

# assignment01

February 11, 2025

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**Assignment - 01** Create a simple program to manage products in a store using Python. Each product will have a name, price, and stock quantity. The program should allow adding products, updating stock, and viewing product details.

**Class Definition** Create a Product class with the following:

- **Attributes:** name: The name of the product (string). price: The price of the product (float). stock: The quantity of the product in stock (integer).

- **Methods:** update\_stock(quantity): Adds or removes the specified quantity from the product stock. **str:** Returns a string in the format: "Product: , Price: \$, Stock: ".

**Interactive Program** Create a simple program that: 1. Adds a new product. 2. Updates the stock of an existing product. 3. Displays the details of a product. 4. Exits the program.

Step 1: Adding a Product Enter product name: Laptop Enter product price: 999.99 Enter product stock: 10 Product added successfully!

Step 2: Updating Stock Enter product name to update: Laptop Enter quantity to add/remove: -2 Stock updated successfully!

Step 3: Viewing Product Details Enter product name: Laptop Product: Laptop, Price: \$999.99, Stock: 8

Step 4: Exiting the Program Exiting the system. Goodbye!

```
[2]: class Product:
    def __init__(self, name, price, stock):
        self.name = name
        self.price = price
        self.stock = stock

    def update_stock(self, quantity):
        self.stock += quantity
        print("Stock updated successfully!")

    def __str__(self):
        return f"Product: {self.name}, Price: ${self.price:.2f}, Stock: {self.
↵stock}"
```

```

def main():
    products = {}

    while True:
        print("\n1. Add a new product")
        print("2. Update stock of an existing product")
        print("3. Display 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: "))
            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: "))
                products[name].update_stock(quantity)
            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.")

if __name__ == "__main__":
    main()

```

1. Add a new product
2. Update stock of an existing product
3. Display product details
4. Exit

Product added successfully!

1. Add a new product
2. Update stock of an existing product
3. Display product details
4. Exit

Product added successfully!

1. Add a new product
2. Update stock of an existing product
3. Display product details
4. Exit

Stock updated successfully!

1. Add a new product
2. Update stock of an existing product
3. Display product details
4. Exit

Product: Laptop, Price: \$50000.00, Stock: 5

1. Add a new product
2. Update stock of an existing product
3. Display product details
4. Exit

Exiting the system. Goodbye!