Hacettepe University

Computer Science and Engineering Department

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Course ***: BBM104 Programming Lab.***

Experiment ***: Assignment 3***

Subject ***: Inheritance, Polymorphism OOP, Java***

Due Date ***: 27.04.2018***

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1. INTRODUCTION

In this assignment, a basic pizza restaurant system is done using the Java programming language. The design consists of two different parts. The first part consists of using Decorator Pattern to manage and create different pizza combinations, and second part includes Data Access Objects Pattern to manage data of customers. Then the process continues with add, remove operations for customers and orders of customers.

According to decorator pattern design, can attach additional responsibilities to an object dynamically. Decorators provide a flexible alternative to sub-classing to extend flexibility.

2. SOFTWARE USING DOCUMENTATION

2.1. Software Usage

The program needs three different inputs to work; input.txt for execution operations; customer.txt for customers' information and orders.txt for the information of orders.

There are different operation commands in the incoming text files:

- **Customer Data File Format:**

Format: <customerID> <customerName> <customerSurname> <phone number> Address: <address>

In this command, customer informations determined by the file given.

There is no output message and no incorrect entry for this execution command.

- **Order Data File Format:**

  Format: Order: <orderID> <customerID>

  Format: <pizza type><topping [1-3]>

  In this command, orders are created according to order file.

  There is no output message and no incorrect entry for this execution command.

- **Input File Format:**

  Format: AddCustomer <cutomerID> <name> <surname> <phone number> <address>

  In this command, a new customer is added to the restaurant system. The customer can order something after that moment.

  There is no incorrect entry for this execution command.

2.2. System Bugs

The program may stop the execution according to some situations.

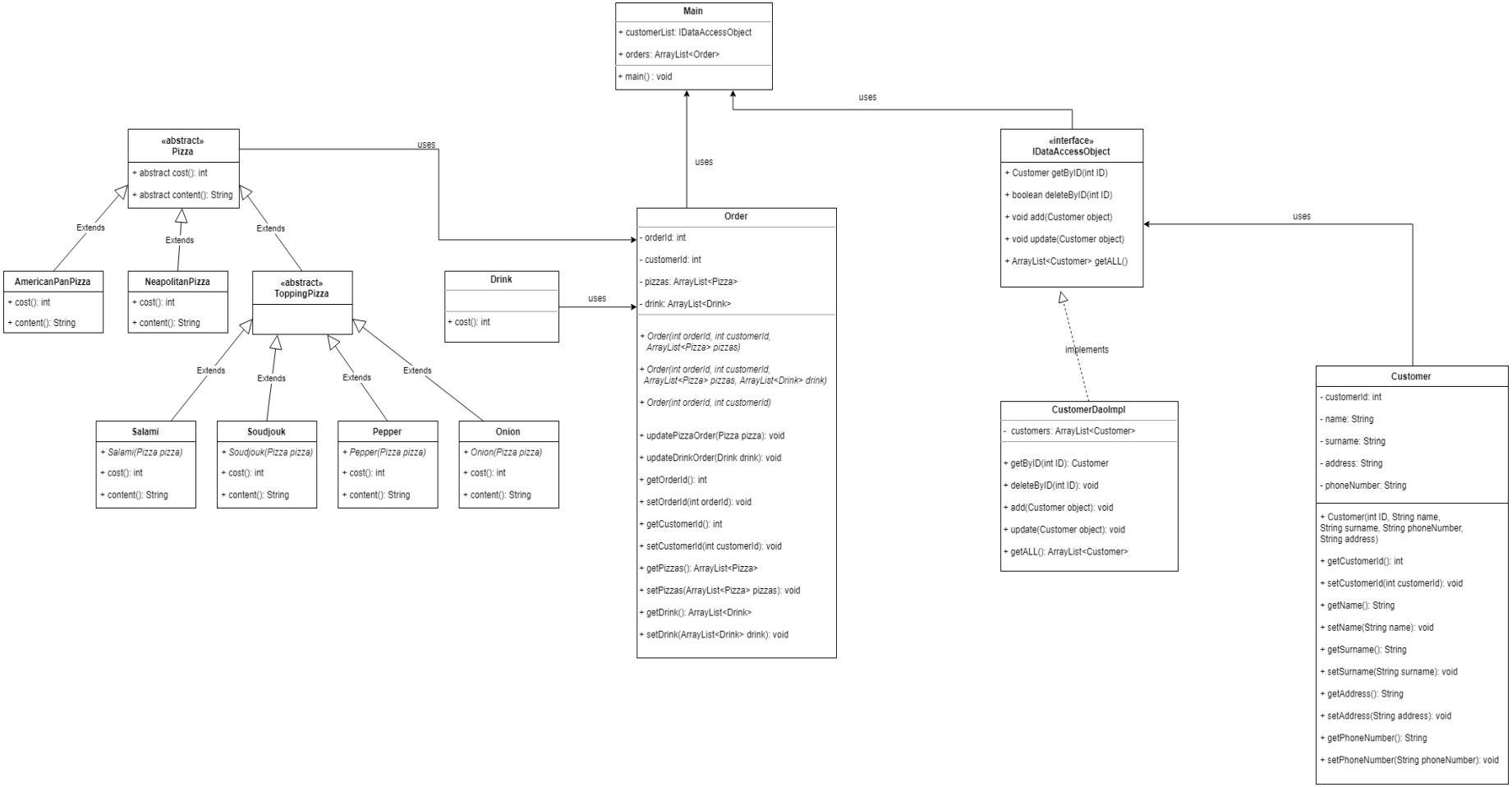
The toppings selecting part, this program pays no attention to 3 maximum toppings rule. There is no limit to adding toppings to the pizzas.

The program checks that situations, but it does not write any error messages if a problematic case is become. It only prevents the case and continues the running;

- It cannot order anything if customer is not existing.
- It cannot update any order if order is not existing.
- It cannot delete any customer if customer is not existing.

3. SOFTWARE DESIGN NOTES

The UML Diagram of The Pizza Restaurant System



4. EVALUATION

This assignment is very educational for inheritance and polymorphism in object-oriented programming structures. Also, abstract classes and interfaces need to be used for the assignment. In a given sense this assignment comes up with the time and difficulties in a parallel way.