REPORT

Sathyabama Institute of Science and Technology

Trained by: FacePrep

PROJECT TILE

Java Project

Supermarket
Billing System

TEAM MEMBERS

V V K RAVI CHANDRA

REG NO:- 41111392

BRANCH:- CSE

Batch:Dream Batch

SECTION:-FA03

G MANISH MOHAN

REG NO:- 41110775

BRANCH:- CSE

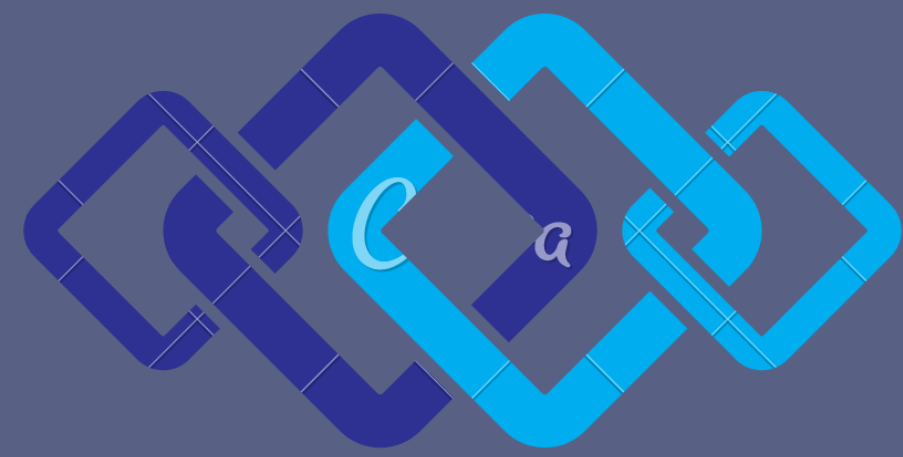Batch:Dream Batch

SECTION:-FA03

RAYUDU YESWANTH KUMAR

REG NO:- 41130454

BRANCH:- ECE

Batch:Dream Batch

SECTION:-FA03

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.
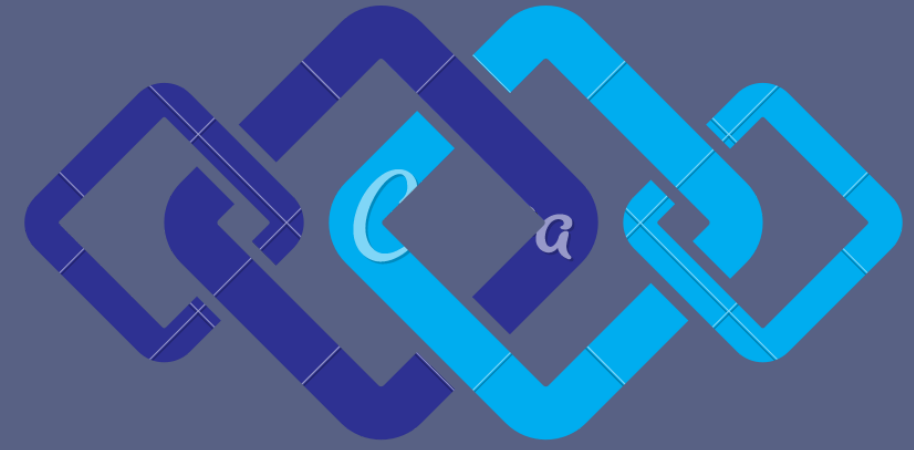
Project Overview

