

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

    def update_stock(self, quantity):
        self.stock += quantity

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

def add_product(products):
    name = input("Enter product name: ")
    price = float(input("Enter product price: "))
    stock = int(input("Enter initial stock quantity: "))
    products[name] = Product(name, price, stock)
    print("Product added successfully!\n")

def update_stock(products):
    name = input("Enter product name: ")
    if name in products:
        quantity = int(input("Enter quantity to add/remove (negative to remove): "))
        products[name].update_stock(quantity)
        print("Stock updated successfully!\n")
    else:
        print("Product not found!\n")

def display_product(products):
    name = input("Enter product name: ")
    if name in products:
        print(products[name])
    else:
        print("Product not found!\n")

def main():
    products = {}
    while True:
```

```

print("\nStore Product Manager")
print("1. 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":
    add_product(products)
elif choice == "2":
    update_stock(products)
elif choice == "3":
    display_product(products)
elif choice == "4":
    print("Exiting program...")
    break
else:
    print("Invalid choice! Please try again.\n")

if __name__ == "__main__":
    main()

```

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Store Product Manager
1. Add a new product
2. Update stock of an existing product
3. Display product details
4. Exit
Enter your choice: 1
Enter product name: mouse
Enter product price: 500
Enter initial stock quantity: 20
Product added successfully!

Store Product Manager
1. Add a new product
2. Update stock of an existing product
3. Display product details
4. Exit
Enter your choice: 2
Enter product name: mouse
Enter quantity to add/remove (negative to remove): +10
Stock updated successfully!

Store Product Manager
1. Add a new product
2. Update stock of an existing product
3. Display product details
4. Exit
Enter your choice: 3
Enter product name: mouse
Product: mouse, Price: $500.00, Stock: 30

Store Product Manager
1. Add a new product
2. Update stock of an existing product
3. Display product details
4. Exit
Enter your choice: 4
Exiting program...

```