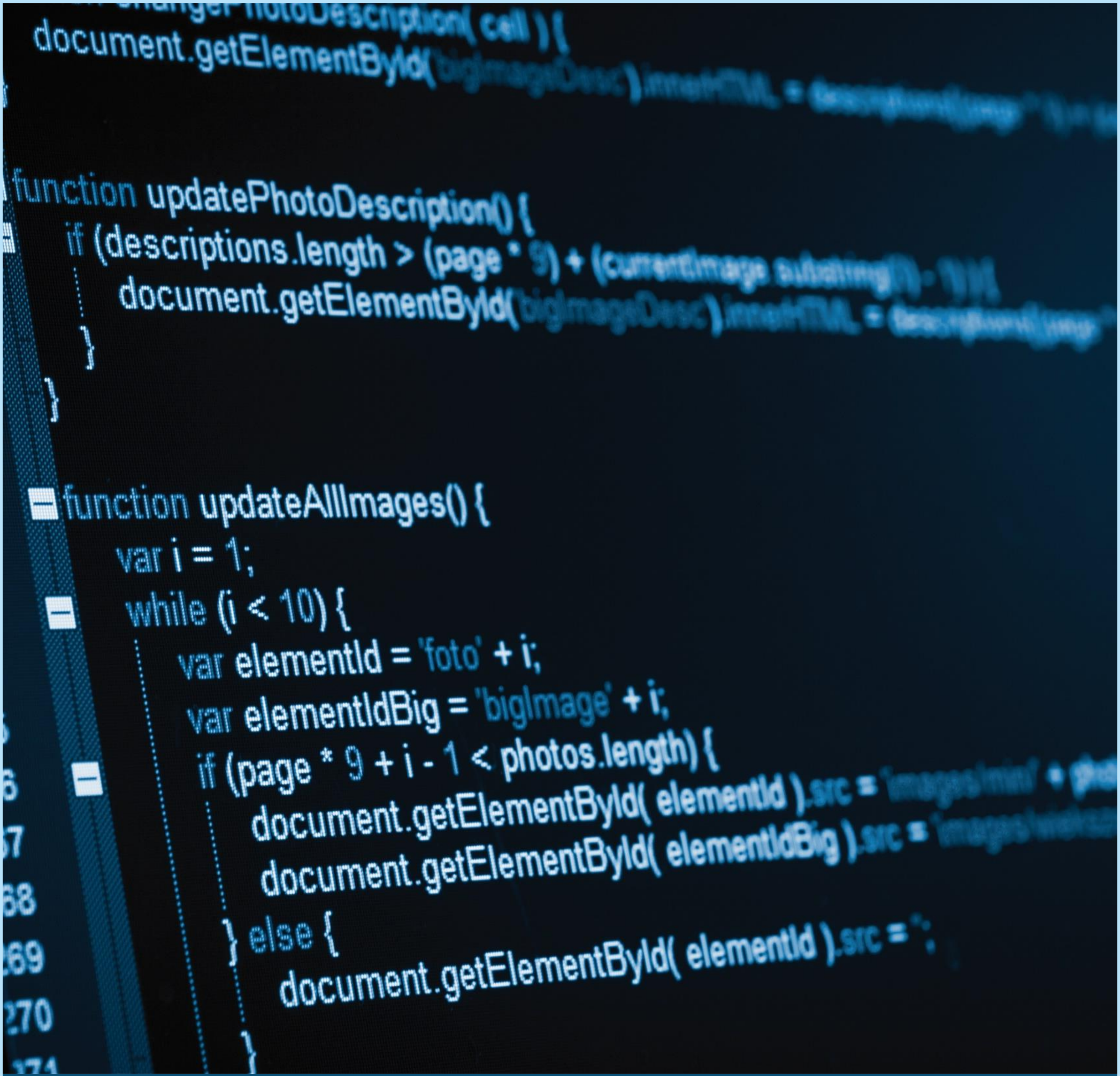
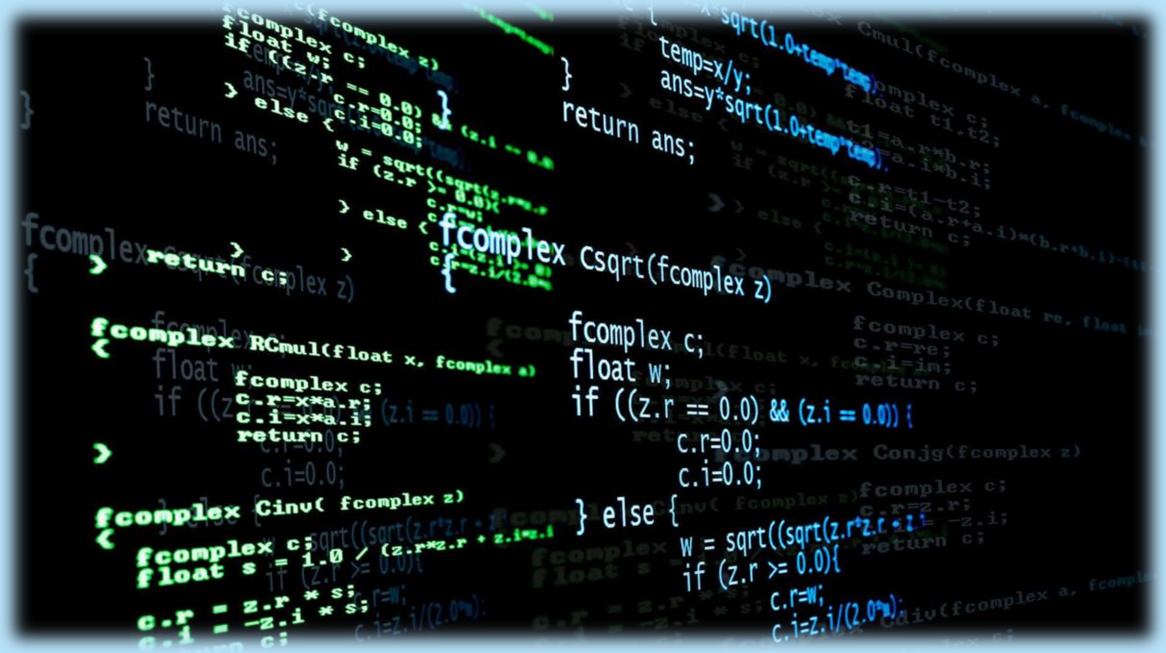


```
    document.getElementById('bigImageDesc').innerHTML = descriptions[(page *
}

function updatePhotoDescription() {
    if (descriptions.length > (page * 9) + (currentImage.substring(1) - 1)) {
        document.getElementById('bigImageDesc').innerHTML = descriptions[(page *
    }
}

function updateAllImages() {
    var i = 1;
    while (i < 10) {
        var elementId = 'foto' + i;
        var elementIdBig = 'bigImage' + i;
        if (page * 9 + i - 1 < photos.length) {
            document.getElementById( elementId ).src = 'images/min/' + phot
            document.getElementById( elementIdBig ).src = 'images/wielkie
        } else {
            document.getElementById( elementId ).src = '';
        }
```

