Online Medieval Weapon and Armour Store
Analysis and Design Document

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30432

Revision History

Date	Version	Description	Author
<4.04.2018	1.0	Domain Model, Architectural Design, Component and Deployment diagrams	Nicolae-Florian Onica

Table of Contents

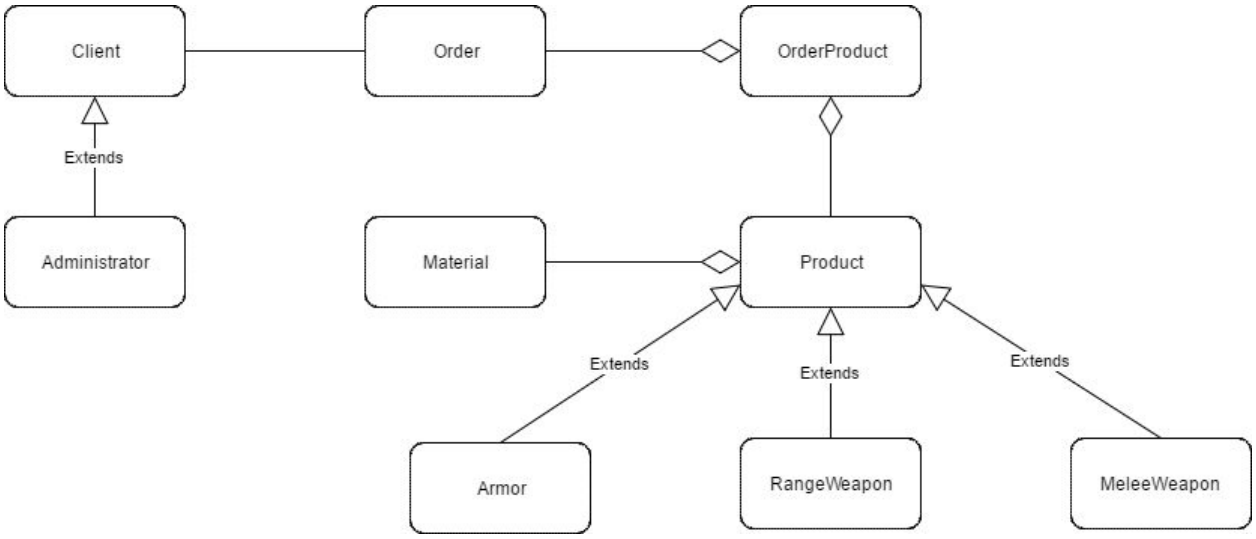
I. Project Specification

This project is an online medieval weapon and armor store that has listings of various weapons along with their features. The project allows users to buy weapons, armor or parts of them online. They can check stats, read reviews and build their own custom weapon.

