

**Online Pizza Ordering System  
Analysis and Design Document  
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Online Pizza Ordering System	Version: <1.0>
	Date: 04/04/18
CS.OPOS2018	

## Revision History

Date	Version	Description	Author
04/04/18	<1.0>	Added Architectural Design + Domain Model	Margin Razvan Cristian
25/04/18	<1.1>	Iteration 1.2	Margin Razvan Cristian

Online Pizza Ordering System	Version: <1.0>
	Date: 04/04/18
CS.OPOS2018	

## Table of Contents

I.	Project Specification	4
II.	Elaboration – Iteration 1.1	4
1.	Domain Model	4
2.	Architectural Design	4
2.1	Conceptual Architecture	4
2.2	Package Design	5
2.3	Component and Deployment Diagrams	6
III.	Elaboration – Iteration 1.2	7
1.	Design Model	7
1.1	Dynamic Behavior	7
1.2	Class Design	8
2.	Data Model	9
3.	Unit Testing	9
IV.	Elaboration – Iteration 2	9
1.	Architectural Design Refinement	9
2.	Design Model Refinement	9
V.	Construction and Transition	10
1.	System Testing	10
2.	Future improvements	10
VI.	Bibliography	10

Online Pizza Ordering System	Version: <1.0>
	Date: 04/04/18
CS.OPOS2018	

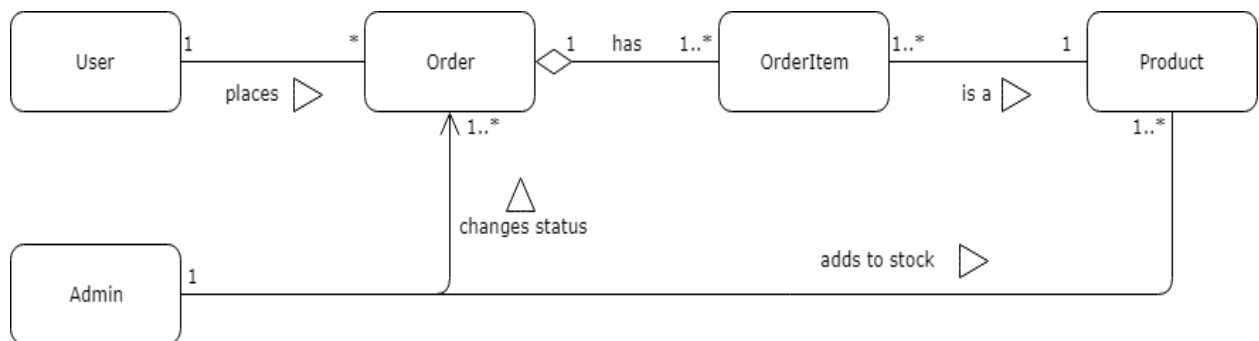
## I. Project Specification

The project consists in developing a web application from which a client of a pizza restaurant, does not need to place an order in a “face-to-face” approach. Instead, he can simply order something online and pick up his order when it is ready.

## II. Elaboration – Iteration 1.1

### 1. Domain Model

The domain model consists in the 2 main actors of our system: the User (Client), and the Employee (Admin). As mentioned above, the User places an Order, which contains all the items that he wants to purchase at a transaction: OrderItems. Finally, each OrderItem is associated to a Product. The Admin has the responsibilities of changing the status of an order ( from not finished to finished), and update the Menu (the Products) if there is need for this.



## 2. Architectural Design

### 2.1 Conceptual Architecture

I will use in this project the layered architectural pattern, because it helps us organize the structure of our application much easier, grouping components into layers, according to their responsibility.

#### Presentation Layer

The Presentation Layer will manage the interactions of our application with the users. Therefore, this layer will be responsible with retrieving data from the user and displaying it back, according with the events occurred.

