REPORT

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Trained by: FacePrep

PROJECT TILE

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Introduction:

- Welcome to the presentation on the Supermarket Billing System implemented using Java.
- In today's digital age, efficient and accurate billing systems are crucial for the smooth operation of supermarkets and retail stores.
- Our project aims to provide a robust solution for automating the billing process in supermarkets, enhancing accuracy, speed, and customer satisfaction.
- The Supermarket Billing System using Java is a comprehensive software solution designed to modernize and optimize the billing process within a supermarket or retail environment.
- This project aims to revolutionize traditional manual billing methods by introducing automation, accuracy, and efficiency through innovative software technologies.

Project Overview

- The Supermarket Billing System is a Java-based application designed to streamline the billing process in supermarkets.

- It offers a user-friendly interface for both cashiers and customers, ensuring a seamless checkout experience.

- Our system efficiently manages inventory, calculates bills, and generates receipts, reducing manual errors and saving time.

Methods used in program

- add_to_menu(List<Item> li, String na, double pr)
  this method to add new items to the menu

- getCartItems()
  used to retrive cart items

- calculateTotal()
  calculate total for the recipt

- addItem(Item item, int quantity)
  to add items to the cart by the customer

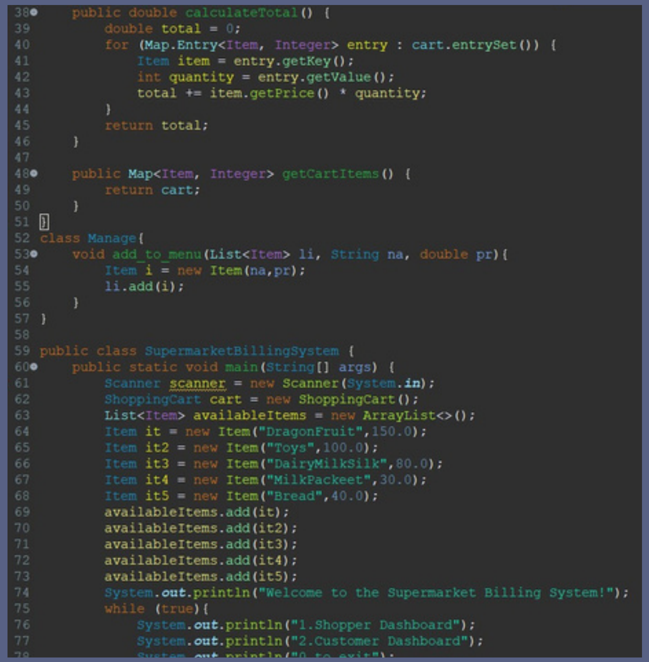
- getName()
  retrive name from item object