Bill Management System in Python

Group Members

- **21IT0479 – J. A. C. P. Jayakodi**
- **21IT0535 – D. T. Thennakoon**
- **21IT0533 – H. H. N. Tharaka**
- **21IT0497 – E. M. C. Maduwanthi**
- **21IT0488 – K. G. P. R. Kithsiri**
- **21IT0510 – G. K. M. Perera**
- **21IT0487 – G. R. T. D. Kirinda**
- **21IT0465 – D. M. T. N. C. Dissanayaka**
- **21IT0457 – A. A. M. Amjad**
- **21IT0481 – K. R. R. I . D. Jayasundara**



python™

1. Purpose

The Denim Center Bill Management System is a Python program designed to manage and generate bills for customers purchasing items at Denim Center, Sri Lanka's Unique Brand. The program allows cashiers to add and remove items, calculate the total cost, and print detailed bills for customers.

2. Functionality

- **Add Item:**

  Cashiers can add items to the bill by providing the item's name, price, quantity, and applicable discount percentage.

- **Remove Item:**

  Cashiers can remove items from the bill that were added in error or are no longer needed.

- **Calculate Total:**

  The system calculates the total cost of all items in the bill, considering the prices, quantities, and discounts.

- **Print Bill:**

  The program generates a detailed bill displaying the item name, price per unit, quantity, applicable discount, and the total cost after applying discounts. It also shows the cashier's name, current date, and time. Additionally, it includes the cash payment made by the customer and calculates the balance.

3. Additional Features

▪ Item Exchange:

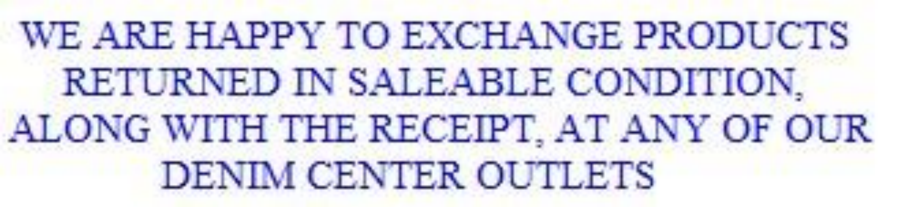
The printed bill includes a notice that customers can return products in saleable condition along with the receipt at any Denim Center outlet for exchange.