#### Business Layer

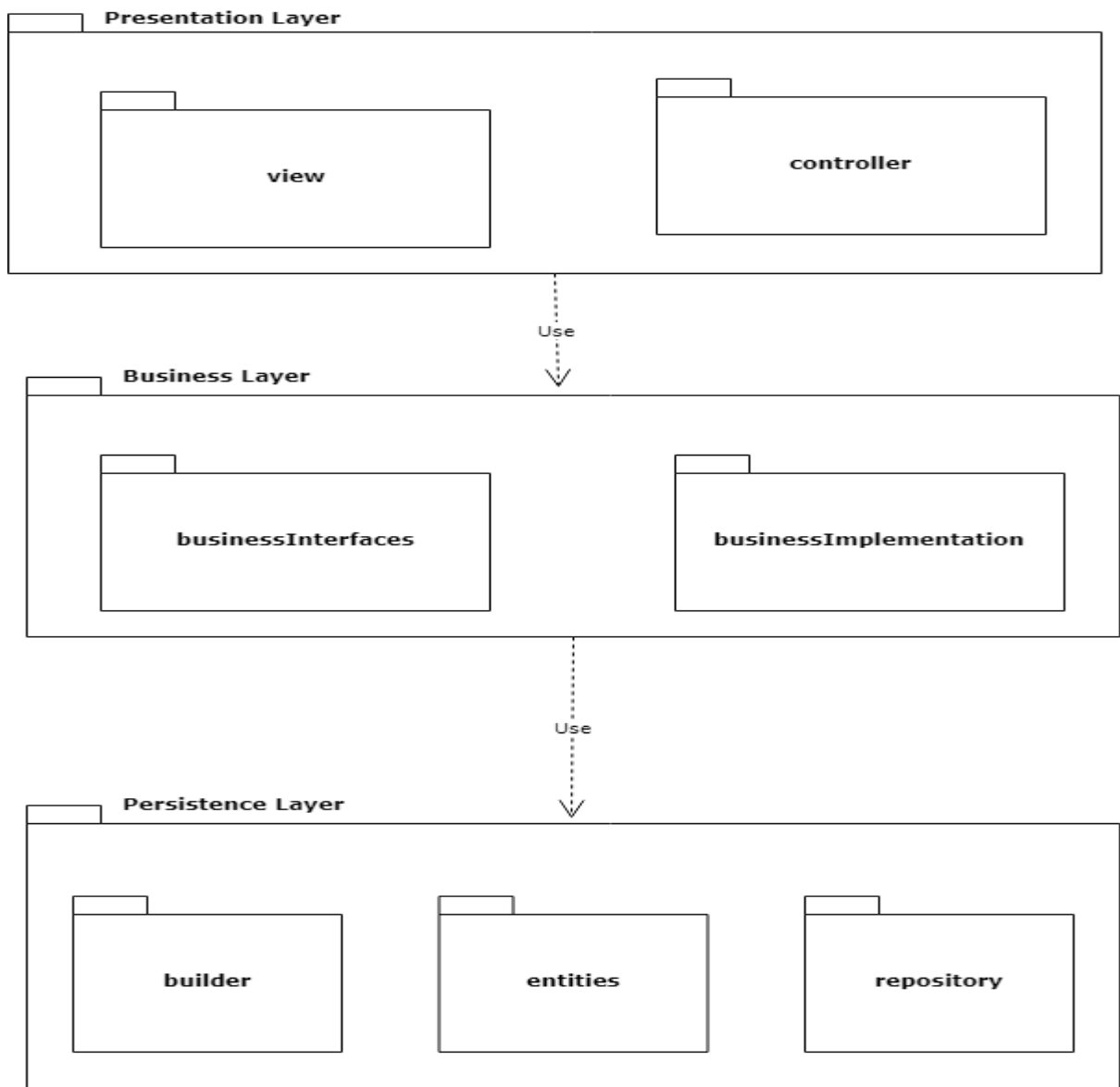
The Business Layer encapsulates all the business logic of our system. Its job is to process the information passed on by the presentation layer.

#### Data Layer

The Data Layer consists of holding the data of our application, having the job of giving access to data that is stored outside our system and passing it to the Business Layer.