II. Elaboration – Iteration 1.1

1. Domain Model

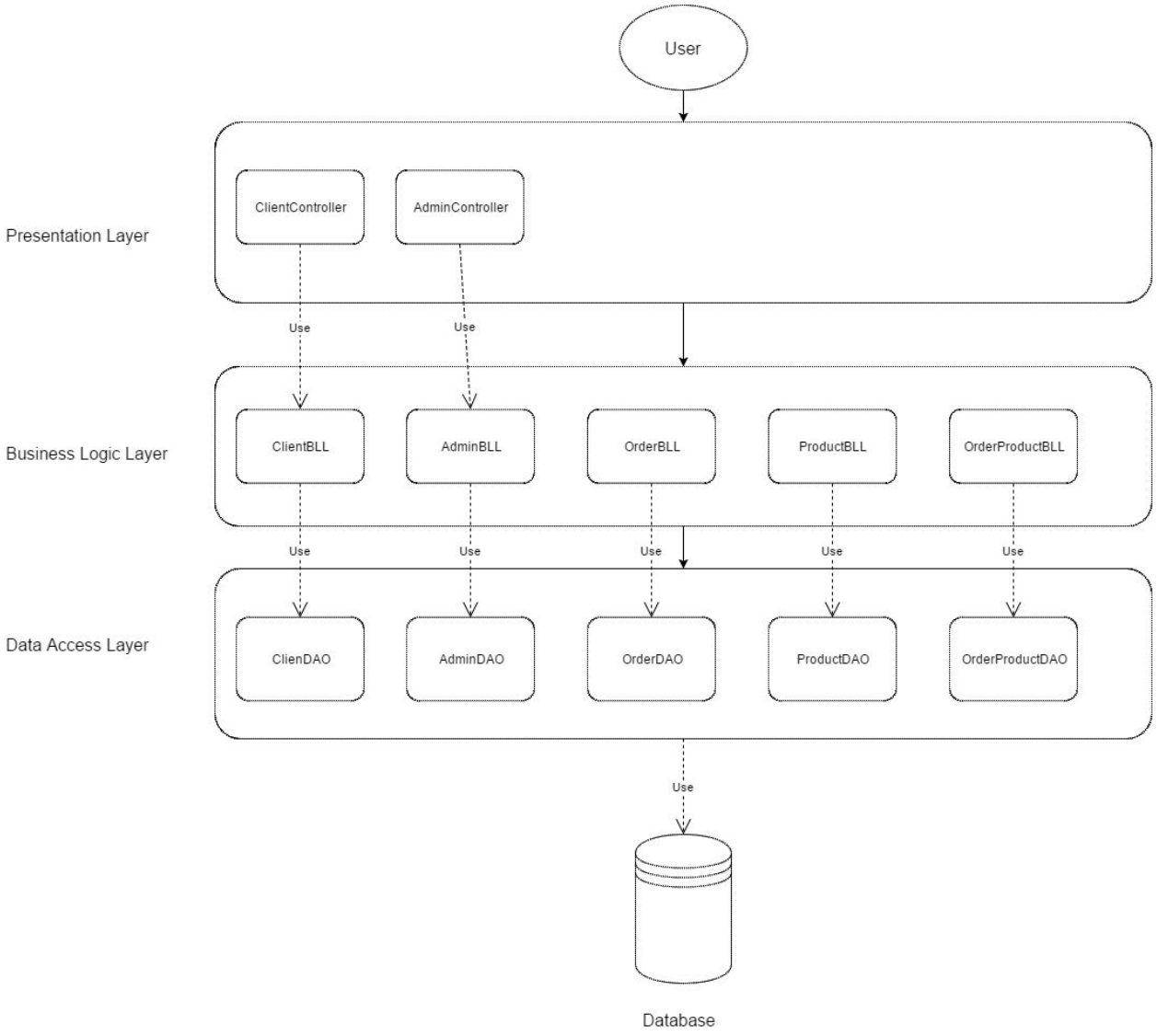
The domain model has 2 actors, the client and the administrator. The user places the order containing the products which he wants or create a customized item which will be added to the order. The administrator performs CRUD operations on products and checks user reviews.



