



# CLOTHIFY

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## Introduction

This project aims to develop a standalone Point of Sale (POS) system for "Clothify Store," a popular clothing shop in Panadura town. Currently, the store's manual processes for managing sales and inventory lead to inefficiencies and errors. The new POS system will automate these tasks, enhancing operational efficiency and accuracy. By utilizing JavaFX for the user interface, Hibernate for data management, and MySQL for the database, this system will provide a user-friendly solution tailored to the store's needs. The goal is to streamline Clothify Store's operations, improve customer service, and support the store's growth and innovation.

## Objectives

- Understand Requirements : Gather and analyze requirements for a standalone clothing store application.
- Design Architecture : Develop a comprehensive plan including system architecture, database design, and user interface.
- Proficiency in Technologies : Gain expertise in JavaFX, Hibernate, Jasper Reports, and layered architecture.
- Implement Functionality : Ensure data processing and validation using Java.
- Learn Design Patterns : Apply concepts of architectures and design patterns.

## Project Requirements

### ➤ System Overview

- Two interfaces : user interface for store employees and admin interface for the store owner.

### ➤ User Management

- User Registration : Accounts for store employees and admin with email and password.
- User Authentication : Secure login system with OTP for password recovery.

### ➤ Product Management

- Product Catalog: Categories for Ladies, Gents, and Kids with product details.
- Inventory Management: Real-time stock updates with functionalities for adding, updating, and removing items.

### ➤ Supplier and Employee Management

- Supplier Management : Add, update, and remove supplier details.
- Employee Management : Admin capabilities to manage employee details.

### ➤ Order Management

- Order Placement : Capturing order details, generating receipts, and handling returns.
- Order Details : Viewing past orders.

### ➤ Reports

- Reports Generation : Inventory, employee, supplier, and sales reports using Jasper Reports with charts.

## Project Architecture

The project will use a layered architecture, consisting of:

- Presentation Layer : JavaFX with Jfoenix for the user interface.
- Business Logic Layer : Java and Hibernate for data processing and business logic.
- Data Access Layer : MySQL database for persistent storage.

## Technologies

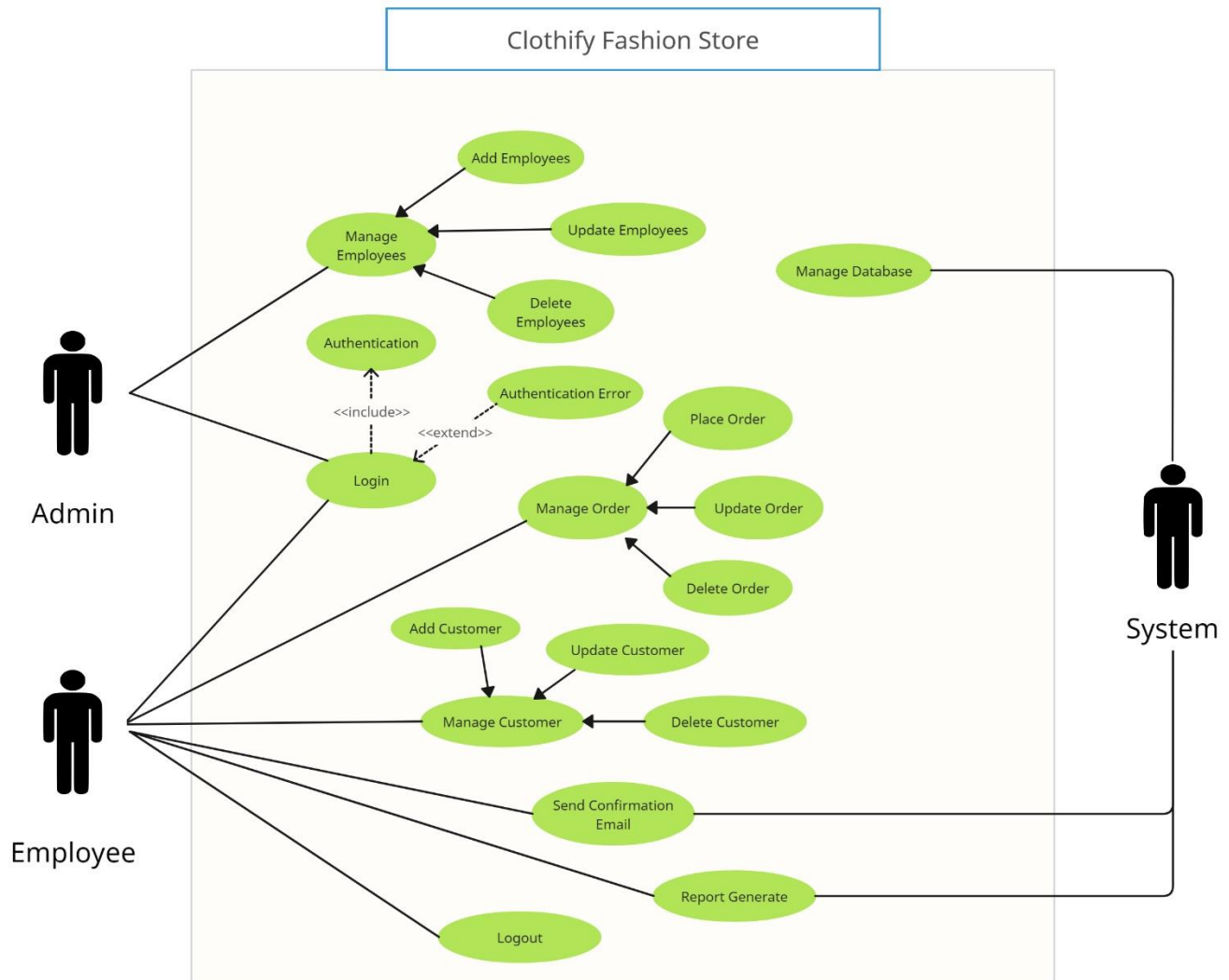
- JavaFX and Jfoenix : For developing a modern and responsive user interface.
- Hibernate : For ORM (Object-Relational Mapping) to interact with the MySQL database.
- MySQL : To store and manage data.
- Maven : For project build management.
- Jasper Reports : For generating detailed and visual reports.
- GitHub : For version control and collaboration.