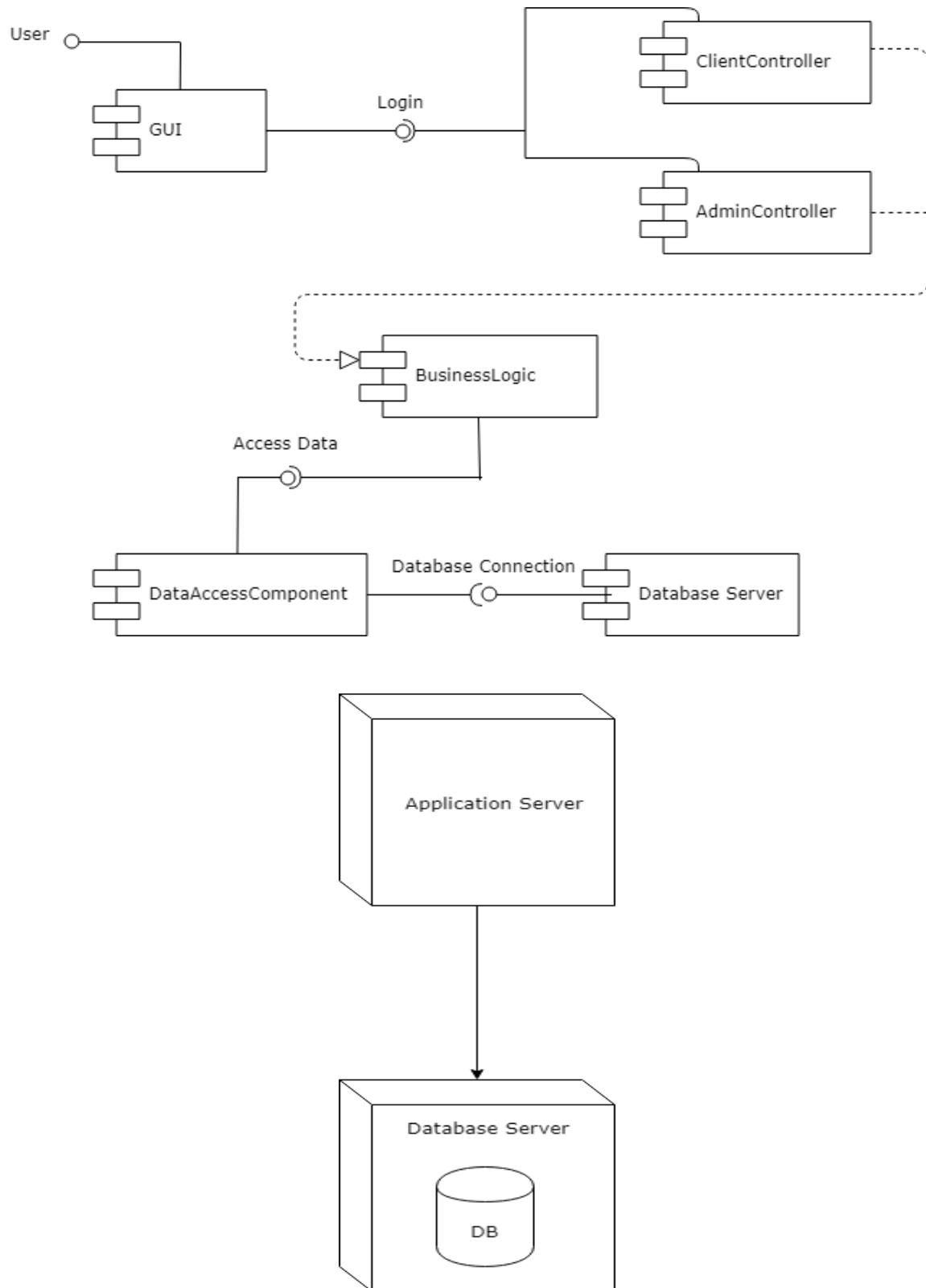
Online Pizza Ordering System	Version: <1.0>
	Date: 04/04/18
CS.OPOS2018	

