# assign1

March 26, 2025

```python
# A class to store product details
class Product:
    def __init__(self, name, price, stock):
        self.name = name  # Product name
        self.price = price  # Product price
        self.stock = stock  # Available stock

    def update_stock(self, quantity):
        self.stock += quantity  # Add or remove stock
        if self.stock < 0:  # If stock becomes negative, set it to zero
            self.stock = 0
            print("Stock cannot be negative. Setting stock to 0.")

    def __str__(self):
        return f"Product: {self.name}, Price: ${self.price}, Stock: {self.
    ↪stock}"

# A class to store multiple products
class Store:
    def __init__(self):
        self.products = {}  # Dictionary to store products

    def add_product(self, name, price, stock):
        if name in self.products:
            print("This product already exists!")
        else:
            self.products[name] = Product(name, price, stock)
            print("Product added successfully!")

    def update_product_stock(self, name, quantity):
        if name in self.products:
            self.products[name].update_stock(quantity)
            print("Stock updated!")
        else:
            print("Product not found!")

    def view_product(self, name):
```

```python
        if name in self.products:
            print(self.products[name])
        else:
            print("Product not found!")

# Function to interact with the store
def main():
    store = Store()

    while True:
        print("\n1. Add Product")
        print("2. Update Product Stock")
        print("3. View Product Details")
        print("4. Exit")
        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: "))
            store.add_product(name, price, stock)

        elif choice == '2':
            name = input("Enter product name: ")
            quantity = int(input("Enter quantity to add/remove: "))
            store.update_product_stock(name, quantity)

        elif choice == '3':
            name = input("Enter product name: ")
            store.view_product(name)

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

        else:
            print("Invalid choice! Try again.")

# Run the program
if __name__ == "__main__":
    main()
```

1. Add Product
2. Update Product Stock
3. View Product Details
4. Exit

```
Enter your choice:  1
Enter product name:  sid
Enter product price:  500
Enter product stock:  300

Product added successfully!

1. Add Product
2. Update Product Stock
3. View Product Details
4. Exit
```

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