Archita_20

Assignment 01

```python
class Product:
    def __init__(self, name, price, stock):
        self.name = name
        self.price = price
        self.stock = stock

    def update_stock(self, quantity):
        """Update the stock of the product by a given quantity."""
        self.stock += quantity
        if self.stock < 0:
            self.stock = 0  # Prevent stock from going negative

    def __str__(self):
        """Return a string with the product's details."""
        return f"Product: {self.name}, Price: ${self.price:.2f}, Stock: {self.stock}"
def product_management_system():
    # Dictionary to store products with their name as the key
    products = {}

    while True:
        print("\nStore Management Menu:")
        print("1. Add a new product")
        print("2. Update stock of an existing product")
        print("3. View product details")
        print("4. Exit")

        choice = input("Enter your choice (1/2/3/4): ")

        if choice == '1':
            # Add a new product
            name = input("Enter the product name: ")
            price = float(input("Enter the product price: $"))
            stock = int(input("Enter the product stock: "))

            # Check if the product already exists
            if name not in products:
                products[name] = Product(name, price, stock)
                print(f"Product '{name}' added successfully!")
            else:
                print(f"Product '{name}' already exists in the store.")

        elif choice == '2':
```

```python
            # Update stock for an existing product
            name = input("Enter the product name to update stock: ")
            if name in products:
                quantity = int(input("Enter the quantity to add/remove
(positive for adding, negative for removing): "))
                products[name].update_stock(quantity)
                print(f"Stock of '{name}' updated successfully!")
            else:
                print(f"Product '{name}' not found in the store.")

        elif choice == '3':
            # View details of a product
            name = input("Enter the product name to view details: ")
            if name in products:
                print(products[name])
            else:
                print(f"Product '{name}' not found in the store.")

        elif choice == '4':
            # Exit the program
            print("Exiting the store management system. Goodbye!")
            break

        else:
            print("Invalid choice. Please select a valid option.")
product_management_system()
```

```
Store Management Menu:
1. Add a new product
2. Update stock of an existing product
3. View product details
4. Exit
Enter your choice (1/2/3/4): 1
Enter the product name: laptop
Enter the product price: $850
Enter the product stock: 20
Product 'laptop' added successfully!

Store Management Menu:
1. Add a new product
2. Update stock of an existing product
3. View product details
4. Exit
Enter your choice (1/2/3/4): 2
Enter the product name to update stock: laptop
Enter the quantity to add/remove (positive for adding, negative for
removing): -5
Stock of 'laptop' updated successfully!
```

```
Store Management Menu:
1. Add a new product
2. Update stock of an existing product
3. View product details
4. Exit
Enter your choice (1/2/3/4): 3
Enter the product name to view details: laptop
Product: laptop, Price: $850.00, Stock: 15

Store Management Menu:
1. Add a new product
2. Update stock of an existing product
3. View product details
4. Exit
Enter your choice (1/2/3/4): 4
Exiting the store management system. Goodbye!
```