## 2.2 Package Design



Online Pizza Ordering System	Version: <1.0>
	Date: 04/04/18
CS.OPOS2018	

### 2.3 Component and Deployment Diagrams



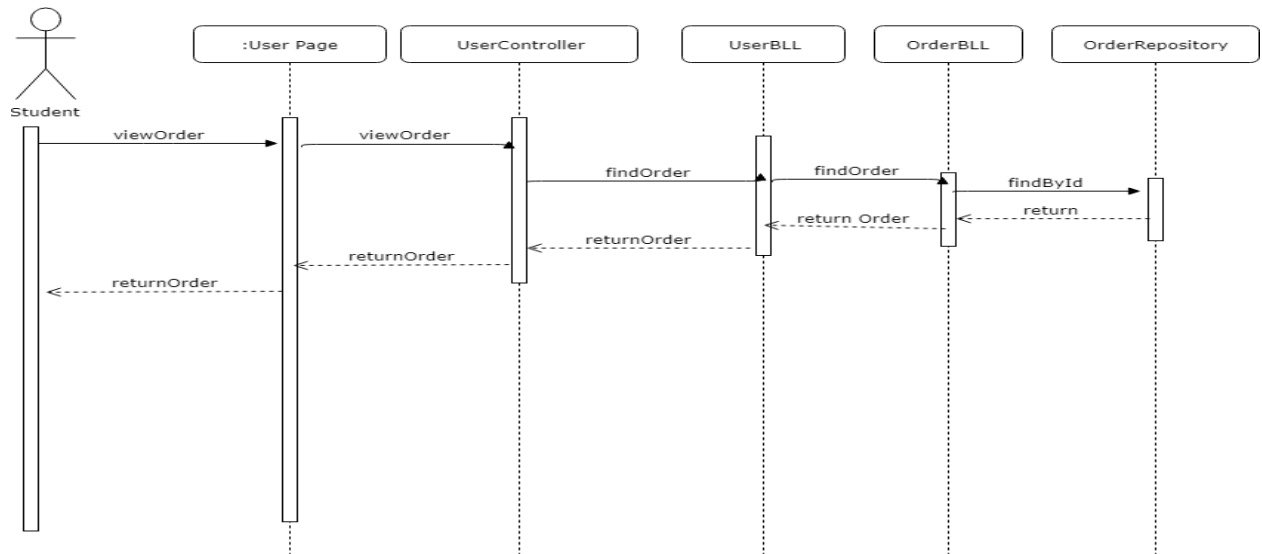
Online Pizza Ordering System	Version: <1.0>
	Date: 04/04/18
CS.OPOS2018	

### III. Elaboration – Iteration 1.2

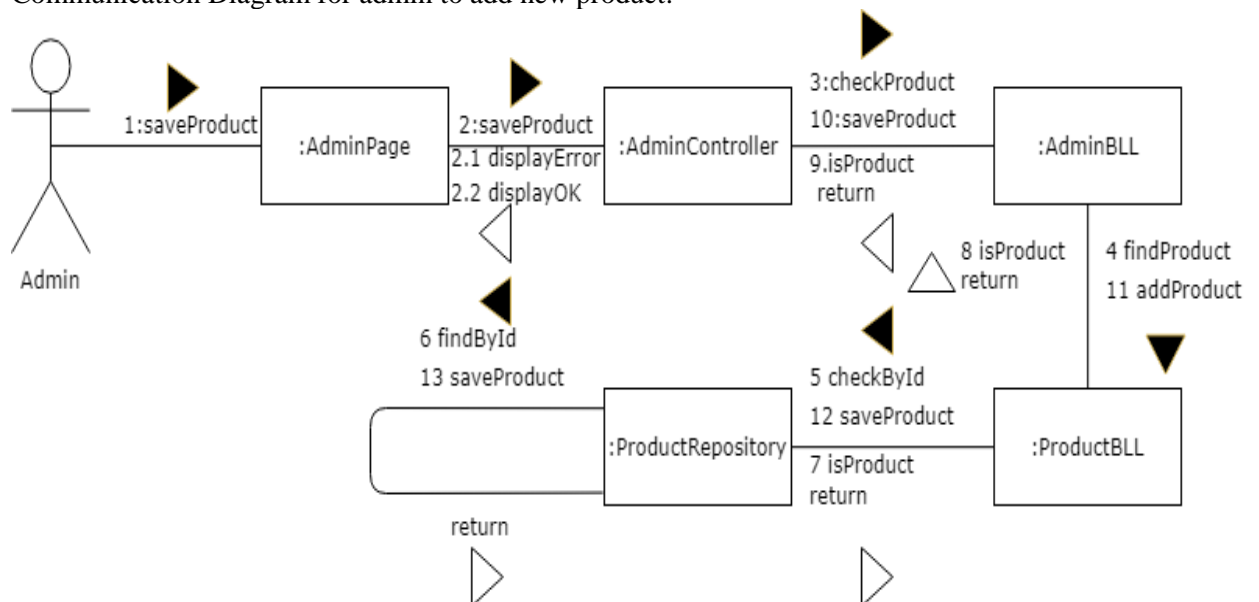
#### 1. Design Model

##### 1.1 Dynamic Behavior

Sequence Diagram for a user to view his order:

