INDEPENDENT TEST REPORT

Project: Inventory Management System

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Course: GRLA08002 GA Software Engineering

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## Testing Methodology

A - Automatic: Unit tests implemented using JUnit 5.

T - Thorough: Tests cover key functionalities including adding, updating, reordering items and order retrieval.

R - Repeatable: Test environment resets before each test.

I - Independent: Tests are self-contained and do not rely on external systems.

P - Professional: Tests follow Given-When-Then structure with proper assertions and naming.

## Summary of Tests Conducted

### InventoryTest.java

1. shouldStoreItemInInventoryWhenAdded - verifies that an added item is stored correctly.

2. shouldUpdateItemQuantityCorrectlyWhenStockIsChanged - verifies that stock quantity updates correctly.

3. shouldTriggerReorderWhenQuantityIsBelowThreshold - verifies reorder is triggered when stock falls below threshold.

### OrderServiceTest.java

1. shouldStoreOrderWhenCreated - verifies order is created and stored.

2. shouldRetrieveCorrectOrderById - verifies order retrieval by Order ID.

## Test Results Summary

|  |  |  |
| --- | --- | --- |
| Test Class | Number of Tests | Status |
| InventoryTest | 3 | Passed |
| OrderServiceTest | 2 | Passed |

All tests passed successfully with no failures or errors.