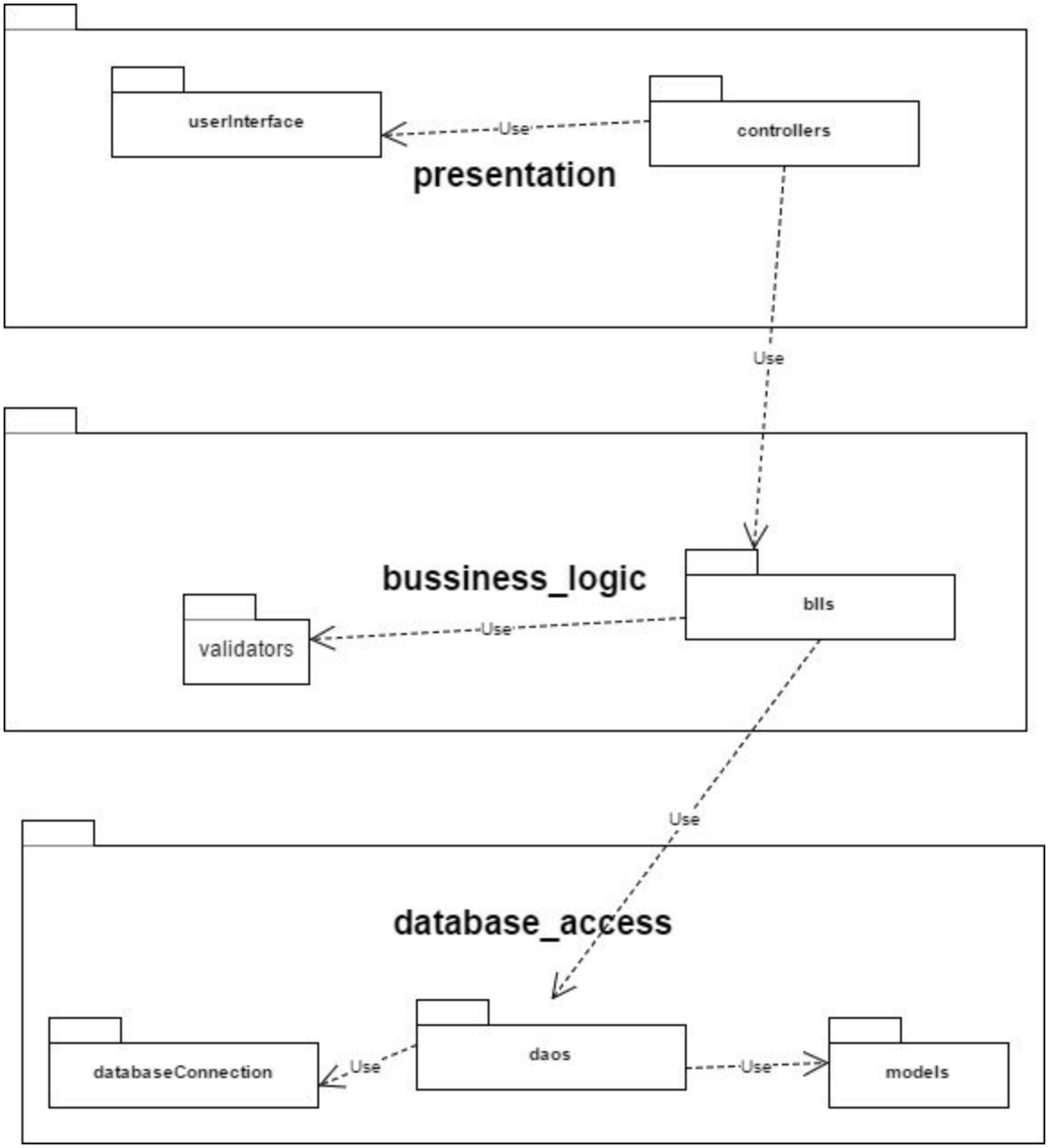
2. Architectural Design

3. Conceptual Architecture

The architectural pattern used for this application is the layered architecture pattern. The components within this pattern are organized into horizontal layers, each layer performing a specific role within the application (e.g., presentation logic or business logic). In this case three layers will be used: presentation, business and database layer.

