	VIDYAVARDHINI'S COLLEGE OF ENGINEERING AND TECHNOLOGY Vasai, India
	Subject: CSL405
	Assistant Professor: Raunak Joshi
	Semester: IV Branches: CSE-DS
	Deadline: 12th February 2025 Academic Year: 2024-25
	Module 1: Python Basics

Course Outcome 1 - Apply basic concepts of python to implement input, output, control statements and data types.

CO1 - Apply Level

1. 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: <name>, Price: $<price>, Stock: <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.

Example Output

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!

sauhard_assignment01

February 12, 2025

[1]:
```python
class Product:
    def __init__(self, productName, productPrice, productStocks):
        self.productName = productName
        self.productPrice = float(productPrice)
        self.productStocks = int(productStocks)

    def update_stock(self, quantity):
        currentStock = self.productStocks
        if currentStock + quantity < 0:
            print("Error")
        else:
            self.productStocks = currentStock + quantity
            print("Stock updated successfully...")

    def __str__(self):
        return f"Product: {self.productName}, Price: Rs {self.productPrice:.
 ↪2f}, Stock: {self.productStocks}"

    def display(self):
        print(self)

def main():
    products = {}

    while True:
        print("1 Add Product")
        print("2 Update Stock")
        print("3 Product Details")
        print("4 Exit")
        choice = input("Enter the choice: ")

        if choice == '1':
            productName = input("Enter the product name: ")
            productPrice = input("Enter price: ")
            productStocks = input("Enter stocks: ")
            productPrice = float(productPrice)
            productStocks = int(productStocks)
```

```
            products[productName] = Product(productName, productPrice,␣
 ↪productStocks)
            print("Product is added successfully...")

        elif choice == '2':
            productName = input("Enter name to update: ")
            if productName in products:
                quantity = int(input("Enter quantity to upadte "))
                print("Type add/remove")
                action = input("Enter your choice: ")
                action = action.strip().lower()

                if action == 'add':
                    products[productName].update_stock(quantity)
                elif action == 'remove':
                    products[productName].update_stock(-quantity)
                else:
                    print("Error")
            else:
                print("Product is not found")

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

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

        else:
            print("error")

if __name__ == "__main__":
    main()
```

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

Enter the choice:  1
Enter the product name:  laptop
Enter price:  80000
Enter stocks:  12

Product is added successfully…
```

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

Enter the choice:  1
Enter the product name:  laptop02
Enter price:  86000
Enter stocks:  6

Product is added successfully…
1 Add Product
2 Update Stock
3 Product Details
4 Exit

Enter the choice:  3
Enter the product name  laptop

Product: laptop, Price: Rs 80000.00, Stock: 12
1 Add Product
2 Update Stock
3 Product Details
4 Exit

Enter the choice:  3
Enter the product name  laptop02

Product: laptop02, Price: Rs 86000.00, Stock: 6
1 Add Product
2 Update Stock
3 Product Details
4 Exit

Enter the choice:  2
Enter name to update:  laptop02
Enter quantity to upadte  6

Type add/remove

Enter your choice:  add

Stock updated successfully…
1 Add Product
2 Update Stock
3 Product Details
4 Exit

Enter the choice:  2
Enter name to update:  laptop
Enter quantity to upadte  2

Type add/remove
```

```
Enter your choice:  remove

Stock updated successfully…
1 Add Product
2 Update Stock
3 Product Details
4 Exit

Enter the choice:  3
Enter the product name  laptop

Product: laptop, Price: Rs 80000.00, Stock: 10
1 Add Product
2 Update Stock
3 Product Details
4 Exit

Enter the choice:  4

Exiting…
```

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