- getPrice()
  retrive price from item

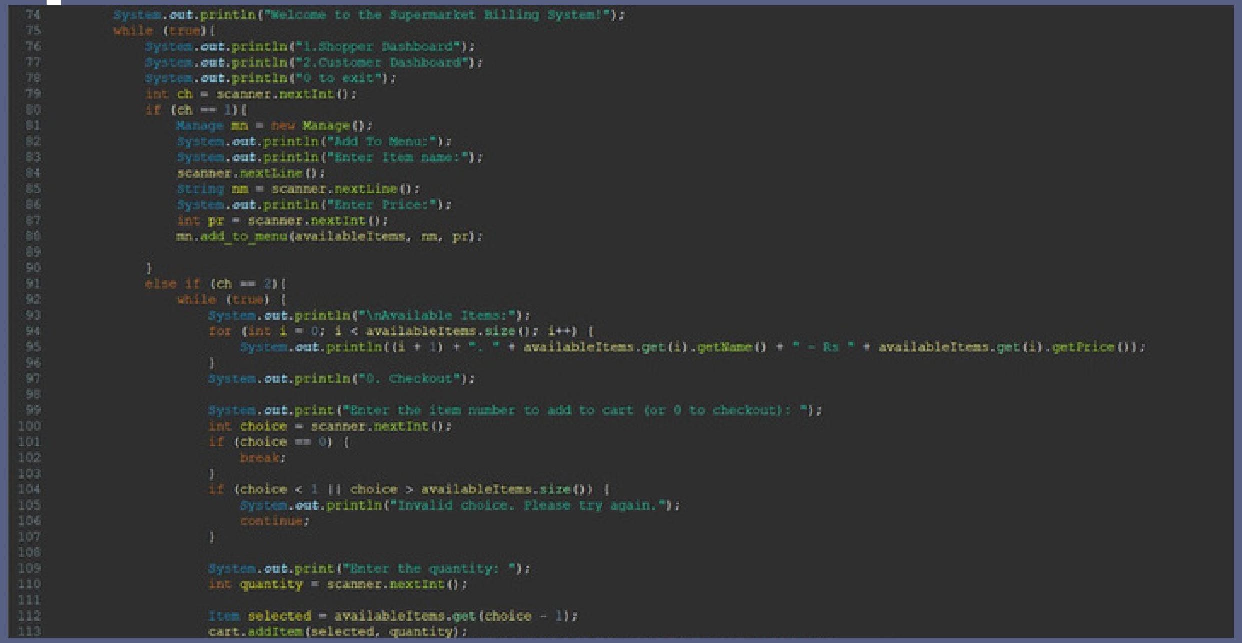
- If total >= 500 then 20% percent will be decreased from the total amount

Code Snippets

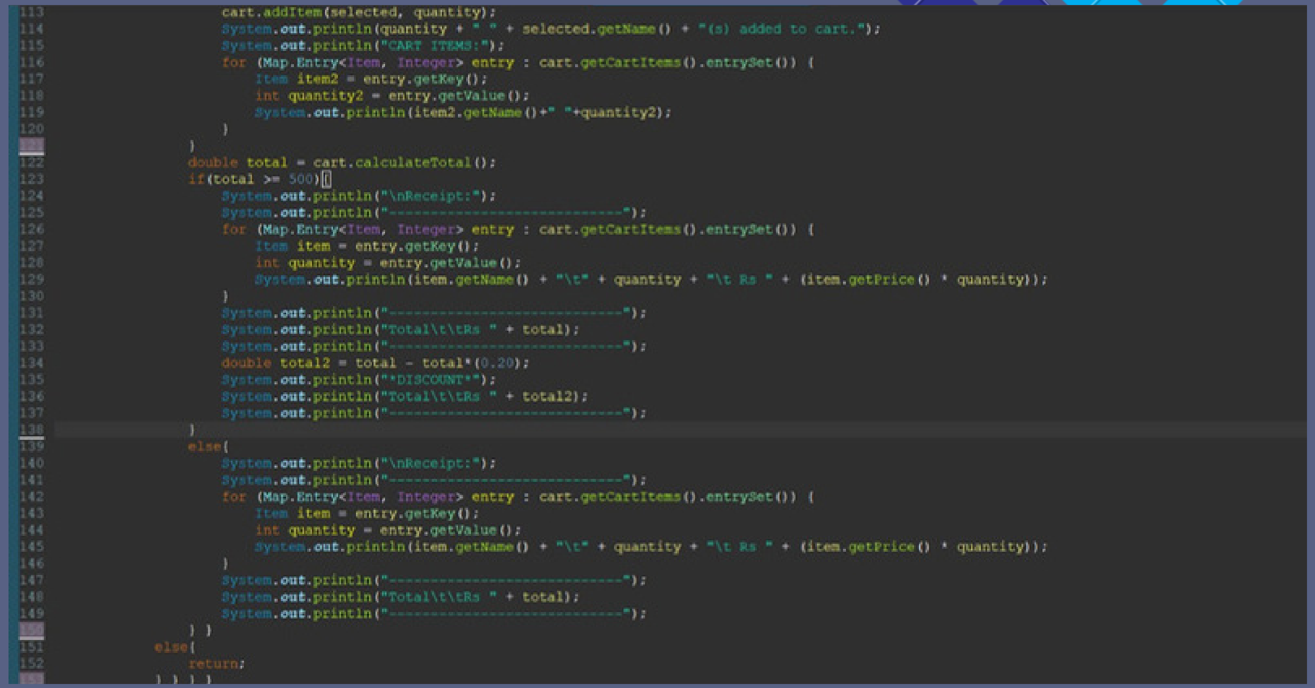
Coded in Eclipse



```java
    public double calculateTotal() {
        double total = 0;
        for (Map.Entry<Item, Integer> entry : cart.entrySet()) {
            Item item = entry.getKey();
            int quantity = entry.getValue();
            total += item.getPrice() * quantity;
        }
        return total;
    }

    public Map<Item, Integer> getCartItems() {
        return cart;
    }
}
class Manage{
    void add_to_menu(List<Item> li, String na, double pr){
        Item i = new Item(na,pr);
        li.add(i);
    }
}

public class SupermarketBillingSystem {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        ShoppingCart cart = new ShoppingCart();
        List<Item> availableItems = new ArrayList<>();
        Item it = new Item("DragonFruit",150.0);
        Item it2 = new Item("Toys",100.0);
        Item it3 = new Item("DairyMilkSilk",80.0);
        Item it4 = new Item("MilkPackeet",30.0);
        Item it5 = new Item("Bread",40.0);
        availableItems.add(it);
        availableItems.add(it2);
        availableItems.add(it3);
        availableItems.add(it4);
        availableItems.add(it5);
        System.out.println("Welcome to the Supermarket Billing System!");
        while (true){
            System.out.println("1.Shopper Dashboard");
            System.out.println("2.Customer Dashboard");
            System.out.println("0 to exit");
```



