

Clean Code Lab Requirement

Objective:

In this lab, you will add a new feature to the Inventory Management System that triggers an alert when an item's quantity falls below 10. You will implement this feature in both the clean code version and the non-clean (messy) code version. By doing so, you will experience firsthand the importance of writing clean and maintainable code when adding new features to a system.

Requirements:

1. **Low-Stock Alert Feature:** Add a functionality that checks if any item's quantity in the inventory falls below 10 then the system should log an alert message

ALERT: Item [item_name] is below 10 units! Current quantity: [quantity]

2. **Implementation:**

- Implement the feature in **both the clean version** and the **non-clean (messy) version** of the code.

3. **Testing:**

- After adding the feature, test the system by updating item quantities.
- Trigger the alert by reducing any item's quantity below 10, and check that the alert message is displayed correctly.
- Trigger the alert by removing any item at all from the inventory.

Benefits of the Lab:

The goal of this lab is to emphasize the importance of clean code in maintaining and extending software. When adding new features, such as the low-stock alert, clean code makes it easier to understand the structure, locate the relevant code, and implement changes with minimal risk of introducing bugs. In contrast, messy code makes feature additions more prone to errors and harder to maintain in the long run.

Deliverables:

- Submit the updated code for both the clean and messy versions with the low-stock alert feature implemented and tested.