

ALA-1

Code With Mistake Comments

```
print("Inventory System")

items = ["Pen","Book","Bag"]

stock = [10,5,2]

name = input("Enter item name: ")

qty = input("Enter quantity: ") # qty is string (should be int)

index = items.index(name) # if item not found → program will crash

if stock[index] >= qty # Missing colon (:) and comparing int with string
    stock[index] = stock[index] - qty
else
    print("Out of stock")

print("Remaining:", stock)

for i in range(3) # Missing colon (:)
    print("Updated") # Indentation error

print("Finished")
```

Mistakes Explanation

1. Quantity Not Converted to Integer

- `input()` always returns string.
- Stock is integer but quantity was string.
- Comparing string with integer causes **Type Error**.

2. Missing Colon :

- After **if condition** colon is required.
- After **for loop** colon is required.
- Without colon → Syntax Error.

3. No Item Validation

- `items.index(name)` directly used.
- If item is not in list → program crashes.
- Must check using `if name in items`.

4. Indentation Error

- `print("Updated")` was not properly indented.
- Python depends on indentation.
- Wrong indentation causes **Indentation Error**.

5. Comparing Different Data Types

- `stock[index] >= qty`
- One is integer, one is string.
- Must convert using `int()` before comparison.

Correct Code

```
print("Inventory System")
items = ["Pen", "Book", "Bag"]
stock = [10, 5, 2]
name = input("Enter item name: ")
qty = int(input("Enter quantity: "))

if name in items:
    index = items.index(name)

    if stock[index] >= qty:
        stock[index] = stock[index] - qty
        print("Stock Updated")
    else:
        print("Out of stock")
else:
    print("Item not found")

print("Remaining:", stock)

for i in range(3):
    print("Updated")
print("Finished")
```

```
PS D:\Hadi> python .\correct.py
Inventory System
Enter item name: Pen
Enter quantity: 5
Remaining: [5, 5, 2]
Updated
Updated
Updated
Finished
PS D:\Hadi>
```