**Name : Toka Reda Mahmoud**

**ID : 41910065**

**package javaapplication4;**

**import java.util.ArrayList;**

**import java.util.Scanner;**

**class MenuItem {**

**String item;**

**String type;**

**double price;**

**public MenuItem(String item, String type, double price) {**

**this.item = item;**

**this.type = type;**

**this.price = price;**

**}**

**}**

**class CoffeeShop {**

**String name;**

**ArrayList<MenuItem> menu;**

**ArrayList<String> orders;**

**public CoffeeShop(String name, ArrayList<MenuItem> menu) {**

**this.name = name;**

**this.menu = menu;**

**this.orders = new ArrayList<String>();**

**}**

**public String addOrder(String item) {**

**for (MenuItem menuItem : menu) {**

**if (menuItem.item.equalsIgnoreCase(item)) {**

**orders.add(item);**

**return "Order added!";**

**}**

**}**

**return "This item is currently unavailable!";**

**}**

**public String fulfillOrder() {**

**if (!orders.isEmpty()) {**

**String item = orders.get(0);**

**orders.remove(0);**

**return "The " + item + " is ready!";**

**} else {**

**return "All orders have been fulfilled!";**

**}**

**}**

**public ArrayList<String> listOrders() {**

**return orders;**

**}**

**public double dueAmount() {**

**double total = 0.0;**

**for (String order : orders) {**

**for (MenuItem menuItem : menu) {**

**if (menuItem.item.equalsIgnoreCase(order)) {**

**total += menuItem.price;**

**}**

**}**

**}**

**return total;**

**}**

**public String cheapestItem() {**

**double minPrice = Double.MAX\_VALUE;**

**String cheapest = "";**

**for (MenuItem menuItem : menu) {**

**if (menuItem.price < minPrice) {**

**minPrice = menuItem.price;**

**cheapest = menuItem.item;**

**}**

**}**

**return cheapest;**

**}**

**public ArrayList<String> drinksOnly() {**

**ArrayList<String> drinkList = new ArrayList<String>();**

**for (MenuItem menuItem : menu) {**

**if (menuItem.type.equalsIgnoreCase("drink")) {**

**drinkList.add(menuItem.item);**

**}**

**}**

**return drinkList;**

**}**

**public ArrayList<String> foodOnly() {**

**ArrayList<String> foodList = new ArrayList<String>();**

**for (MenuItem menuItem : menu) {**

**if (menuItem.type.equalsIgnoreCase("food")) {**

**foodList.add(menuItem.item);**

**}**

**}**

**return foodList;**

**}**

**}**

**public class Main {**

**public static void main(String[] args) {**

**ArrayList<MenuItem> menu = new ArrayList<MenuItem>();**

**menu.add(new MenuItem("Latte", "Drink", 3.50));**

**menu.add(new MenuItem("Cappuccino", "Drink", 3.00));**

**menu.add(new MenuItem("Espresso", "Drink", 2.50));**

**menu.add(new MenuItem("Croissant", "Food", 2.00));**

**menu.add(new MenuItem("Bagel", "Food", 2.50));**

**CoffeeShop coffeeShop = new CoffeeShop("My Coffee Shop", menu);**

**Scanner scanner = new Scanner(System.in);**

**while (true) {**

**System.out.println("Enter your order (or 'exit' to quit): ");**

**String order = scanner.nextLine();**

**if (order.equalsIgnoreCase("exit")) {**

**break;**

**}**

**String response = coffeeShop.addOrder(order);**

**System.out.println(response);**

**}**

**System.out.println(coffeeShop.listOrders());**

**System.out.println("Total due: " + coffeeShop.dueAmount());**

**System.out.println("Cheapest item: " + coffeeShop.cheapestItem());**

**}**

**}**