

☀ **Background:** At Hop Industries, we pride ourselves on the quality of our software. As we move into the e-commerce world, ensuring the reliability of our systems is crucial. This is where unit testing comes in!

### **The Scenario:**

You've been handed a piece of code responsible for handling the stock management of products in the e-commerce store. Your job is to write unit tests to ensure this code works as expected. But beware! Rumor has it that there might be some bugs lurking around.

## **Expectations For the Stock Manager Class**

1. **When adding stock:**
    - If a user tries to add stock for a new product, that product should be tracked and its stock should reflect the added amount.
    - If a user adds more stock for an already-tracked product, its stock should correctly accumulate.
    - A user should not be able to add a negative quantity of stock.
  2. **When removing stock:**
    - If a user tries to remove stock from a product that isn't tracked (i.e., doesn't exist in our system), the operation should indicate failure (e.g., return false).
    - When a user requests removal of a quantity of stock that's available, the operation should succeed and the stock should reduce correctly.
    - If a user tries to remove more stock than what's available for a product, the operation should indicate failure.
    - When removing stock leads to a product having zero quantity left, it should still be tracked (perhaps for restocking purposes in the future).
  3. **When querying for stock:**
    - If a user queries the stock of a product that's not tracked, the system should indicate that the product isn't found (e.g., return -1 or a similar sentinel value).
    - When querying an existing product, it should return its current stock level.
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### **Your Mission:**

Write unit tests in the unit test project to ensure that the Stock Manager class fits all requirements. A single requirement may require more than one unit test to PROVE that the requirement is met. Look at the expectations for the stock manager class and use that as a starting point to figure out what tests you will need to write. All tests are required to pass.