## Project Flow

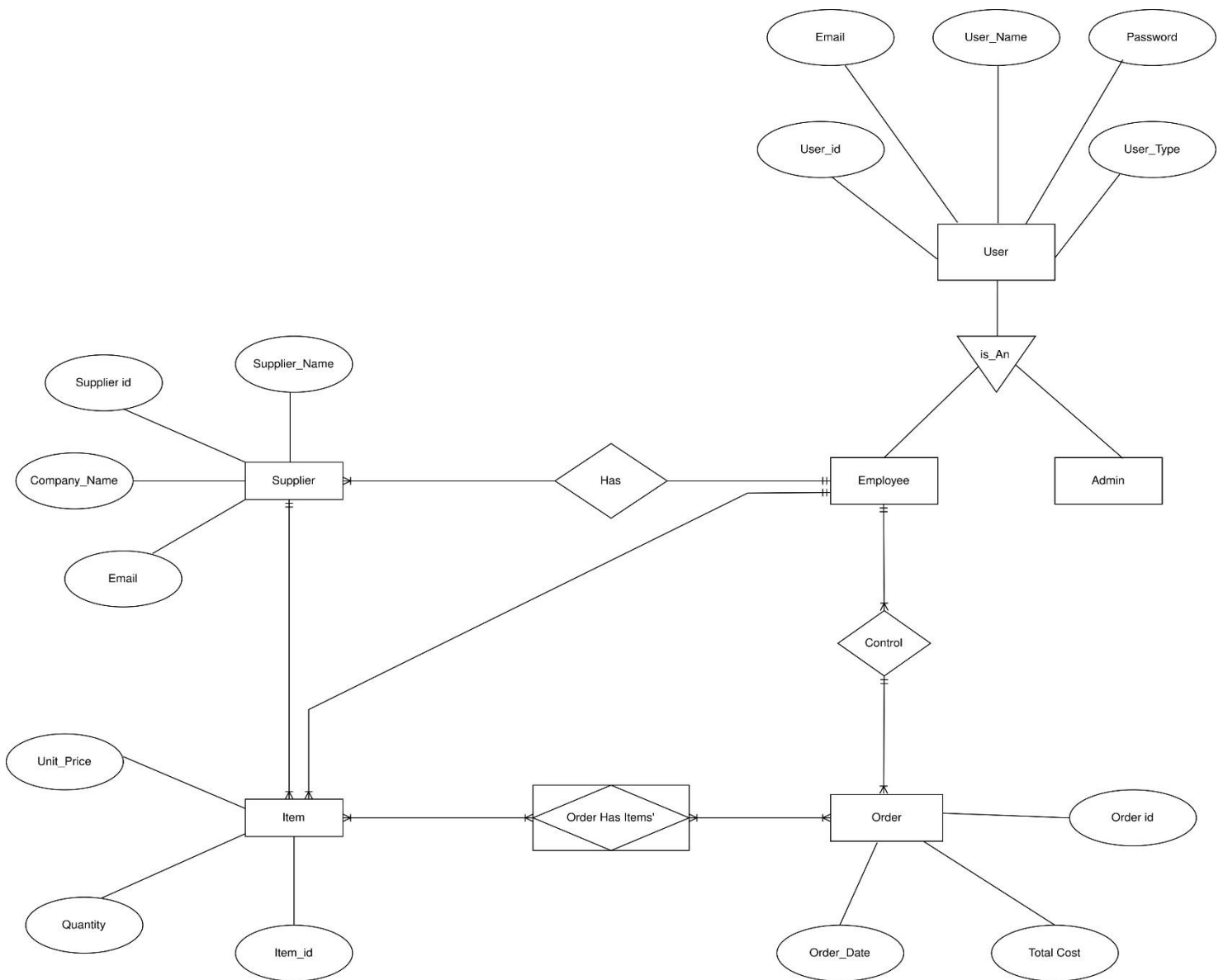
### 1. Project Analysis and Planning

- Understand and prioritize requirements.
- Create ER and Use-case diagrams.
- Supporting Documents:

✓ Use-Case Diagram



## ✓ ER Diagram



## 2. Design and Prototyping

- Develop wireframes and mockups.
- Create interactive prototypes considering UX aspects.
- Supporting Documents:

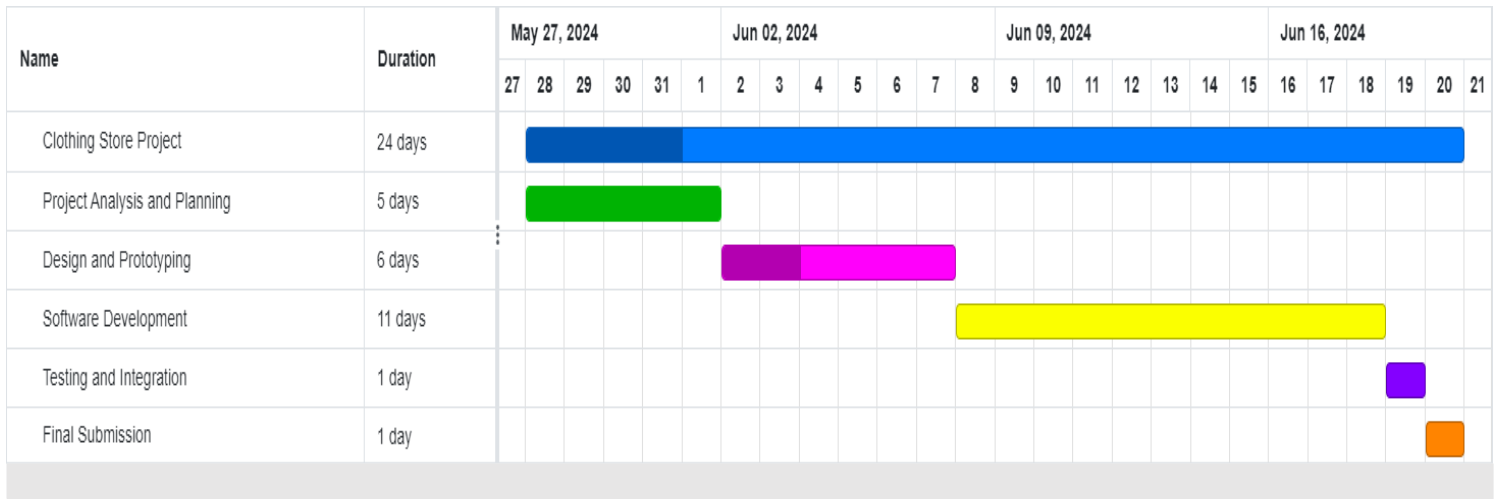
## ✓ Prototype Design

<https://www.figma.com/design/auw2bwqgj2bxwb464ZZCeo/Untitled?node-id=0-1&t=CPosfDlqVIsWPKqY-1>

### 3. Software Development

- Set up development environment.
- Implement features in accordance with best practices and standards.
- Supporting Documents:

✓ Gantt Chart



### Time Frame and Submission Process

- Project Assigning : May 28, 2024
- Milestone 01 : June 4, 2024
  - ✓ Submit time schedule, use case diagram, ER diagram, and prototype design.
- Final Submission : June 20, 2024
  - ✓ Submit completed user interface, database connectivity with Hibernate, and GitHub repository link.



## Conclusion

The development of a standalone POS system for Clothify Store will transform its operational processes, reducing errors and boosting efficiency. By automating sales, inventory, and billing, the new system will enhance productivity and customer service. Utilizing technologies like JavaFX, Hibernate, and MySQL, the application will be robust and user-friendly. This strategic move will position Clothify Store for continued growth and competitiveness in the retail market, ensuring it remains ahead of the curve in delivering exceptional service and trendy, affordable clothing to its customers.

## References

- [JavaFX Documentation](#)
- [Hibernate ORM Documentation](#)
- [MySQL Documentation](#)
- [Maven Repository](#)
- [Password Encryption](#)