | Return 0  In stock: 0 |