▪ Web Address:

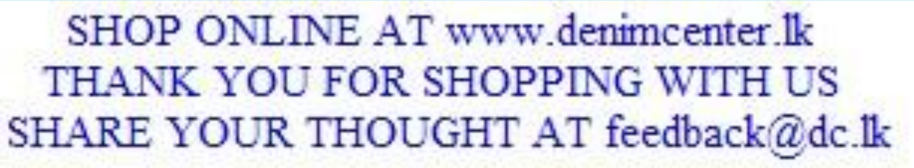
The bill also provides the web address (www.denimcenter.lk) for online shopping at Denim Center.

▪ Thank You Message:

The printed bill includes a thank you message, expressing gratitude for shopping at Denim Center.



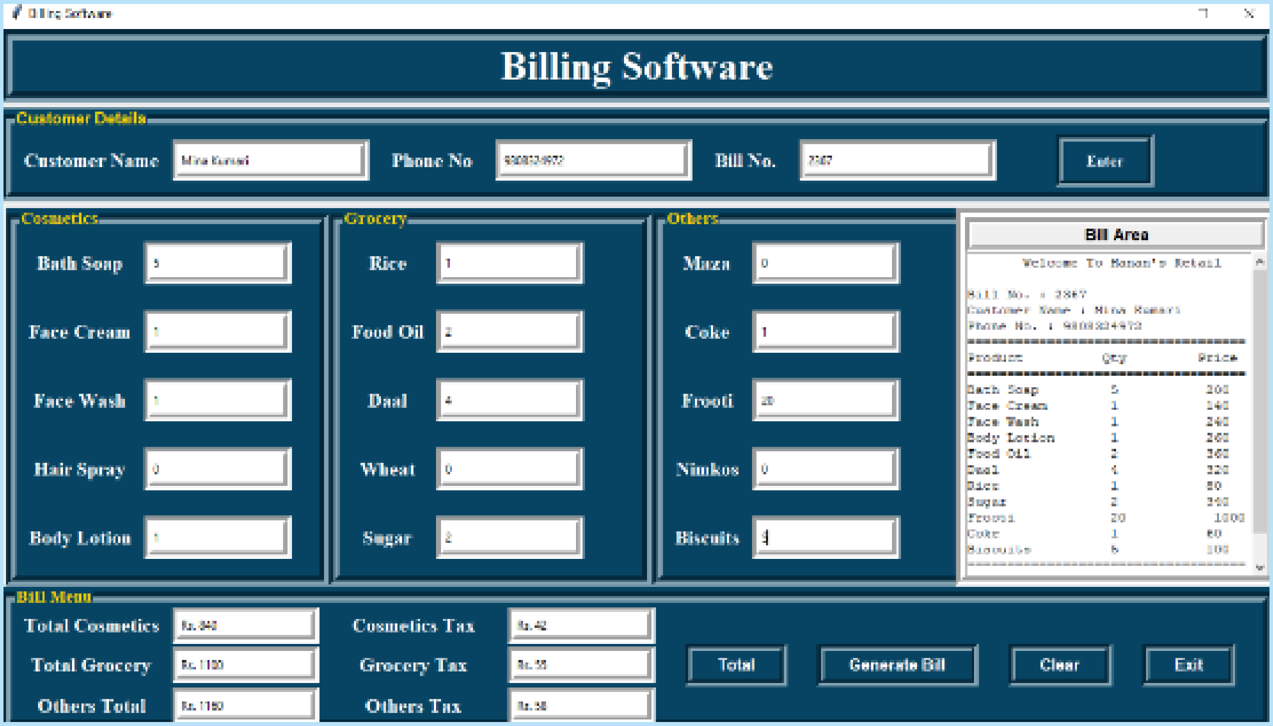
WE ARE HAPPY TO EXCHANGE PRODUCTS
RETURNED IN SALEABLE CONDITION,
ALONG WITH THE RECEIPT, AT ANY OF OUR
DENIM CENTER OUTLETS



SHOP ONLINE AT www.denimcenter.lk
THANK YOU FOR SHOPPING WITH US
SHARE YOUR THOUGHT AT feedback@dc.lk

4. Potential Improvements

- **GUI Interface:** Add a graphical user interface to make the system more user-friendly.
- **Database Integration:** Store bill details in a database for easier retrieval and record keeping.
- **Bill Numbering:** Assign a unique bill number to each generated bill for tracking purposes.
- **Customer Details:** Collect customer information (name, contact details) for bill records.
- **Bill History:** Implement a feature to view and search previous bills.