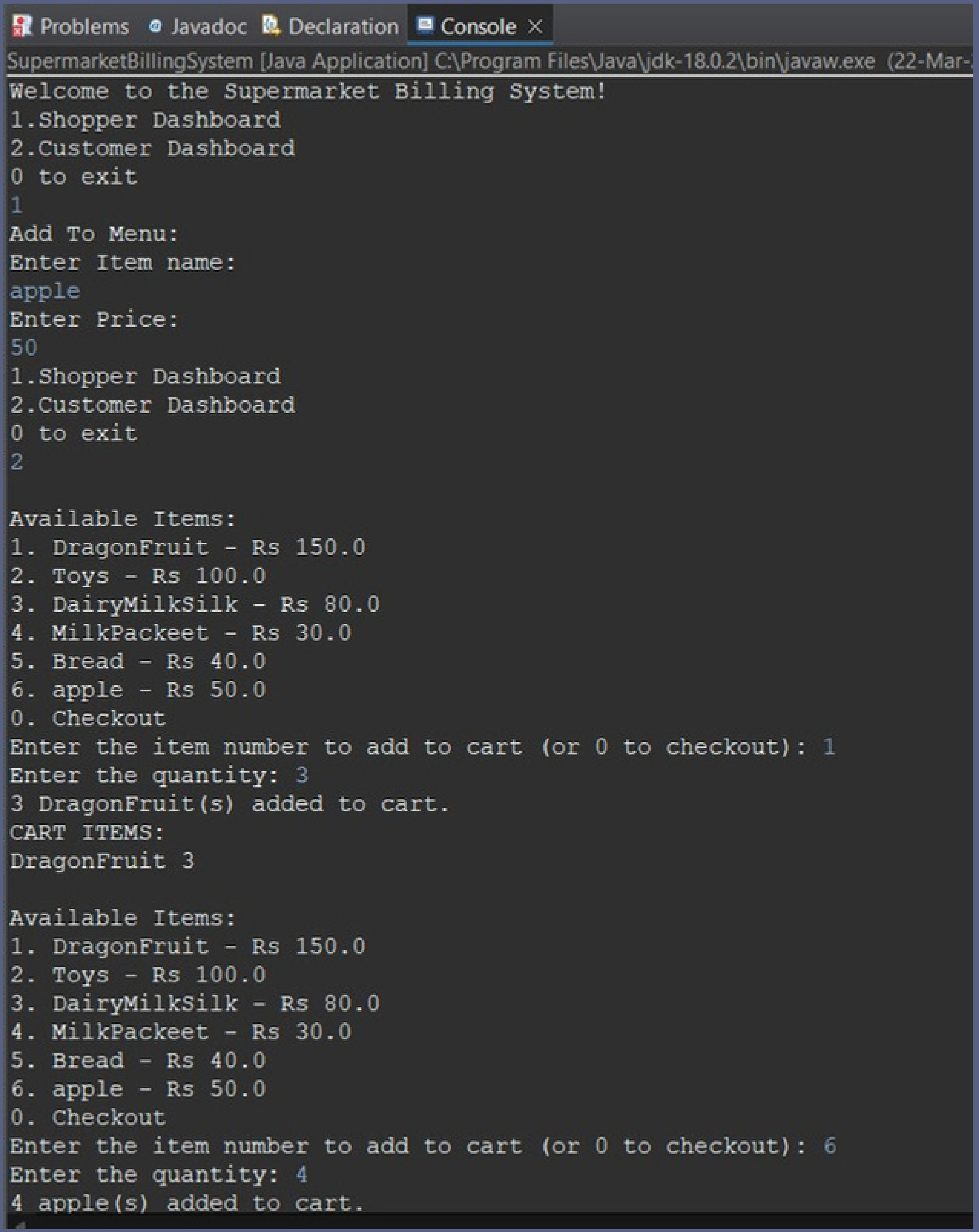
```java
        System.out.println("Welcome to the Supermarket Billing System!");
        while (true){
            System.out.println("1.Shopper Dashboard");
            System.out.println("2.Customer Dashboard");
            System.out.println("0 to exit");
            int ch = scanner.nextInt();
            if (ch == 1){
                Manage mn = new Manage();
                System.out.println("Add To Menu:");
                System.out.println("Enter Item name:");
                scanner.nextLine();
                String nm = scanner.nextLine();
                System.out.println("Enter Price:");
                int pr = scanner.nextInt();
                mn.add_to_menu(availableItems, nm, pr);

            }
            else if (ch == 2){
                while (true) {
                    System.out.println("\nAvailable Items:");
                    for (int i = 0; i < availableItems.size(); i++) {
                        System.out.println((i + 1) + ". " + availableItems.get(i).getName() + " - Rs " + availableItems.get(i).getPrice());
                    }
                    System.out.println("0. Checkout");

                    System.out.print("Enter the item number to add to cart (or 0 to checkout): ");
                    int choice = scanner.nextInt();
                    if (choice == 0) {
                        break;
                    }
                    if (choice < 1 || choice > availableItems.size()) {
                        System.out.println("Invalid choice. Please try again.");
                        continue;
                    }

                    System.out.print("Enter the quantity: ");
                    int quantity = scanner.nextInt();

                    Item selected = availableItems.get(choice - 1);
                    cart.addItem(selected, quantity);
```