- **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.**

Code Snippets

Coded in Eclipse
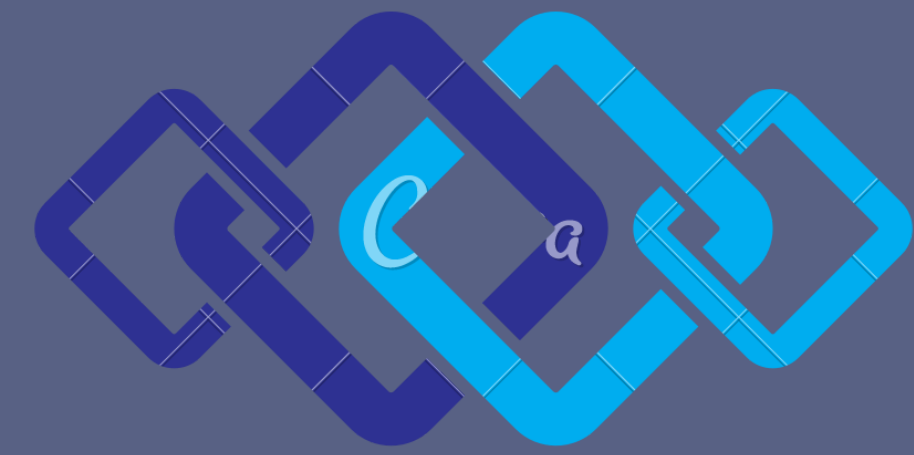
```java
1  package placementproject;
2  import java.util.*;
3
4  class Item {
5      private String name;
6      private double price;
7
8      public Item(String name, double price) {
9          this.name = name;
10         this.price = price;
11     }
12
13     public String getName() {
14         return name;
15     }
16
17     public double getPrice() {
18         return price;
19     }
20 }
21
22 class ShoppingCart {
23     private Map<Item, Integer> cart;
24
25     public ShoppingCart() {
26         cart = new HashMap<>();
27     }
28
29     public void addItem(Item item, int quantity) {
30         if (cart.containsKey(item)) {
31             int currentQuantity = cart.get(item);
32             cart.put(item, currentQuantity + quantity);
33         } else {
34             cart.put(item, quantity);
35         }
36     }
37
38     public double calculateTotal() {
39         double total = 0;
40         for (Map.Entry<Item, Integer> entry : cart.entrySet()) {
41             Item item = entry.getKey();
```
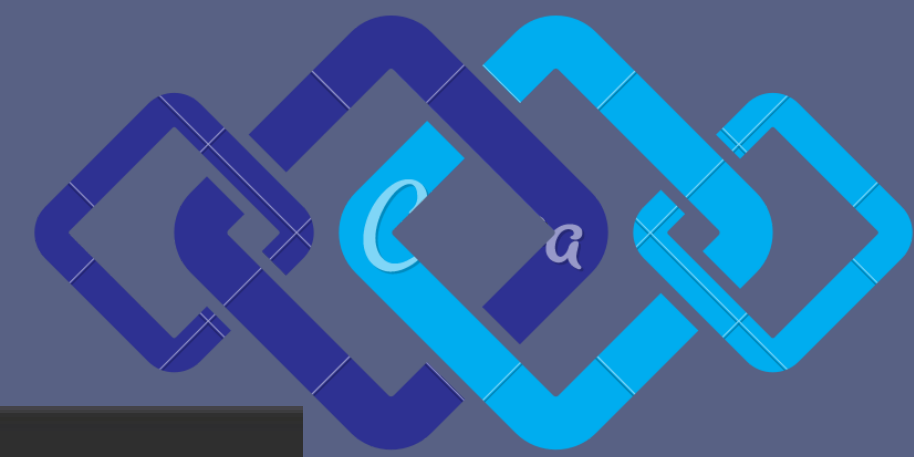
```java
38     public double calculateTotal() {
39         double total = 0;
40         for (Map.Entry<Item, Integer> entry : cart.entrySet()) {
41             Item item = entry.getKey();
42             int quantity = entry.getValue();
43             total += item.getPrice() * quantity;
44         }
45         return total;
46     }
47
48     public Map<Item, Integer> getCartItems() {
49         return cart;
50     }
51 }
52 class Manage{
53     void add_to_menu(List<Item> li, String na, double pr){
54         Item i = new Item(na,pr);
55         li.add(i);
56     }
57 }
58
59 public class SupermarketBillingSystem {
60     public static void main(String[] args) {
61         Scanner scanner = new Scanner(System.in);
62         ShoppingCart cart = new ShoppingCart();
63         List<Item> availableItems = new ArrayList<>();
64         Item it = new Item("DragonFruit",150.0);
65         Item it2 = new Item("Toys",100.0);
66         Item it3 = new Item("DairyMilkSilk",80.0);
67         Item it4 = new Item("MilkPackeet",30.0);
68         Item it5 = new Item("Bread",40.0);
69         availableItems.add(it);
70         availableItems.add(it2);
71         availableItems.add(it3);
72         availableItems.add(it4);
73         availableItems.add(it5);
74         System.out.println("Welcome to the Supermarket Billing System!");
75         while (true){
76             System.out.println("1.Shopper Dashboard");
77             System.out.println("2.Customer Dashboard");
78             System.out.println("0 to exit");
```

Code Snippets

```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);
                        System.out.println(quantity + " " + selected.getName() + "(s) added to cart.");
```