Billing Software

Customer Details

Customer Name: Mina Kumari
Phone No: 9808324972
Bill No.: 2367

Cosmetics

Bath Soap: 5
Face Cream: 1
Face Wash: 1
Hair Spray: 0
Body Lotion: 1

Grocery

Rice: 1
Food Oil: 2
Daal: 4
Wheat: 0
Sugar: 2

Others

Maza: 0
Coke: 1
Frooti: 20
Nimkos: 0
Biscuits: 5

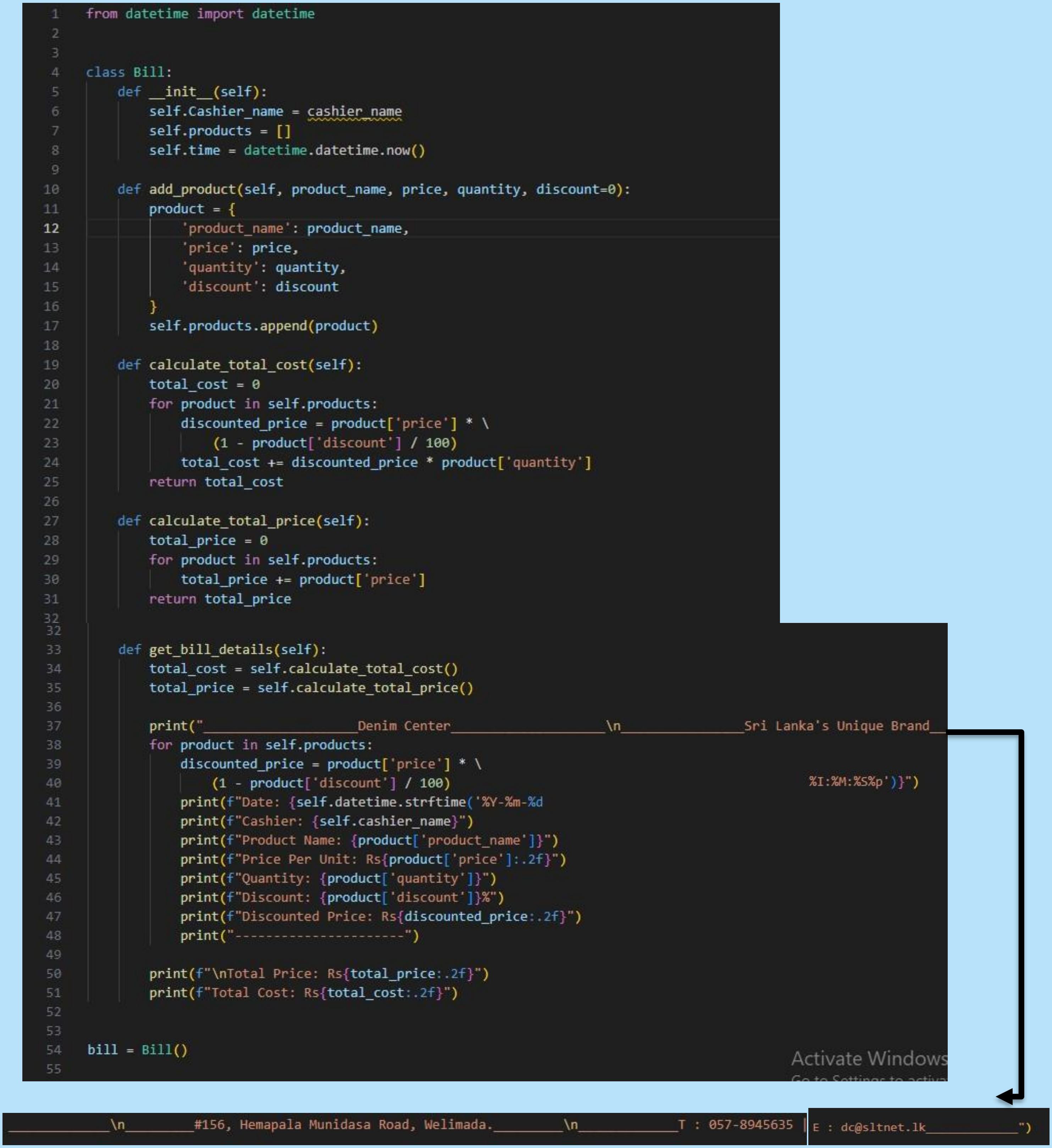
Bill Area

```
      Welcome To Manan's Retail

Bill No. : 2367
Customer Name : Mina Kumari
Phone No. : 9808324972
=======================================
Product              Qty          Price
=======================================
Bath Soap             5            200
Face Cream            1            140
Face Wash             1            240
Body Lotion           1            260
Food Oil              2            360
Daal                  4            320
Rice                  1            80
Sugar                 2            340
Frooti                20            1000
Coke                  1            60
Biscuits              5            100
---------------------------------------
```

