Restaurant Order System - Java Program

This PDF contains the full Java source code for the simple Restaurant Order System using Object-Oriented Programming (OOP).

Java Source Code:

```java
import java.util.ArrayList;

class MenuItem {
    private String name;
    private double price;

    public MenuItem(String name, double price) {
        this.name = name;
        this.price = price;
    }

    public String getName() { return name; }
    public double getPrice() { return price; }
}

class OrderItem {
    private MenuItem item;
    private int quantity;

    public OrderItem(MenuItem item, int quantity) {
        this.item = item;
        this.quantity = quantity;
    }

    public double getCost() {
        return item.getPrice() * quantity;
    }

    public void display() {
        System.out.println(item.getName() + " x " + quantity + " = " + getCost());
    }
}

class Order {
    private ArrayList<OrderItem> items = new ArrayList<>();

    public void addItem(MenuItem m, int qty) {
        items.add(new OrderItem(m, qty));
    }

    public double getTotal() {
        double total = 0;
        for (OrderItem i : items) {
            total += i.getCost();
        }
        return total;
    }

    public void showBill() {
        System.out.println("\n----- BILL -----");
        for (OrderItem i : items) {
            i.display();
        }
        System.out.println("----------------");
        System.out.println("Total Amount: " + getTotal());
    }
}

public class RestaurantSystem {
    public static void main(String[] args) {

        MenuItem pizza = new MenuItem("Pizza", 150);
        MenuItem burger = new MenuItem("Burger", 80);
        MenuItem coffee = new MenuItem("Coffee", 40);

        Order order = new Order();
        order.addItem(pizza, 2);
        order.addItem(burger, 1);
        order.addItem(coffee, 3);
```

```
            order.showBill();
        }
    }
}
```

Sample Output (when program runs):

```
----- BILL -----
Pizza x 2 = 300.0
Burger x 1 = 80.0
Coffee x 3 = 120.0
----------------
Total Amount: 500.0
```

Notes:

1. Save this file as RestaurantSystem.java (or split classes into separate files) and compile with JDK 8+.

2. To extend: add input handling (Scanner), GUI, database connectivity, or billing features like GST/discount.