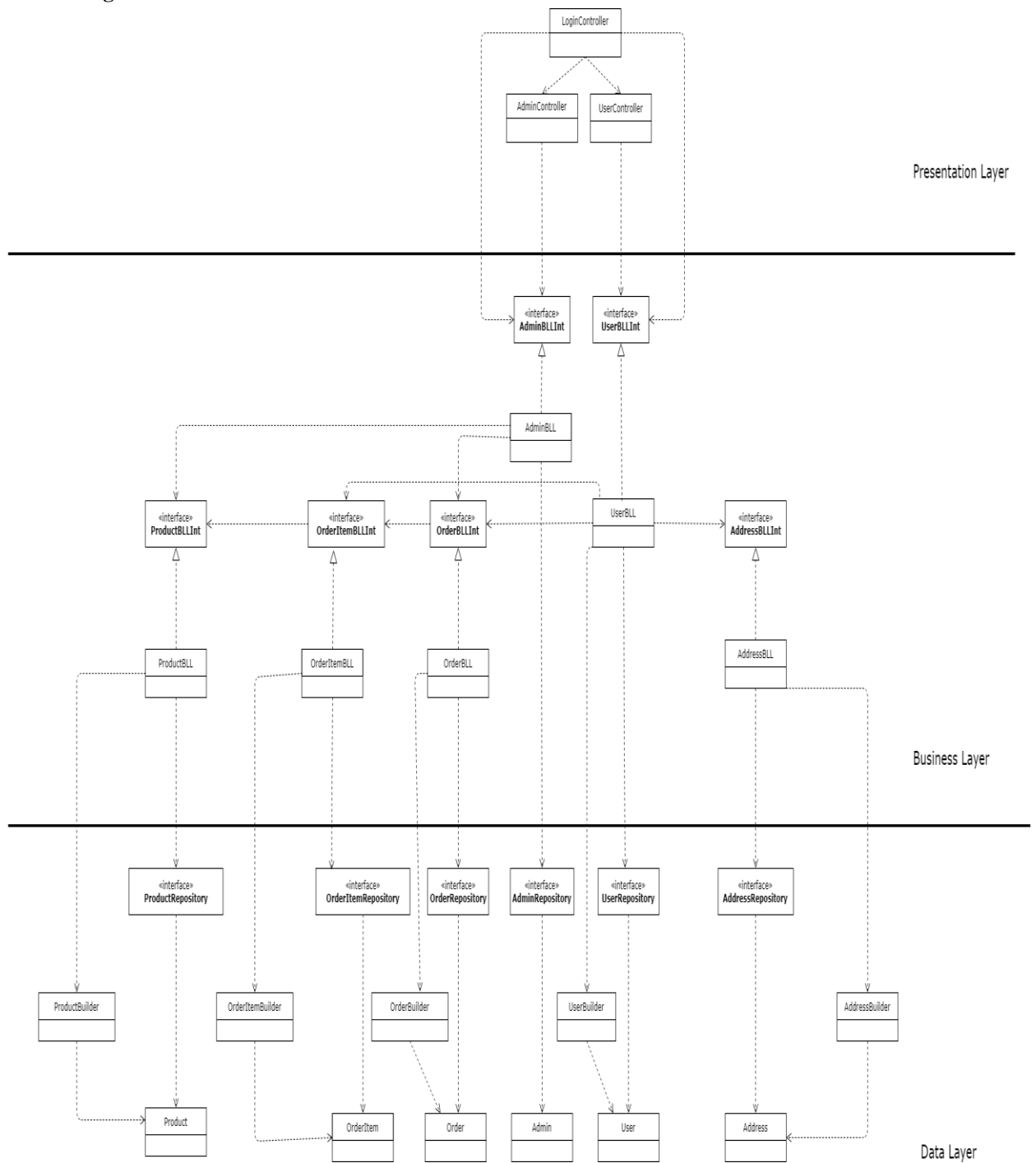


Communication Diagram for admin to add new product:



