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Code:

```
class Product:

    def __init__(self, name, price, stock):

        self.name: str = name

        self.price: float = price

        self.stock: int = stock


    def update_stock(self, quantity):

        self.stock += quantity


    def __str__(self):

        return f"Product: {self.name}, Price: ${self.price:.2f}, Stock: {self.stock}"


# Dictionary to store products

products = {}


while True:

    print("MENU\n1. Add Product\n2. Update Stock\n3. View Product Details\n4. Exit System")

    choice = input("Enter your choice: ")


    if choice == '1':

        name = input("Enter product name: ")

        price = float(input("Enter product price: "))

        stock = int(input("Enter product stock: "))

        products[name] = Product(name, price, stock)

        print("Product added successfully!")


    elif choice == '2':
        name = input("Enter product name to update: ")
        if name in products:
            quantity = int(input("Enter quantity to add/remove (positive to add, negative to
```

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remove): "))
        products[name].update_stock(quantity)
        print("Stock updated successfully!")
    else:
        print("Product not found.")


    elif choice == '3':
        name = input("Enter product name: ")
        if name in products:
            print(products[name])
        else:
            print("Product not found.")


    elif choice == '4':
        print("Exiting the system. Goodbye!")
        break


    else:
        print("Invalid choice. Please try again.")
```

Output:

```
MENU
1. Add Product
2. Update Stock
3. View Product Details
4. Exit System
Enter your choice: 1
Enter product name: Laptop
Enter product price: 850
Enter product stock: 27
Product added successfully!
MENU
```

```
MENU
1. Add Product
2. Update Stock
3. View Product Details
4. Exit System
Enter your choice: 3
Enter product name: Laptop
Product: Laptop, Price: $850.00, Stock: 27
MENU
1. Add Product
2. Update Stock
3. View Product Details
4. Exit System
Enter your choice: 2
Enter product name to update: Laptop
Enter quantity to add/remove (positive to add, negative to remove): 5
Stock updated successfully!
MENU
1. Add Product
2. Update Stock
3. View Product Details
4. Exit System
Enter your choice: 3
Enter product name: Laptop
Product: Laptop, Price: $850.00, Stock: 32
MENU
1. Add Product
2. Update Stock
3. View Product Details
4. Exit System
Enter your choice: 1
Enter product name: Mobile
Enter product price: 220
Enter product stock: 42
Product added successfully!
MENU
MENU
1. Add Product
2. Update Stock
3. View Product Details
4. Exit System
Enter your choice: Laptop
Invalid choice. Please try again.
MENU
1. Add Product
2. Update Stock
3. View Product Details
4. Exit System
Enter your choice: 3
Enter product name: Laptop
Product: Laptop, Price: $850.00, Stock: 32
MENU
1. Add Product
2. Update Stock
3. View Product Details
4. Exit System
Enter your choice: 2
```

```
Enter product name to update: Laptop
Enter quantity to add/remove (positive to add, negative to remove): -2
Stock updated successfully!
MENU
1. Add Product
2. Update Stock
3. View Product Details
4. Exit System
Enter your choice: 3
Enter product name: Laptop
Product: Laptop, Price: $850.00, Stock: 30
MENU
1. Add Product
2. Update Stock
3. View Product Details
4. Exit System
Enter your choice: 4
Exiting the system. Goodbye!
```