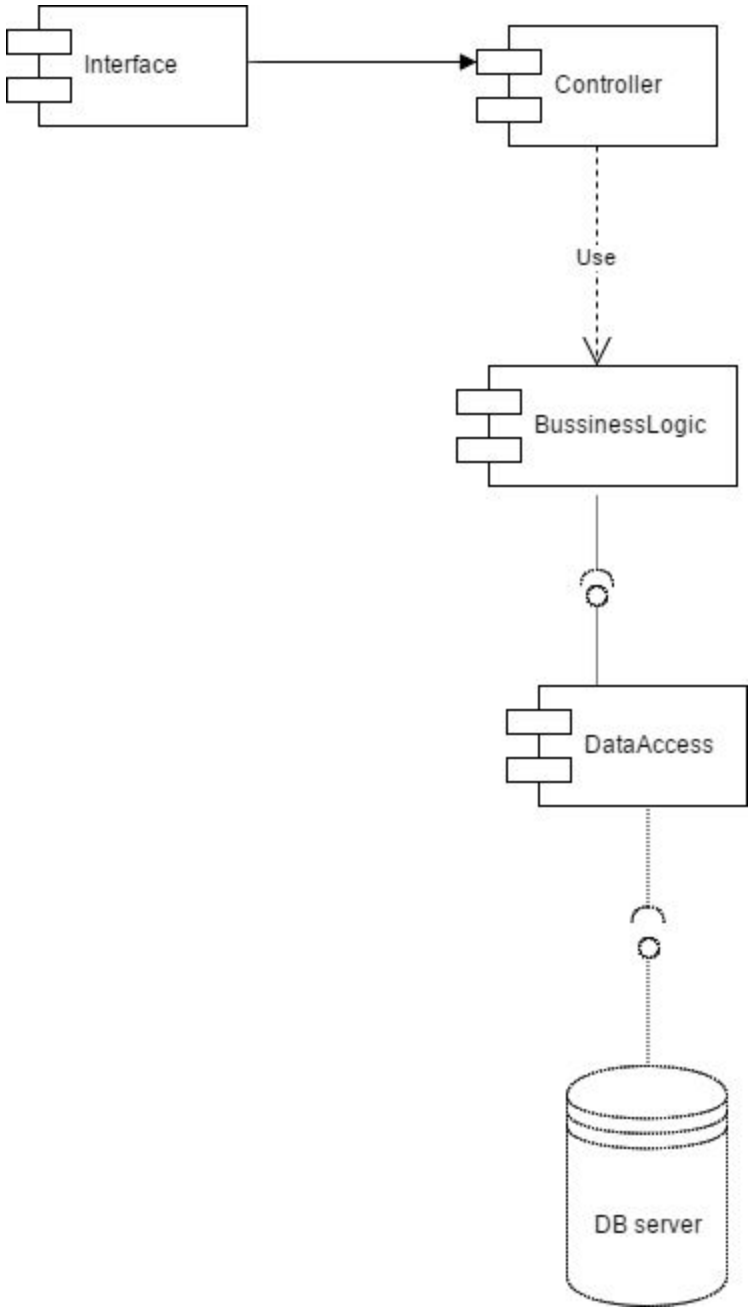

User
Presentation Layer
ClientController
AdminController
Use
Use
Business Logic Layer
ClientBLL
AdminBLL
OrderBLL
ProductBLL
OrderProductBLL
Use
Use
Use
Use
Use
Data Access Layer
ClienDAO
AdminDAO
OrderDAO
ProductDAO
OrderProductDAO
Use
Database

