**Project Document: Inventory Management System**

Table of Contents

1. Introduction

1.1. Purpose of the Document

1.2. Project Overview

1.3. Scope

2. System Requirements

2.1. Functional Requirements

3. Architecture

3.1. Functional Requirements

3.2. Class Diagram

3.3. Sequence Diagrams

4. Technologies Used

5. Conclusion

6. References

**1. Introduction**

1.1. Purpose of the Document

- This document outlines the design and implementation of an Inventory Management System using Core Java, Oracle SQL database, JUnit, Jenkins, and Docker.

1.2. Project Overview

- The project aims to create a robust inventory management system to track products, manage stock, and handle orders in a user-friendly interface.

1.3. Scope

- The system will include user authentication, product management, stock tracking, order processing, and reporting features.

**2. System Requirements**

2.1. Functional Requirements

- User authentication and role-based access control.

- Product creation, update, and deletion.

- Stock tracking with notifications for low stock.

- Order placement, processing, and history tracking.

- Reporting for sales, stock levels, and order history.

**3. Architecture**

3.1. Functional Requirements

- User Management Module

- Product Management Module

- Stock Tracking Module

- Order Processing Module

- Reporting Module

**3.2. Class Diagram**

- Create a class diagram representing the major classes and their relationships in the system.

3.3. Sequence Diagrams+

- Create sequence diagrams for key interactions, such as placing an order or updating stock.

**5. Technologies Used**

- Core Java for application logic.

- Oracle SQL database for data storage.

- JUnit for unit testing.

- Jenkins for continuous integration.

- Docker for containerization.

**6. Conclusion**

- Summarize the achievements and lessons learned during the development of the Inventory Management System.

**7. References**

- List resources, tutorials, and documentation used during the project development.

Please note that this outline provides a framework for your project. You will need to flesh out each section with detailed descriptions, code samples, and implementation specifics. The project is quite extensive, so I recommend breaking it down into smaller tasks and working on them incrementally.