Code Snippets

```java
113                    cart.addItem(selected, quantity);
114                    System.out.println(quantity + " " + selected.getName() + "(s) added to cart.");
115                    System.out.println("CART ITEMS:");
116                    for (Map.Entry<Item, Integer> entry : cart.getCartItems().entrySet()) {
117                        Item item2 = entry.getKey();
118                        int quantity2 = entry.getValue();
119                        System.out.println(item2.getName()+" "+quantity2);
120                    }
121                }
122            double total = cart.calculateTotal();
123            if(total >= 500){
124                System.out.println("\nReceipt:");
125                System.out.println("-------------------------------");
126                for (Map.Entry<Item, Integer> entry : cart.getCartItems().entrySet()) {
127                    Item item = entry.getKey();
128                    int quantity = entry.getValue();
129                    System.out.println(item.getName() + "\t" + quantity + "\t Rs " + (item.getPrice() * quantity));
130                }
131                System.out.println("-------------------------------");
132                System.out.println("Total\t\tRs " + total);
133                System.out.println("-------------------------------");
134                double total2 = total - total*(0.20);
135                System.out.println("*DISCOUNT*");
136                System.out.println("Total\t\tRs " + total2);
137                System.out.println("-------------------------------");
138            }
139            else{
140                System.out.println("\nReceipt:");
141                System.out.println("-------------------------------");
142                for (Map.Entry<Item, Integer> entry : cart.getCartItems().entrySet()) {
143                    Item item = entry.getKey();
144                    int quantity = entry.getValue();
145                    System.out.println(item.getName() + "\t" + quantity + "\t Rs " + (item.getPrice() * quantity));
146                }
147                System.out.println("-------------------------------");
148                System.out.println("Total\t\tRs " + total);
149                System.out.println("-------------------------------");
150            } }
151        else{
152            return;
153        } } } }
```

Output Snippets
Output in console
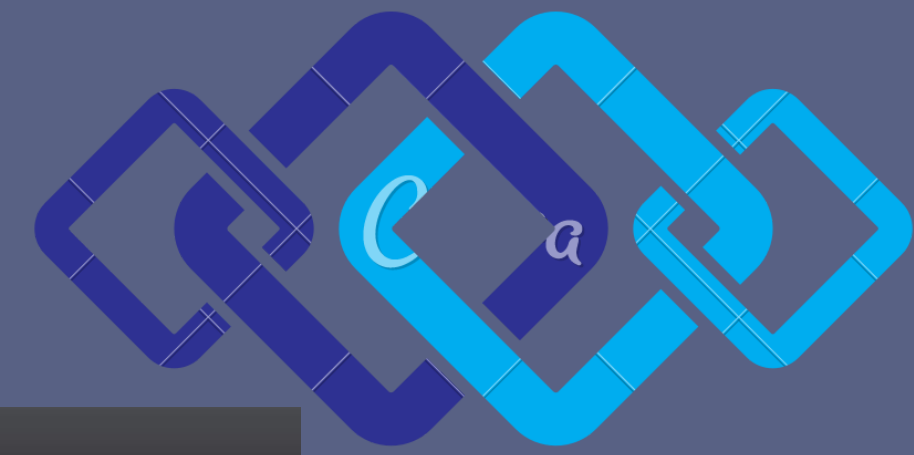

```
Problems  @ Javadoc  Declaration  Console ×
SupermarketBillingSystem [Java Application] C:\Program Files\Java\jdk-18.0.2\bin\javaw.exe  (22-Mar-20
Welcome to the Supermarket Billing System!
1.Shopper Dashboard
2.Customer Dashboard
0 to exit
1
Add To Menu:
Enter Item name:
Apple
Enter Price:
50
1.Shopper 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: 1
1 DragonFruit(s) added to cart.
CART ITEMS:
DragonFruit 1

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.
```

```
Problems  @ Javadoc  Declaration  Console ×
<terminated> SupermarketBillingSystem [Java Application] C:\Program Files\Java\jdk-18.0.2\bin\javaw.e
CART ITEMS:
DragonFruit 1

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 1

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    1        Rs 150.0
-----------------------------
Total            Rs 350.0
-----------------------------
1.Shopper Dashboard
2.Customer Dashboard
0 to exit
0
```
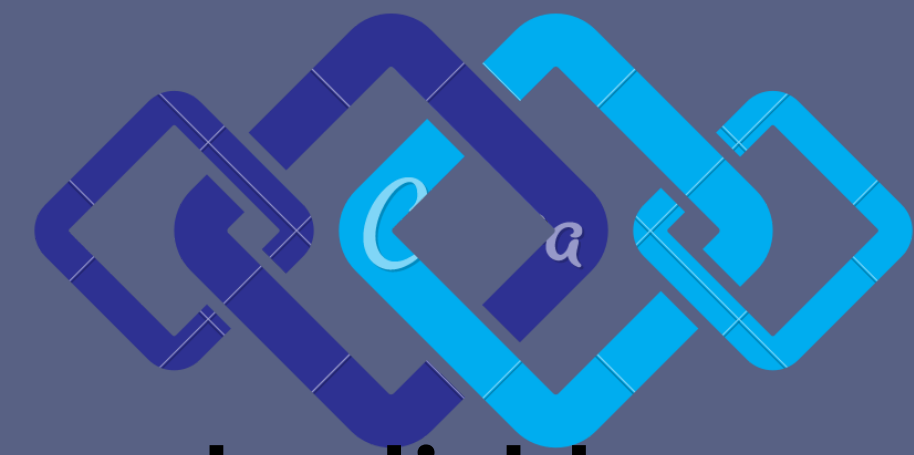
Conclusion:

- 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