Online Pizza Ordering System	Version: <1.0>
	Date: 04/04/18
CS.OPOS2018	

## 1.2 Class Design

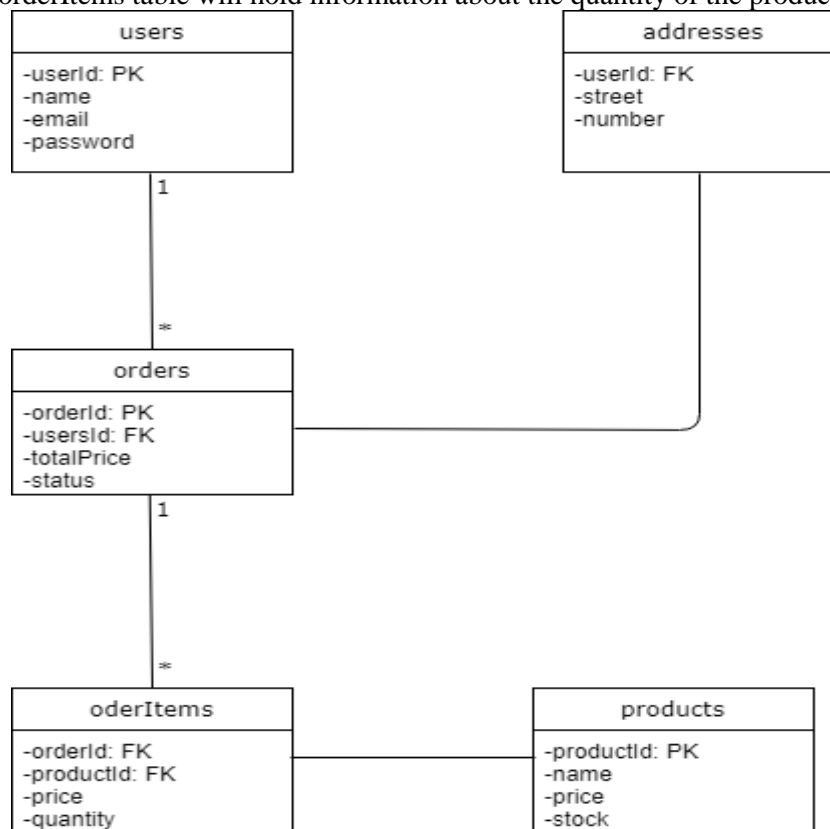




Online Pizza Ordering System	Version: <1.0>
	Date: 04/04/18
CS.OPOS2018	

## 2. Data Model

The Data Model is the entities that we want to store in our Database. As mentioned above, we will have clients stored in the users table. Each will need an email and a password in order to login. Also, each client will have an order, which will contain a status( delivered/undelivered), a total price for the order, and references to other tables. Also, each order will contain a shipping address. Furthermore, each order can contain several order items, which contain a single product. The difference between the product and the order items is that a product represents a single item, whereas the orderItems table will hold information about the quantity of the product chosen.



## 3. Unit Testing

*[Present the used testing methods and the associated test case scenarios.]*

## IV. Elaboration – Iteration 2

### 1. Architectural Design Refinement

*[Refine the architectural design: conceptual architecture, package design (consider package design principles), component and deployment diagrams. Motivate the changes that have been made.]*

### 2. Design Model Refinement

*[Refine the UML class diagram by applying class design principles and GRASP; motivate your choices. Deliver the updated class diagrams.]*

Online Pizza Ordering System	Version: <1.0>
	Date: 04/04/18
CS.OPOS2018	

## **V. Construction and Transition**

### **1. System Testing**

*[Describe how you applied integration testing and present the associated test case scenarios.]*

### **2. Future improvements**

*[Present future improvements for the system]*

## **VI. Bibliography**