Bill Menu

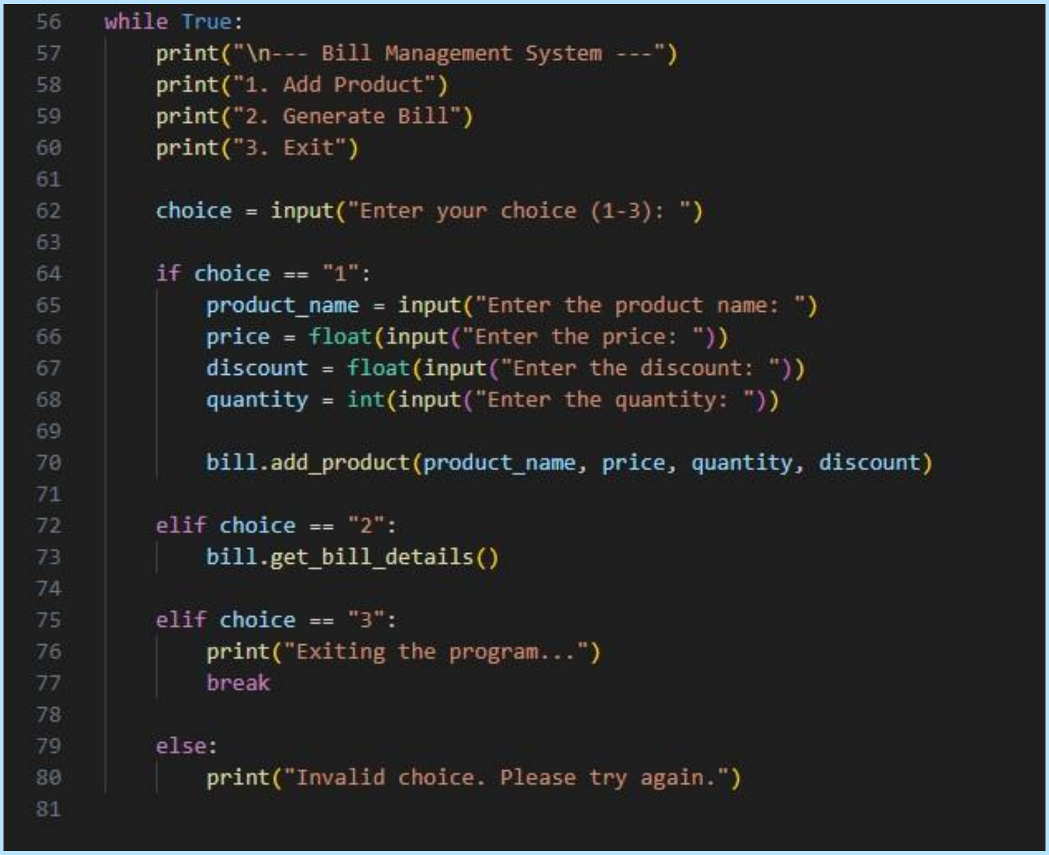
Total Cosmetics: Rs. 840
Total Grocery: Rs. 1100
Others Total: Rs. 1160
Cosmetics Tax: Rs. 42
Grocery Tax: Rs. 55
Others Tax: Rs. 58

