**Online Grocery Shopping App**

import java.util.\*;

class Item {

    public String name;

    public double price;

    public int quantity;

    public Item(String name, double price) {

        this.name = name;

        this.price = price;

        this.quantity = 1;

    }

    public void incrementQuantity() {

        quantity++;

    }

    public void decrementQuantity() {

        if (quantity > 1) {

            quantity--;

        }

    }

    public String toString() {

        return name + " - Rs " + price + " x " + quantity + " = " + price \* quantity + " Rs ";

    }

}

class GroceryCategory {

    private String categoryName;

    private LinkedList<Item> items = new LinkedList<>();

    public GroceryCategory(String categoryName) {

        this.categoryName = categoryName;

    }

    public void addItem(Item item) {

        for (Item existingItem : items) {

            if (existingItem.name.equals(item.name)) {

                existingItem.incrementQuantity();

                return;

            }

        }

        items.add(item);

    }

    public void removeItem(Item item) {

        items.remove(item);

    }

    public LinkedList<Item> getItems() {

        return items;

    }

    public String getCategoryName() {

        return categoryName;

    }

}

class ShoppingCart {

    private LinkedList<Item> cartItems = new LinkedList<>();

    public void addItem(Item item) {

        for (Item cartItem : cartItems) {

            if (cartItem.name.equals(item.name)) {

                cartItem.incrementQuantity();

                return;

            }

        }

        cartItems.add(item);

    }

    public void removeItem(Item item) {

        cartItems.remove(item);

    }

    public double calculateTotal() {

        double total = 0.0;

        for (Item item : cartItems) {

            total += item.price \* item.quantity;

        }

        return total;

    }

    public void displayCart() {

        for (Item item : cartItems) {

            System.out.println(item);

        }

    }

}

public class GroceryShoppingApp {

    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);

        GroceryCategory fruits = new GroceryCategory("Fruits");

        GroceryCategory vegetables = new GroceryCategory("Vegetables");

        GroceryCategory grains = new GroceryCategory("Grains");

        GroceryCategory bakeryProducts = new GroceryCategory("Bakery Products");

        GroceryCategory snacks = new GroceryCategory("Snacks");

        Item apple = new Item("Apple", 20);

        Item banana = new Item("Banana", 10);

        Item orange = new Item("Orange", 15);

        Item brinjal = new Item("Brinjal", 40);

        Item ladyFinger = new Item("Lady Finger", 35);

        Item potato = new Item("Potato", 50);

        Item wheat = new Item("Wheat", 30);

        Item jawar = new Item("Jawar", 40);

        Item bajra = new Item("Bajra", 35);

        Item donuts = new Item("Donuts", 60);

        Item khari = new Item("Khari", 80);

        Item pastry = new Item("Pastry", 30);

        Item kurkure = new Item("Kurkure", 30);

        Item bourbon = new Item("Bourbon", 40);

        Item bananaChips = new Item("Banana Chips", 30);

        fruits.addItem(apple);

        fruits.addItem(banana);

        fruits.addItem(orange);

        vegetables.addItem(brinjal);

        vegetables.addItem(potato);

        vegetables.addItem(ladyFinger);

        grains.addItem(wheat);

        grains.addItem(bajra);

        grains.addItem(jawar);

        snacks.addItem(bourbon);

        snacks.addItem(kurkure);

        snacks.addItem(bananaChips);

        bakeryProducts.addItem(khari);

        bakeryProducts.addItem(pastry);

        bakeryProducts.addItem(donuts);

        ShoppingCart cart = new ShoppingCart();

        while (true) {

            System.out.println("Select a category to view items (1-5):");

            System.out.println("1. Fruits");

            System.out.println("2. Vegetables");

            System.out.println("3. Grains");

            System.out.println("4. Bakery Products");

            System.out.println("5. Snacks");

            System.out.println("6. View Cart");

            System.out.println("7. Checkout");

            int choice = scanner.nextInt();

            if (choice == 1) {

                displayCategory(fruits, cart);

            } else if (choice == 2) {

                displayCategory(vegetables, cart);

            } else if (choice == 3) {

                displayCategory(grains, cart);

            } else if (choice == 4) {

                displayCategory(bakeryProducts, cart);

            } else if (choice == 5) {

                displayCategory(snacks, cart);

            } else if (choice == 6) {

                System.out.println("Items in the cart:");

                cart.displayCart();

            } else if (choice == 7) {

                double total = cart.calculateTotal();

