**Inventory Management System Validation Testing**

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**Test Data**

**Basic Inventory:**

* Product Name: Galaxy Z Flip6
* Quantity: 100
* Price: $1200.00
* Sales: 2
* Expected Result: A new product, the Galaxy Z Flip6, should be added to the inventory. The system should correctly track the sales, reducing the inventory by the quantity sold.

**Case – Zero Quantity:**

* Product Name: Sony WH1000XM4 Wireless Headphones
* Quantity: 0
* Price: $199.99
* Sales: 0
* Expected Result: The program should not allow the sales of an item with zero units.

**Case – Large Quantity**

* Product Name: Apple AirPods Pro 2
* Quantity: 10,000
* Price: $249.99
* Sales: 100
* Expected Result: The program should handle a large number of inventories properly, ensuring that it tracks both the stock and sales accurately.

**Case – Negative Quantity**

* Product Name: Apple Watch Series 10
* Quantity: -10
* Price: $349.00
* Sales: 0
* Expected Result: The program should not allow the addition of an item with negative units.

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| --- | --- | --- | --- | --- |
| Product  Name | Quantity | Price | Sales | Expected  Result |
| Galaxy ZFlip6 | 100 | $1200.00 | 2 | Quantity decreases by 2 sales increase by 2 |
| Sony WH1000XM4 Wireless Headphones | 0 | $199.99 | 0 | No sales allowed with 0 quantity |
| Apple AirPods Pro 2 | 10,000 | $249.99 | 100 | Large numbers handled correctly |
| Apple Watch Series 10 | -50 | $349.00 | 0 | No sales allowed with negative quantity |

**Test Results:**

1. **Basic Inventory**

**Test Description:** Added a new item (Galaxy Z Flip6) to the inventory with the initial quantity of 100 units

**Result:** The system successfully added the item to the inventory and tracked its sales. When 2 units were sold, the inventory updated correctly, reflecting the new stock of 98 units.

**Conclusion**: The inventory system works as expected for basic item addition and sales tracking.

1. **Zero Quantity**

**Test Description:** Attempted to sell an item (Sony WH1000XM4 Wireless Headphones) that had zero stock in inventory.

**Result**: The system successfully prevented the sale, displaying a message indicating insufficient stock. The inventory remained unchanged.

**Conclusion**: The system correctly handles items with zero quantities and prevents sales for out-of-stock items.

1. **Large Quantity**

**Test Description**: Added an item (Apple AirPods Pro 2) with a very large quantity (10000 units) to the inventory.

**Result**: The system successfully handled the addition of a large quantity without errors. Sales were tracked accurately, and the inventory remained consistent.

**Conclusion:** The system efficiently processes and tracks items with large quantities without performance issues.

1. **Negative Quantity**

**Test Description**: Attempted to add an item (Apple Watch Series 10) to the inventory with a negative quantity (-50).

**Result**: The system allowed the item to be added to the inventory with a negative quantity. However, it successfully prevented the sale of the item, displaying a message indicating that negative stock cannot be sold. The inventory showed the negative quantity but did not permit any transactions.

**Conclusion**: While the system allowed the addition of an item with negative stock, it correctly prevented the sale, highlighting the need for further validation to prevent negative quantities from being entered into inventory.

A screenshot of a computer

Description automatically generated

Figure Inventory Management

A screenshot of a computer

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Figure Submitting order for Basic Inventory

A screenshot of a computer

Description automatically generated

Figure Basic Inventory Sales Tracking

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Figure Large Quantity Sales Tracking

A computer screen shot of a computer

Description automatically generated

Figure Error Message for Zero and Negative Quantity Sales

A screenshot of a computer

Description automatically generated

Figure Report Generation for Sales

A screenshot of a computer

Description automatically generated

Figure Username and Password Creation

A screenshot of a computer

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Figure Settings