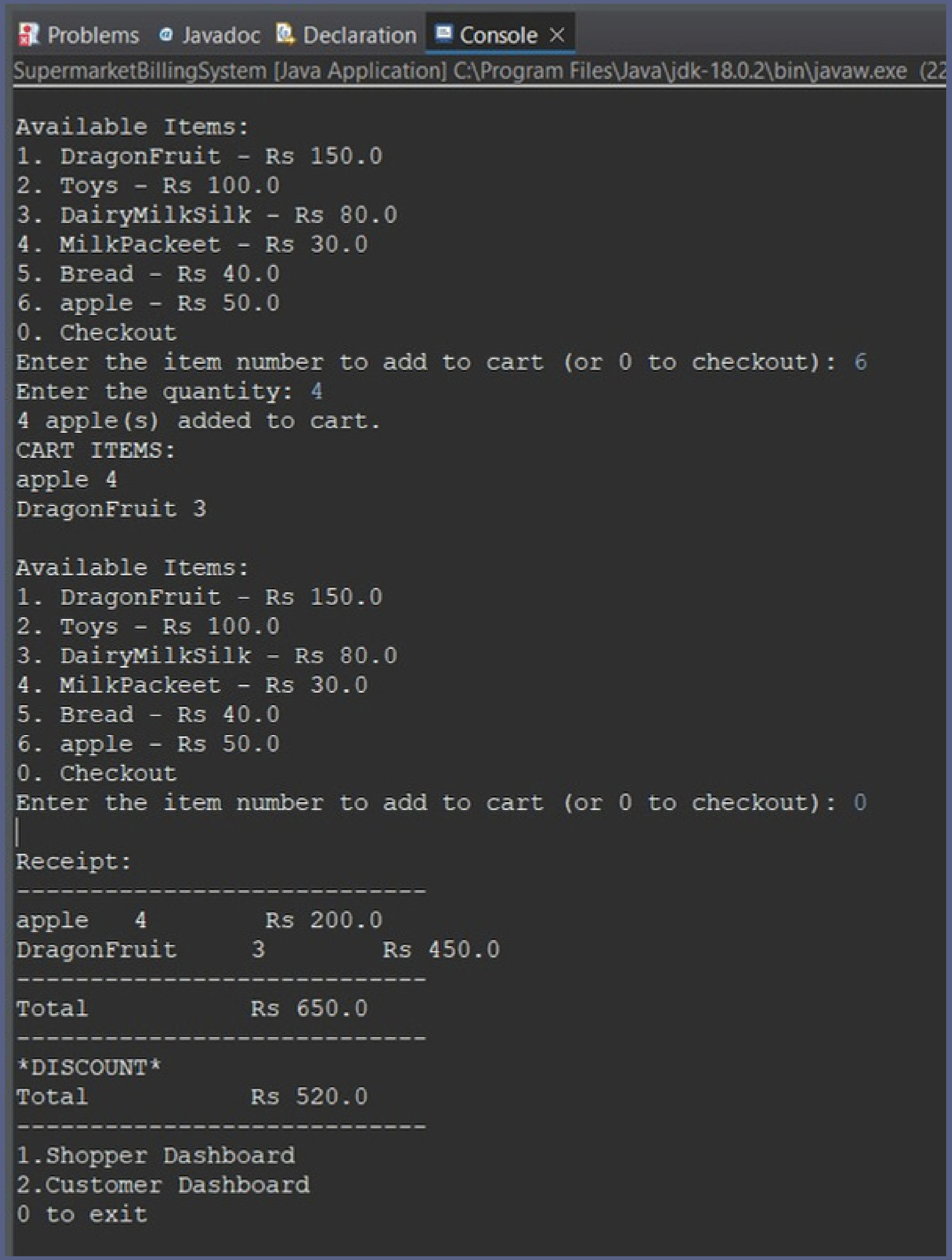
```java
                    cart.addItem(selected, quantity);
                    System.out.println(quantity + " " + selected.getName() + "(s) added to cart.");
                    System.out.println("CART ITEMS:");
                    for (Map.Entry<Item, Integer> entry : cart.getCartItems().entrySet()) {
                        Item item2 = entry.getKey();
                        int quantity2 = entry.getValue();
                        System.out.println(item2.getName()+" "+quantity2);
                    }
                }
                double total = cart.calculateTotal();
                if(total >= 500){
                    System.out.println("\nReceipt:");
                    System.out.println("----------------------------");
                    for (Map.Entry<Item, Integer> entry : cart.getCartItems().entrySet()) {
                        Item item = entry.getKey();
                        int quantity = entry.getValue();
                        System.out.println(item.getName() + "\t" + quantity + "\t Rs " + (item.getPrice() * quantity));
                    }
                    System.out.println("----------------------------");
                    System.out.println("Total\t\tRs " + total);
                    System.out.println("----------------------------");
                    double total2 = total - total*(0.20);
                    System.out.println("*DISCOUNT*");
                    System.out.println("Total\t\tRs " + total2);
                    System.out.println("----------------------------");
                }
                else{
                    System.out.println("\nReceipt:");
                    System.out.println("----------------------------");
                    for (Map.Entry<Item, Integer> entry : cart.getCartItems().entrySet()) {
                        Item item = entry.getKey();
                        int quantity = entry.getValue();
                        System.out.println(item.getName() + "\t" + quantity + "\t Rs " + (item.getPrice() * quantity));
                    }
                    System.out.println("----------------------------");
                    System.out.println("Total\t\tRs " + total);
                    System.out.println("----------------------------");
                } }
            else{
                return;
            } } } }
```