5. Python Code



```python
from datetime import datetime


class Bill:
    def __init__(self):
        self.Cashier_name = cashier_name
        self.products = []
        self.time = datetime.datetime.now()

    def add_product(self, product_name, price, quantity, discount=0):
        product = {
            'product_name': product_name,
            'price': price,
            'quantity': quantity,
            'discount': discount
        }
        self.products.append(product)

    def calculate_total_cost(self):
        total_cost = 0
        for product in self.products:
            discounted_price = product['price'] * \
                (1 - product['discount'] / 100)
            total_cost += discounted_price * product['quantity']
        return total_cost

    def calculate_total_price(self):
        total_price = 0
        for product in self.products:
            total_price += product['price']
        return total_price


    def get_bill_details(self):
        total_cost = self.calculate_total_cost()
        total_price = self.calculate_total_price()

        print("____________________Denim Center____________________\n________________Sri Lanka's Unique Brand__
        for product in self.products:
            discounted_price = product['price'] * \
                (1 - product['discount'] / 100)                                              %I:%M:%S%p')}")
            print(f"Date: {self.datetime.strftime('%Y-%m-%d
            print(f"Cashier: {self.cashier_name}")
            print(f"Product Name: {product['product_name']}")
            print(f"Price Per Unit: Rs{product['price']:.2f}")
            print(f"Quantity: {product['quantity']}")
            print(f"Discount: {product['discount']}%")
            print(f"Discounted Price: Rs{discounted_price:.2f}")
            print("---------------------")

        print(f"\nTotal Price: Rs{total_price:.2f}")
        print(f"Total Cost: Rs{total_cost:.2f}")


bill = Bill()

_____________\n_________#156, Hemapala Munidasa Road, Welimada.________\n_____________T : 057-8945635 | E : dc@sltnet.lk____________")
```

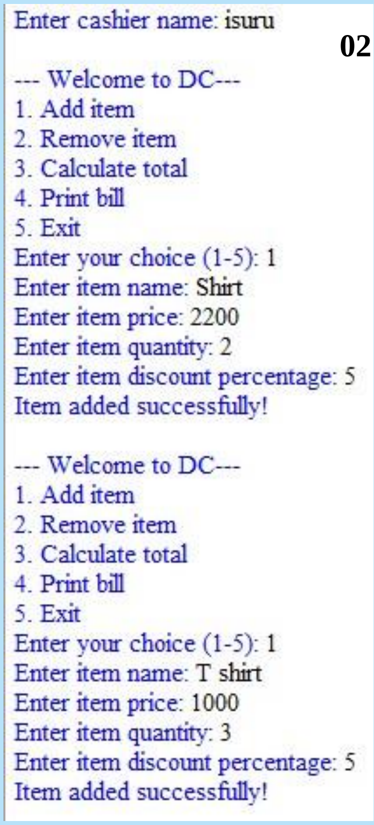
Activate Windows
Go to Settings to activa



```python
while True:
    print("\n--- Bill Management System ---")
    print("1. Add Product")
    print("2. Generate Bill")
    print("3. Exit")

    choice = input("Enter your choice (1-3): ")

    if choice == "1":
        product_name = input("Enter the product name: ")
        price = float(input("Enter the price: "))
        discount = float(input("Enter the discount: "))
        quantity = int(input("Enter the quantity: "))

        bill.add_product(product_name, price, quantity, discount)

    elif choice == "2":
        bill.get_bill_details()

    elif choice == "3":
        print("Exiting the program...")
        break

    else:
        print("Invalid choice. Please try again.")