4. Package Design

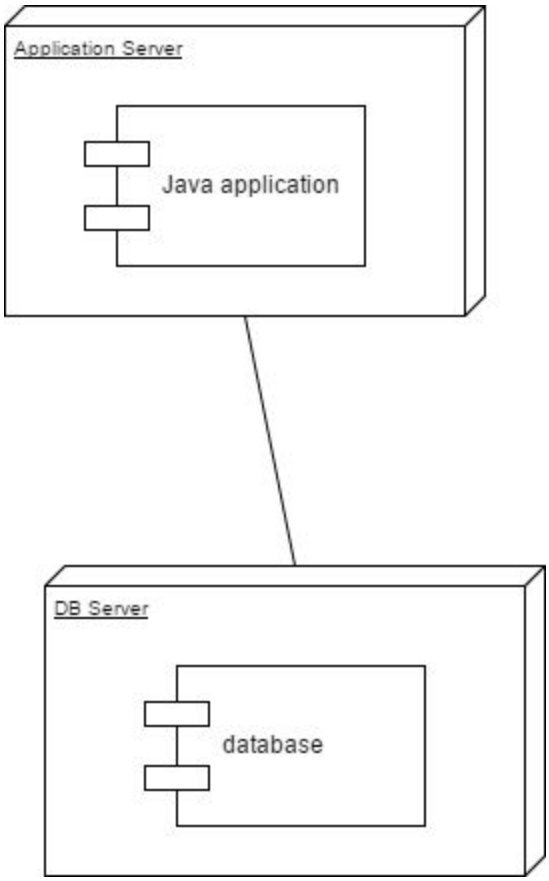


5. Component and Deployment Diagrams

Component diagram



Deployment diagram



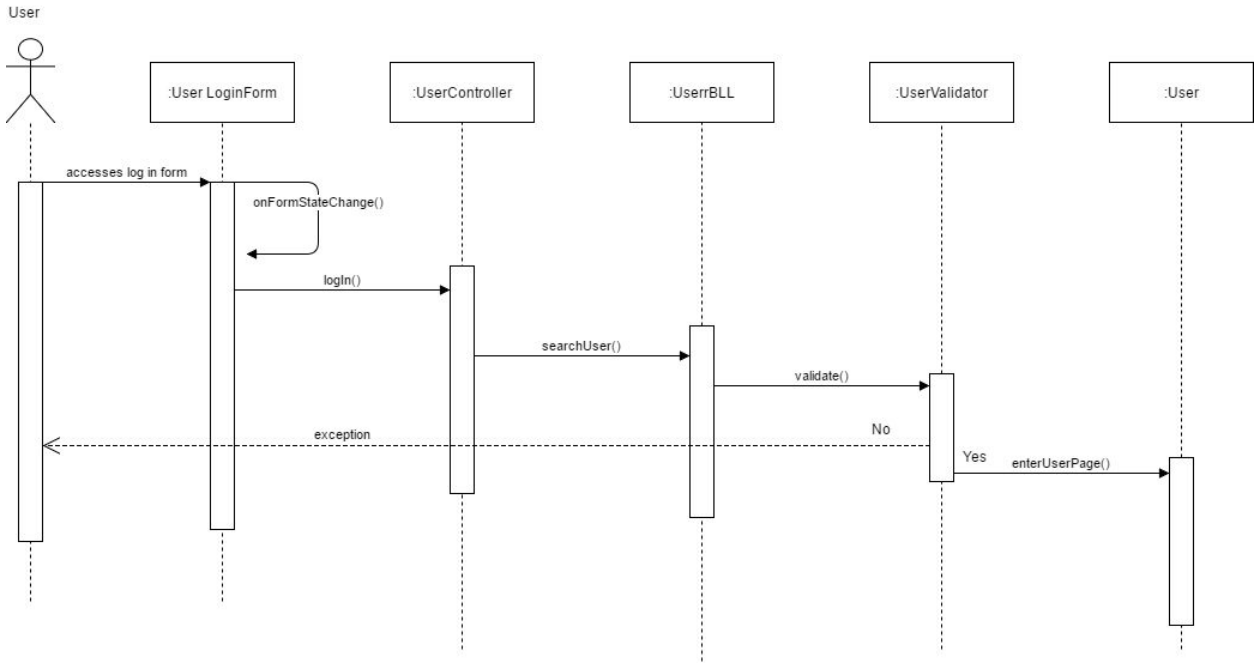
III. Elaboration – Iteration 1.2

1. Design Model

