Best Furniture Deals

Analysis and Design Document

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1. Requirements Analysis

# Assignment Specification

[Application description]

We are tasked to implement an application that users can use to search for furniture deals (same concept as Amazon where costumers are able to find deals from different vendors). Users should be able to filter their query by price, name and type. If a deal is available, users can add that deal to their cart and proceed to checkout. Another feature that the application offers is tracking the order status.

# Functional Requirements

*[Present the functional requirements]*

The application will be designed and implemented in C# offering a graphical user interface.

The users should be able to:

* Create their account
* Login
* Search for deals
* Add products to their cart and checkout
* Provide feedback to an order

The staff / admin should be able to:

* Manage products
* Make discounts
* Update order status

# Non-functional Requirements

*[Discuss the non-functional requirements for the system]*

First requirement is to implement and test the application. Another requirement is to use any OOP language (Java, C#, Python etc.). Another requirement is to use layered architecture. Other non-functional requirement is to use a factory method in order to build and apply discounts on existing which change the order quantity and overall price accordingly.

2. Use-Case Model

*[Create the use-case diagrams and provide one use-case description (according to the format below).*

*Use-Case description format:*

*Use case: <use case goal>*

*Level: <one of: summary level, user-goal level, sub-function>*

*Primary actor: <a role name for the actor who initiates the use case>*

*Main success scenario: <the steps of the main success scenario from trigger to goal delivery>*

*Extensions: <alternate scenarios of success or failure>*

*]*

3. System Architectural Design

**3.1 Architectural Pattern Description**

*[Describe briefly the used architectural patterns.]*

In our application, I structured the application using layered architecture. The layered architecture’s components are organized into horizontal layers, each layer performing a specific role within application (presentation layer, business logic and database access layer) each layer communicates with the layer below and above it. The layers of my application are: DataAccess, BusinessLogic and PresentationLayer.

**3.2 Diagrams**

*[Create the system’s conceptual architecture; use architectural patterns and describe how they are applied. Create package, component and deployment diagrams]*

4. UML Sequence Diagrams

*[Create a sequence diagram for a relevant scenario.]*

5. Class Design

**5.1 Design Patterns Description**

*[Describe briefly the used design patterns.]*

**5.2 UML Class Diagram**

*[Create the UML Class Diagram and highlight and motivate how the design patterns are used.]*

6. Data Model

*[Present the data models used in the system’s implementation.]*

7. System Testing

*[Present the used testing strategies (unit testing, integration testing, validation testing) and testing methods (data-flow, partitioning, boundary analysis, etc.).]*

8. Bibliography