Best Furniture Deals

Analysis and Design Document

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1. Requirements Analysis

# Assignment Specification

The application is a search engine for furniture products. A user is able to create an account and login to search for various provided deals. Deals are managed by staff and can be filtered by price, name and type. Payments can be done via a cash only policy and need to be validated by staff. This creates an order in the system that can be tracked by the user from the Order History section. The state of an order is updated by staff. Once an order is delivered the user can provide feedback in a form on the specific Order History entry details.

# Functional Requirements

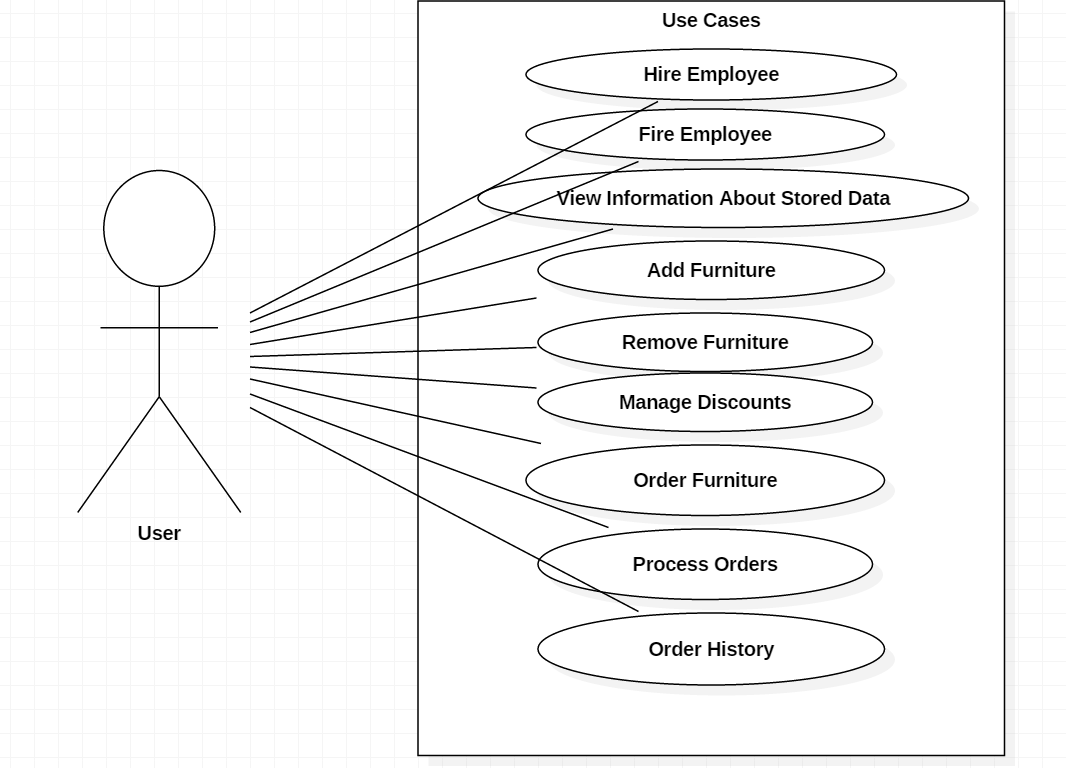
In order to use the application, every user is supposed to create an account and login. The application has three types of users, each one of them having a specific set of rights. The administrator has the rights to perform any operation, employees can manage products, discounts and orders as well as view and order items while customers can view and order products, check their order history and give feedback on the products they bought.

The application allows hireing and fireing employees which implies inserting and removing them from the database. Users, roles and the furniture can also be listed. Furniture can be added and removed from the system. Discounts can also be managed by adding or removing a 10% or 20% price change. This also modifies the product’s price in the database. Every type of user can place orders and view their order history as well as leave feedback to the products they bought and received. Staff members can view and manage the orders, updating their tracking information.

# Non-functional Requirements

The “Best Furniture Deals” application has a good response time, it’s a maintainable application that can be updated and upgraded any time. The information provided by the users is safely stored in a database, passwords are hashed using the SHA-256 algorithm.

2. Use-Case Model

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Use case: Hire Employee

Level: sub-function

Primary actor: admin

Main success scenario:

* Admin clicks Hire Employee from the menu
* Admin enters the new employee’s information
* Admin clicks Hire Employee
* The entered data is valid and the new employee is registered and saved in the database

Extensions:

* The data entered by the admin is not valid and the new employee isn’t registered or saved in the database

3. System Architectural Design

**3.1 Architectural Pattern Description**

*[Describe briefly the used architectural patterns.]*

**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