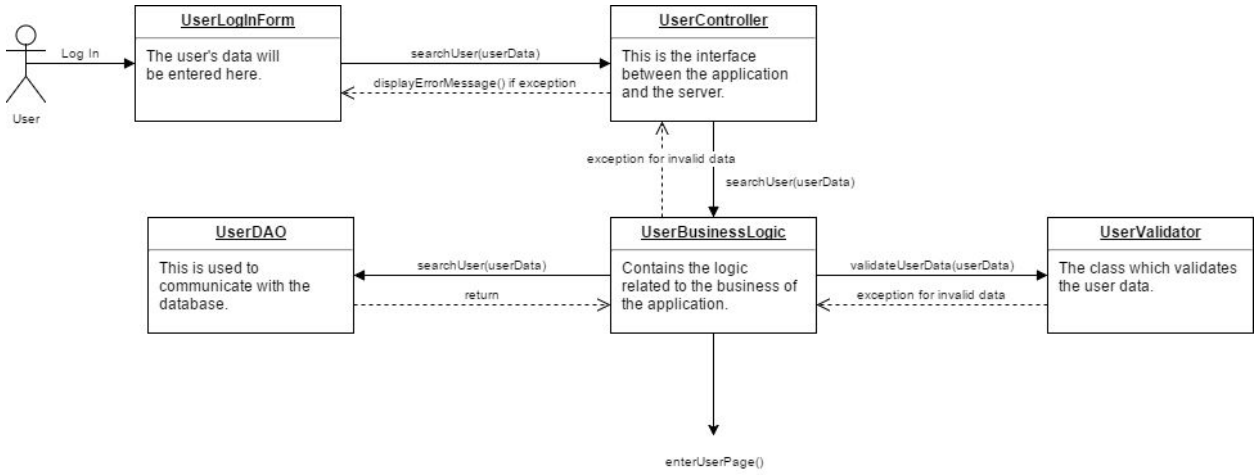
1.1 Dynamic Behavior

Login

Sequence diagram

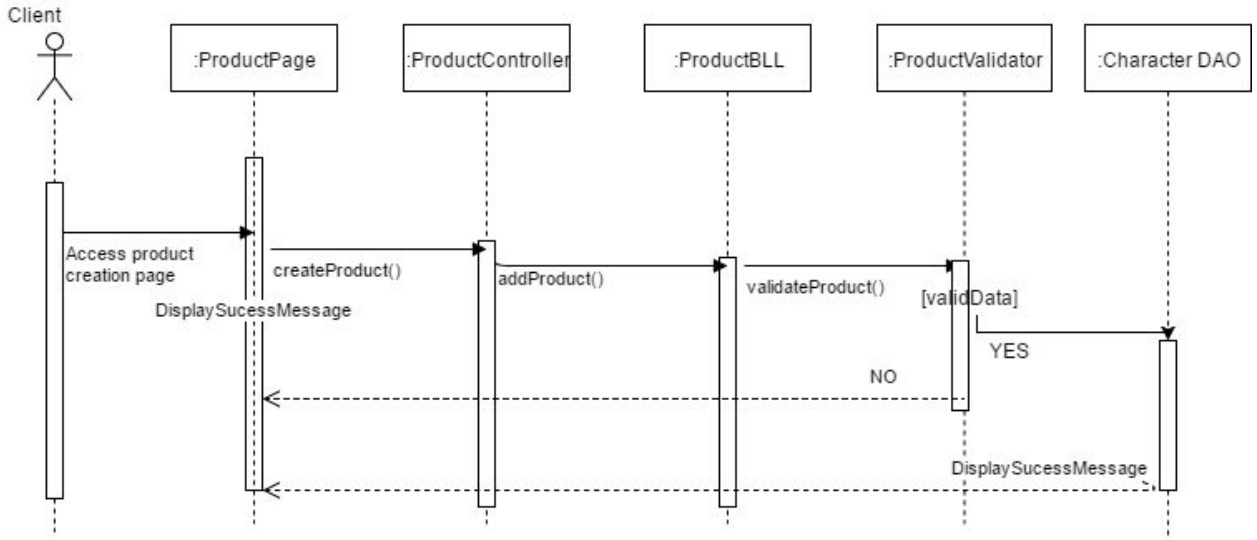


Communication diagram

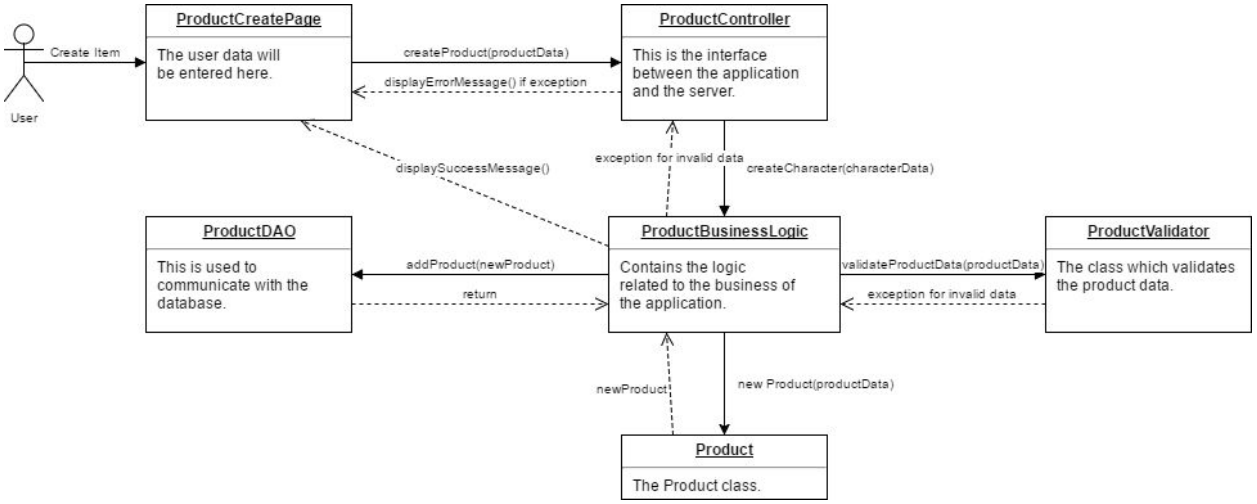


Create item

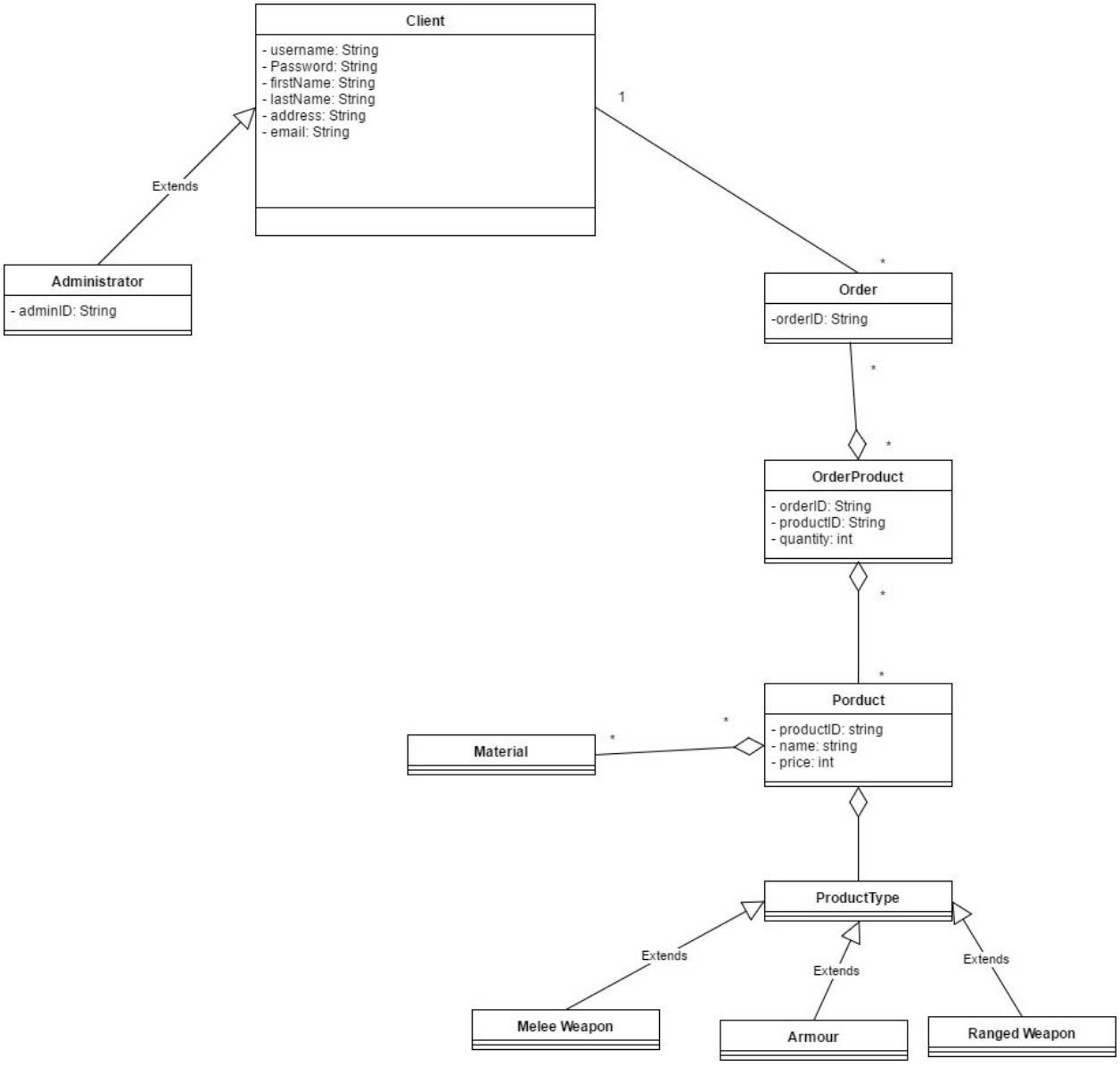