```

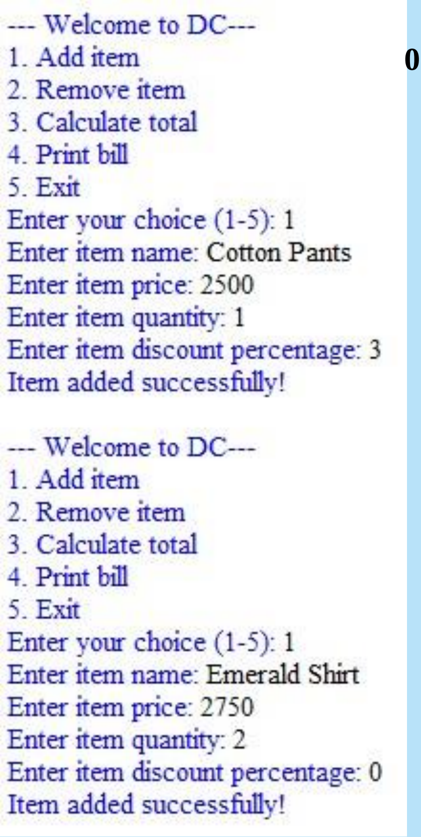
6. Input

01



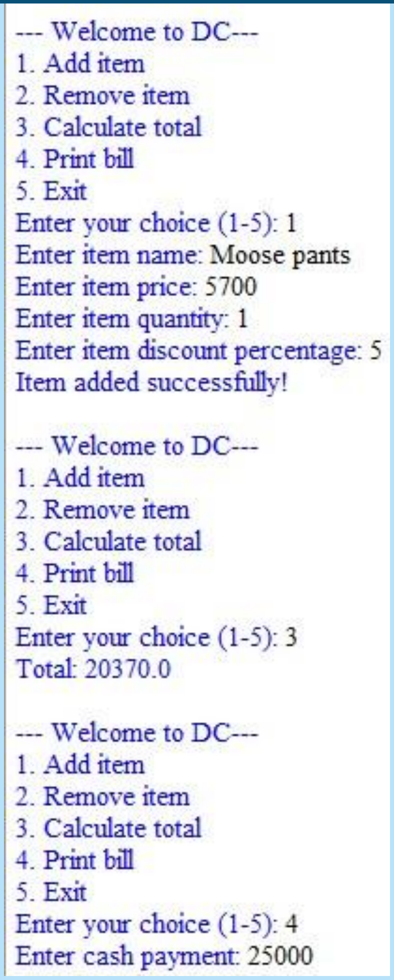
```
Enter cashier name: isuru

--- Welcome to DC---
1. Add item
2. Remove item
3. Calculate total
4. Print bill
5. Exit
Enter your choice (1-5): 1
Enter item name: Shirt
Enter item price: 2200
Enter item quantity: 2
Enter item discount percentage: 5
Item added successfully!

--- Welcome to DC---
1. Add item
2. Remove item
3. Calculate total
4. Print bill
5. Exit
Enter your choice (1-5): 1
Enter item name: T shirt
Enter item price: 1000
Enter item quantity: 3
Enter item discount percentage: 5
Item added successfully!
```

02



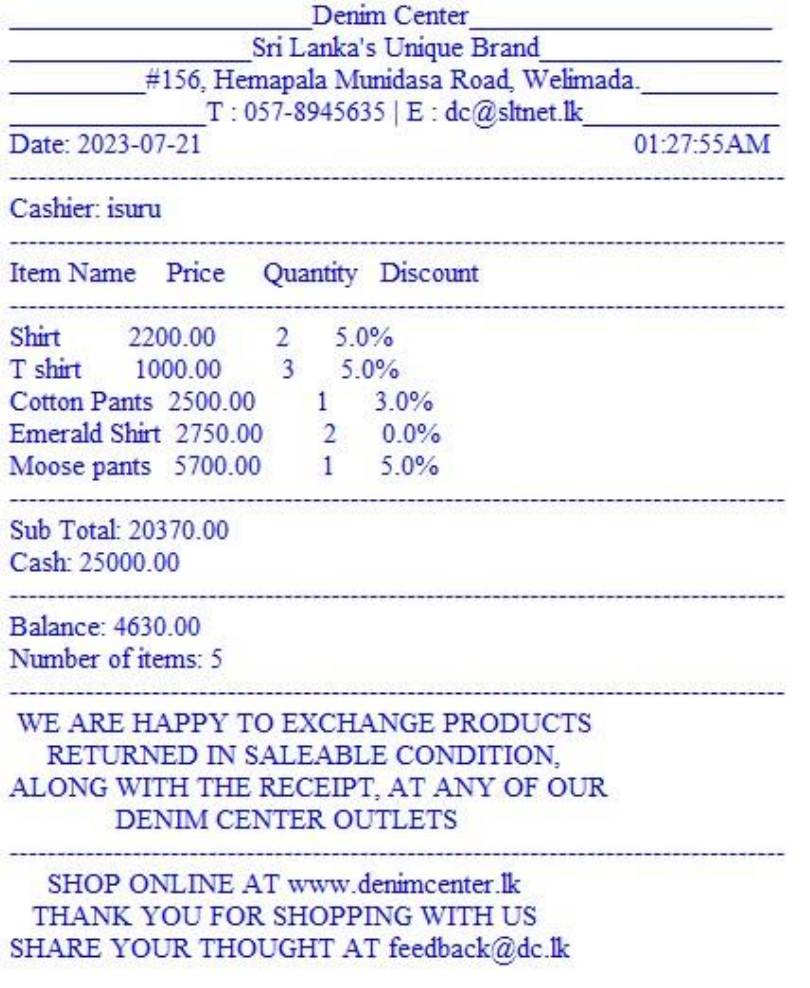
```
--- Welcome to DC---
1. Add item
2. Remove item
3. Calculate total
4. Print bill
5. Exit
Enter your choice (1-5): 1
Enter item name: Cotton Pants
Enter item price: 2500
Enter item quantity: 1
Enter item discount percentage: 3
Item added successfully!

--- Welcome to DC---
1. Add item
2. Remove item
3. Calculate total
4. Print bill
5. Exit
Enter your choice (1-5): 1
Enter item name: Emerald Shirt
Enter item price: 2750
Enter item quantity: 2
Enter item discount percentage: 0
Item added successfully!
```

