

# Software Design Document

## Grocery Store Application for COMP 3700

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# 1. Introduction

This introduction consists of a brief overview of the Grocery Store Application for Mr. Smith. It also includes target audience and scope.

## Scope and Purpose

This document includes descriptions of the technical design for the Grocery Store Application, technical details, and a brief overview of the functions available for the application. This document is targeted for Mr. Smith as well as the managers of each grocery store branch and their employees.

## System Development

- Database: SQLite
- Development: IntelliJ and Swing

## Design Approach

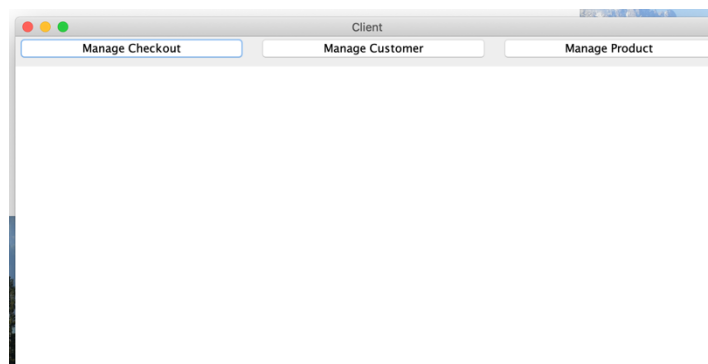
A modular design approach was used for this project; separate sections of the interface were created at different times and incorporated all together at the end of the design process.

## Data Flow

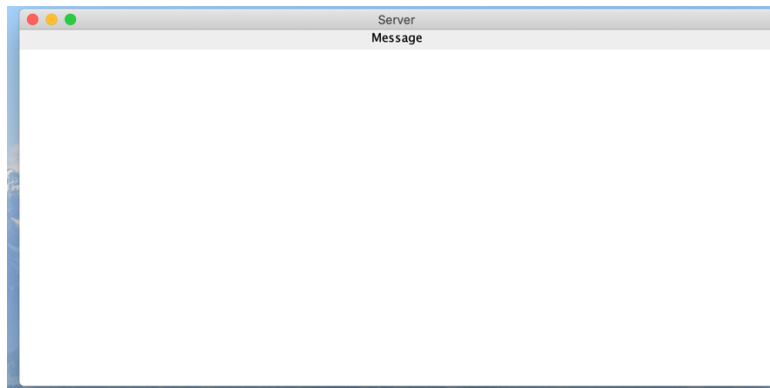
The Grocery Store Application uses a JDBC driver and SQLite to connect clients to a main server with all of Mr. Smith's data. This database is used to manage and keep track of products, customers, and orders for all grocery stores.

## UI Design and Interface

The UI design was created by IntelliJ and Swing and the following screenshots show examples of the interface.



Management screen  
(client side)



Management page (server side)

A screenshot of a web browser window titled 'Manage Product'. The window contains a form with four input fields: 'Product ID', 'Product Name', 'Product Price', and 'Product Quantity'. Below these fields are two buttons: 'Load Product' and 'Save Product'. The form is styled with a light gray background and white input fields.

Page after selecting  
“Manage Product”

## 2. Modules

### Search

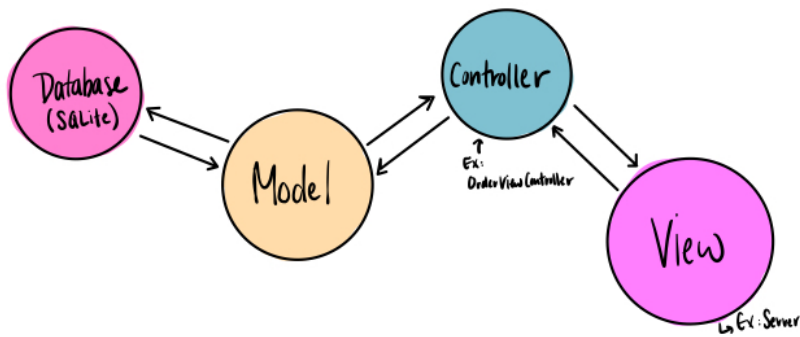
When using any of the “Load” buttons, the user will be able to search the main database to find data. Using the “Save” buttons and inserting the relevant information will save and add new data to the main database. All record of each change and search can be seen in the server’s page.

### Security

The application allows all users who work in the grocery store to make changes and search the grocery store’s main database. Further development should be made in order to work with secure logins for different levels, such as an admin account for Mr. Smith and accounts for all employees in order to keep the data secure.

### 3. Graphs for Grocery Store Application

#### MVC Architecture



#### Client-Server Model