Output Snippets

Output in console



```
SupermarketBillingSystem [Java Application] C:\Program Files\Java\jdk-18.0.2\bin\javaw.exe  (22-Mar-
Welcome to the Supermarket Billing System!
1.Shopper Dashboard
2.Customer Dashboard
0 to exit
1
Add To Menu:
Enter Item name:
apple
Enter Price:
50
1.Shopper Dashboard
2.Customer Dashboard
0 to exit
2

Available Items:
1. DragonFruit - Rs 150.0
2. Toys - Rs 100.0
3. DairyMilkSilk - Rs 80.0
4. MilkPackeet - Rs 30.0
5. Bread - Rs 40.0
6. apple - Rs 50.0
0. Checkout
Enter the item number to add to cart (or 0 to checkout): 1
Enter the quantity: 3
3 DragonFruit(s) added to cart.
CART ITEMS:
DragonFruit 3

Available Items:
1. DragonFruit - Rs 150.0
2. Toys - Rs 100.0
3. DairyMilkSilk - Rs 80.0
4. MilkPackeet - Rs 30.0
5. Bread - Rs 40.0
6. apple - Rs 50.0
0. Checkout
Enter the item number to add to cart (or 0 to checkout): 6
Enter the quantity: 4
4 apple(s) added to cart.
```



```
SupermarketBillingSystem [Java Application] C:\Program Files\Java\jdk-18.0.2\bin\javaw.exe  (22

Available Items:
1. DragonFruit - Rs 150.0
2. Toys - Rs 100.0
3. DairyMilkSilk - Rs 80.0
4. MilkPackeet - Rs 30.0
5. Bread - Rs 40.0
6. apple - Rs 50.0
0. Checkout
Enter the item number to add to cart (or 0 to checkout): 6
Enter the quantity: 4
4 apple(s) added to cart.
CART ITEMS:
apple 4
DragonFruit 3

Available Items:
1. DragonFruit - Rs 150.0
2. Toys - Rs 100.0
3. DairyMilkSilk - Rs 80.0
4. MilkPackeet - Rs 30.0
5. Bread - Rs 40.0
6. apple - Rs 50.0
0. Checkout
Enter the item number to add to cart (or 0 to checkout): 0

Receipt:
----------------------------
apple   4        Rs 200.0
DragonFruit     3       Rs 450.0
----------------------------
Total           Rs 650.0
----------------------------
*DISCOUNT*
Total           Rs 520.0
----------------------------
1.Shopper Dashboard
2.Customer Dashboard
0 to exit
```

Conclusion:

- The Supermarket Billing System offers an efficient and reliable solution for managing billing processes in supermarkets.

- This Supermarket Billing System demonstrates the power of Java in creating efficient and user-friendly applications.

- It simplifies billing processes and paves the way for further functionalities, contributing to a more streamlined supermarket experience.

Thank You