Sequence diagram



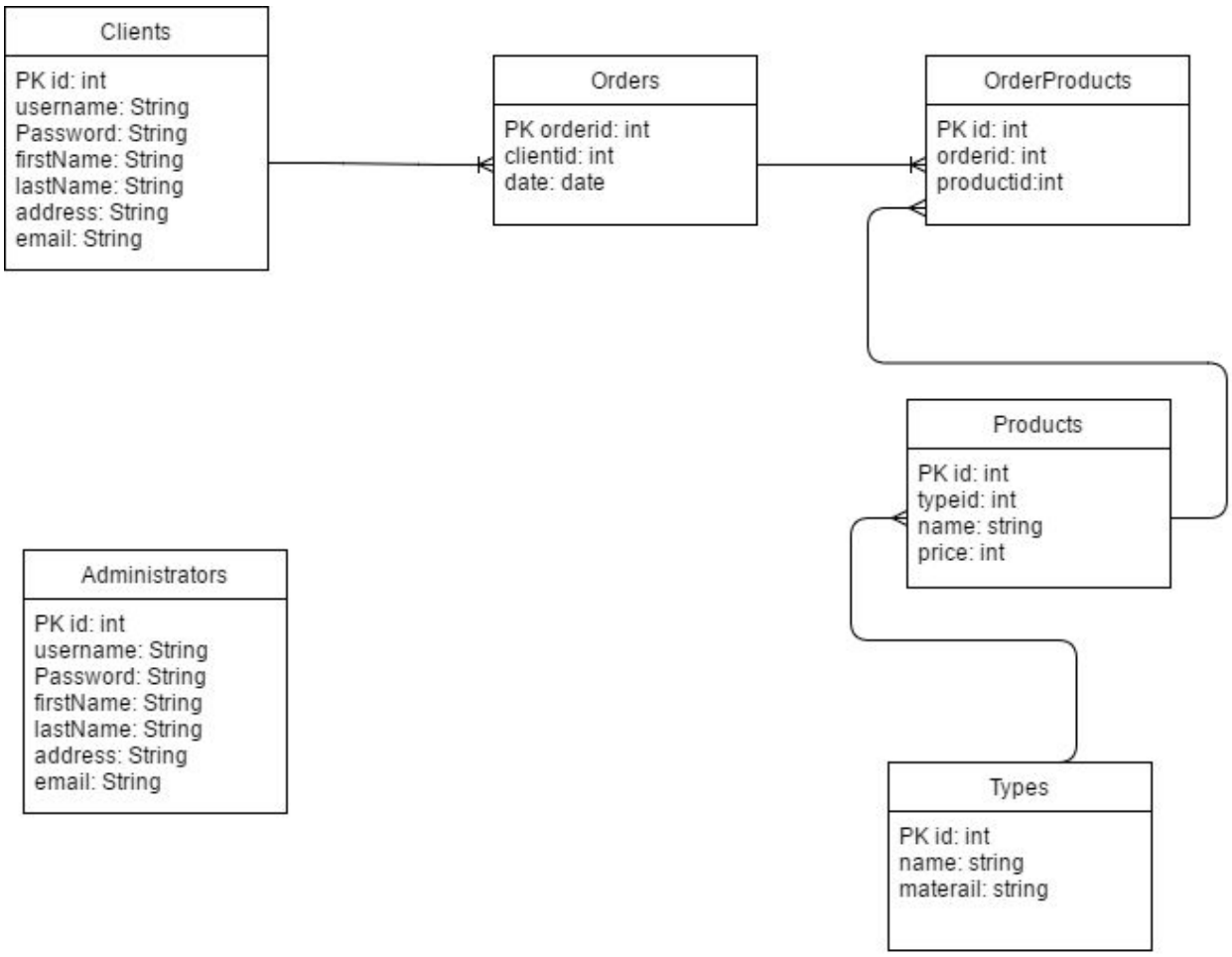
Communication diagram



1.2 Class Design



2. Data Model



3. Unit Testing

The testing strategy used is unit testing which implies separating the code into unit and testing each unit to see if they meet the required functionality.
Test case scenarios:

- CRUD operations on products
- User login/logout
- Creating an order

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.]

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