Software Requirements Specification (SRS)

1. Introduction

1.1 Purpose

The purpose of this document is to specify the functional and non-functional requirements of the "Clothify Store" application. This standalone Point of Sale (POS) system aims to streamline operations, automate inventory, sales tracking, and billing processes, and improve efficiency for the Clothify Store.

1.2 Scope

The "Clothify Store" application will cater to the following needs:

- Manage inventory for categories: Ladies, Gents, and Kids.
- Automate order placement, sales tracking, and report generation.
- Provide user and admin interfaces for role-specific functionalities.
- Simplify supplier and employee management.

The application will be developed using JavaFX, JFoenix, Hibernate, MySQL, and Maven as the build tool.

1.3 Definitions and Acronyms

- **POS**: Point of Sale
- **JavaFX**: A software platform for creating desktop applications.
- **JFoenix**: Material design library for JavaFX.
- **Hibernate**: An ORM tool for database operations.

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2. System Overview

2.1 Interfaces

- **User Interface**: For store employees to manage inventory, place orders, and view reports.
- **Admin Interface**: For the store owner to manage employees, suppliers, and generate detailed reports.

2.2 Key Features

1. **User Management**:

    - Admin can register and manage user accounts.
    - Password management with OTP for recovery.
2. **Product Management**:
    - Categories: Ladies, Gents, Kids.
    - Add, update, and delete products with real-time stock updates.
3. **Supplier Management**:
    - Add, update, or delete supplier details.
    - Link suppliers with products.
4. **Employee Management**:
    - Add, update, or delete employee details.
5. **Order Management**:
    - Place orders, generate receipts, and process returns.
    - Include employee and customer details in order records.
6. **Reports**:
    - Generate sales, inventory, employee, and supplier reports using Jasper Reports.
    - Include charts for visual representation.

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3. Functional Requirements

3.1 User Management

- Register default and admin users.
- Validate login credentials.
- Implement password recovery via email OTP.

3.2 Product Management

- Add new products with ID, name, size, price, and quantity.
- Update and delete product details.
- Automatically adjust stock quantities based on purchases or returns.

3.3 Supplier Management

- Add and manage supplier information.
- View products supplied by each supplier.

3.4 Employee Management

- Allow the admin to manage employee records.

3.5 Order Management

- Capture order details with auto-generated IDs.

- Provide email receipts for customers.
- Support returns and update inventory accordingly.

3.6 Reports

- Generate and print inventory, employee, and supplier reports.
- Admin-only access to sales reports.
- Use charts (line and pie) for data visualization.

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4. Non-Functional Requirements

4.1 Performance

- The system should handle up to 50 concurrent users without performance degradation.

4.2 Usability

- Provide a visually appealing, resizable, and user-friendly interface.

4.3 Reliability

- Ensure data consistency during operations such as inventory updates.

4.4 Security

- Encrypt sensitive user data (e.g., passwords).

4.5 Maintainability

- Follow layered architecture to allow for easy updates and maintenance.

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5. System Architecture

The application will use a layered architecture consisting of:

1. **Presentation Layer**: JavaFX and JFoenix for UI.
2. **Business Logic Layer**: Java classes implementing core functionalities.
3. **Data Access Layer**: Hibernate for database interactions.
4. **Database**: MySQL for data storage.

6. Constraints

- The application must be completed by **February 15, 2025**.
- Use only JavaFX, Hibernate, and MySQL for core development.

7. Deliverables

1. GitHub Repository Link
2. Screenshots of the application
3. Use Case and ER Diagrams
4. SRS Document in PDF format
5. Functional Prototype

8. References

- JavaFX Documentation
- Hibernate ORM Documentation
- MySQL Documentation