03



```
--- Welcome to DC---
1. Add item
2. Remove item
3. Calculate total
4. Print bill
5. Exit
Enter your choice (1-5): 1
Enter item name: Moose pants
Enter item price: 5700
Enter item quantity: 1
Enter item discount percentage: 5
Item added successfully!

--- Welcome to DC---
1. Add item
2. Remove item
3. Calculate total
4. Print bill
5. Exit
Enter your choice (1-5): 3
Total: 20370.0

--- Welcome to DC---
1. Add item
2. Remove item
3. Calculate total
4. Print bill
5. Exit
Enter your choice (1-5): 4
Enter cash payment: 25000
```

7. Output (Sample)



```
____________________Denim Center____________________
________________Sri Lanka's Unique Brand________________
_________#156, Hemapala Munidasa Road, Welimada._________
_____________T : 057-8945635 | E : dc@sltnet.lk_____________
Date: 2023-07-21                                  01:27:55AM
------------------------------------------------------------
Cashier: isuru
------------------------------------------------------------
Item Name    Price     Quantity   Discount
------------------------------------------------------------
Shirt        2200.00       2        5.0%
T shirt       1000.00       3        5.0%
Cotton Pants  2500.00        1       3.0%
Emerald Shirt  2750.00       2       0.0%
Moose pants   5700.00        1       5.0%
------------------------------------------------------------
Sub Total: 20370.00
Cash: 25000.00
------------------------------------------------------------
Balance: 4630.00
Number of items: 5
------------------------------------------------------------
 WE ARE HAPPY TO EXCHANGE PRODUCTS
   RETURNED IN SALEABLE CONDITION,
ALONG WITH THE RECEIPT, AT ANY OF OUR
         DENIM CENTER OUTLETS
------------------------------------------------------------
   SHOP ONLINE AT www.denimcenter.lk
  THANK YOU FOR SHOPPING WITH US
SHARE YOUR THOUGHT AT feedback@dc.lk
```

8. Conclusion

The Bill Management System is a versatile Python program that simplifies the process of calculating the total cost of purchases with discounts. By allowing users to input product details and generating detailed bill reports, the program provides an efficient and user-friendly solution for bill management.

As the program evolves, implementing the suggested additional features would further enhance its functionality and make it more robust for various use cases. The user-friendly interface and flexible design ensure that users can easily generate accurate bills with a clear breakdown of costs and discounts.

9. Questions

- **How would you prompt the user to enter the price of the product?**

The user is provided with an input function to enter the item's pricing in the function details.

- **How would you prompt the user to enter the quantity of the product?**

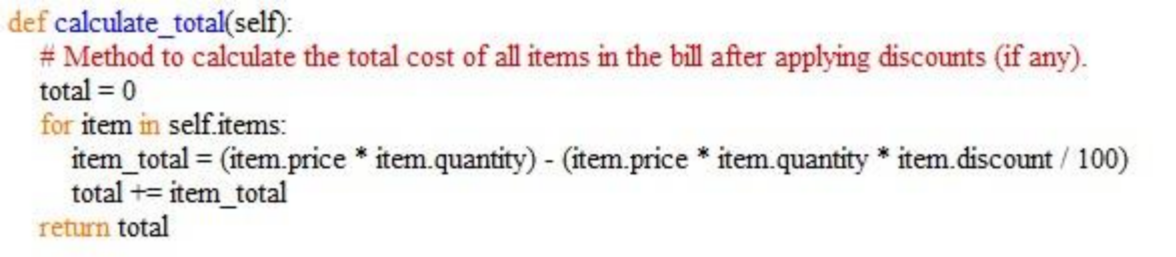
The user is provided with an input function to enter the item's amount in the function details.

- **How would you prompt the user to enter the discount (if any) for the product?**

Because there is a criterion to apply for a discount in the total amount function of this program, the user cannot add a discount.

- **If a discount is provided, how can you apply it to the total cost?**

First create variable (item_total) and create simplify the formula.
Like as mention below,



```
def calculate_total(self):
    # Method to calculate the total cost of all items in the bill after applying discounts (if any).
    total = 0
    for item in self.items:
        item_total = (item.price * item.quantity) - (item.price * item.quantity * item.discount / 100)
        total += item_total
    return total
```

- **Can you think of any potential improvements or additional features that could be added to enhance the functionality of the program?**

This is answered in unit 4 of this PDF.