                System.out.println("Total amount: Rs " + total);

                break;

            }

        }

        scanner.close();

    }

    private static void displayCategory(GroceryCategory category, ShoppingCart cart) {

        System.out.println("Category: " + category.getCategoryName());

        LinkedList<Item> items = category.getItems();

        for (int i = 0; i < items.size(); i++) {

            System.out.println((i + 1) + ". " + items.get(i));

        }

        System.out.println("Select an item to add to the cart (1-" + items.size() + "):");

        Scanner scanner = new Scanner(System.in);

        int choice = scanner.nextInt();

        if (choice >= 1 && choice <= items.size()) {

            Item selectedItem = items.get(choice - 1);

            cart.addItem(selectedItem);

            System.out.println("Added " + selectedItem.name + " to the cart.");

        }

    }

}

/\*

Select a category to view items (1-5):

1. Fruits

2. Vegetables

3. Grains

4. Bakery Products

5. Snacks

6. View Cart

7. Checkout

1

Category: Fruits

1. Apple - Rs 20.0 x 1 = 20.0 Rs

2. Banana - Rs 10.0 x 1 = 10.0 Rs

3. Orange - Rs 15.0 x 1 = 15.0 Rs

Select an item to add to the cart (1-3):

1

Added Apple to the cart.

Select a category to view items (1-5):

1. Fruits

2. Vegetables

3. Grains

4. Bakery Products

5. Snacks

6. View Cart

7. Checkout

2

Category: Vegetables

1. Brinjal - Rs 40.0 x 1 = 40.0 Rs

2. Potato - Rs 50.0 x 1 = 50.0 Rs

3. Lady Finger - Rs 35.0 x 1 = 35.0 Rs

Select an item to add to the cart (1-3):

2

Added Potato to the cart.

Select a category to view items (1-5):

1. Fruits

2. Vegetables

3. Grains

4. Bakery Products

5. Snacks

6. View Cart

7. Checkout

3

Category: Grains

1. Wheat - Rs 30.0 x 1 = 30.0 Rs

2. Bajra - Rs 35.0 x 1 = 35.0 Rs

3. Jawar - Rs 40.0 x 1 = 40.0 Rs

Select an item to add to the cart (1-3):

3

Added Jawar to the cart.

Select a category to view items (1-5):

1. Fruits

2. Vegetables

3. Grains

4. Bakery Products

5. Snacks

6. View Cart

7. Checkout

4

Category: Bakery Products

1. Khari - Rs 80.0 x 1 = 80.0 Rs

2. Pastry - Rs 30.0 x 1 = 30.0 Rs

3. Donuts - Rs 60.0 x 1 = 60.0 Rs

Select an item to add to the cart (1-3):

2

Added Pastry to the cart.

Select a category to view items (1-5):

1. Fruits

2. Vegetables

3. Grains

4. Bakery Products

5. Snacks

6. View Cart

7. Checkout

5

Category: Snacks

1. Bourbon - Rs 40.0 x 1 = 40.0 Rs

2. Kurkure - Rs 30.0 x 1 = 30.0 Rs

3. Banana Chips - Rs 30.0 x 1 = 30.0 Rs

Select an item to add to the cart (1-3):

1

Added Bourbon to the cart.

Select a category to view items (1-5):

1. Fruits

2. Vegetables

3. Grains

4. Bakery Products

5. Snacks

6. View Cart

7. Checkout

5

Category: Snacks

1. Bourbon - Rs 40.0 x 1 = 40.0 Rs

2. Kurkure - Rs 30.0 x 1 = 30.0 Rs

3. Banana Chips - Rs 30.0 x 1 = 30.0 Rs

Select an item to add to the cart (1-3):

1

Added Bourbon to the cart.

Select a category to view items (1-5):

1. Fruits

2. Vegetables

3. Grains

4. Bakery Products

5. Snacks

6. View Cart

7. Checkout

6

Items in the cart:

Apple - Rs 20.0 x 1 = 20.0 Rs

Potato - Rs 50.0 x 1 = 50.0 Rs

Jawar - Rs 40.0 x 1 = 40.0 Rs

Pastry - Rs 30.0 x 1 = 30.0 Rs

Bourbon - Rs 40.0 x 2 = 80.0 Rs

Select a category to view items (1-5):

1. Fruits

2. Vegetables

3. Grains

4. Bakery Products

5. Snacks

6. View Cart

7. Checkout

7

Total amount: Rs 220.0

\*/