SOFTWARE REQUIRMENTS SPECIFICATION (SRS)

Jewellery businesses often face challenges in managing customer details, inventory, and billing efficiently using traditional methods. Manual handling of such operations can lead to errors, data loss, and unorganized processes. The Jewellery Shop Management System aims to eliminate these issues by offering a fully digital, user-friendly, and feature-rich platform.

1. INTRODUCTION

This system allows shopkeepers and employees to manage jewellery items, perform quick billing, track customer purchases, generate invoices, and monitor inventory in real time. With a clean UI, role-based access, and database-backed operations, it ensures both security and productivity.

The main goals of this system are:

• To streamline the sales and billing process
• To organize customer and inventory data
• To generate accurate reports and summaries
• To provide data security with role-based access
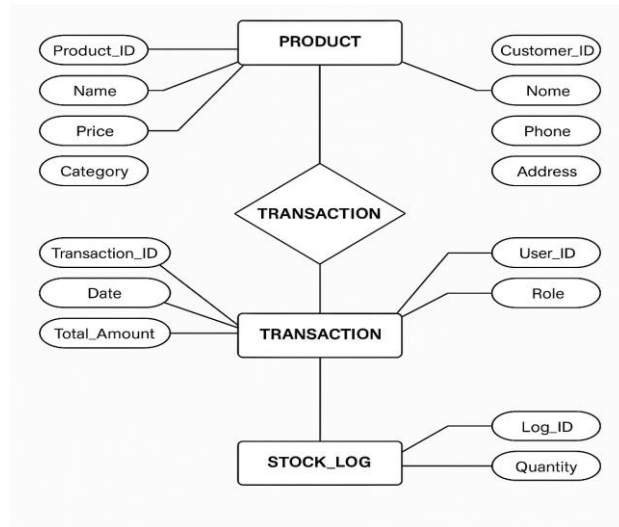
2. SYSTEM OVERVIEW

The system is built on a three-tier architecture:

• Presentation Layer: Developed using HTML, CSS, JavaScript, and Bootstrap

• Business Logic Layer: Powered by Java and Spring Boot

• Data Layer: Managed using MySQL relational database

The users include: Admin and Employee. Admin can manage all operations including user creation, inventory, billing, and reports. Employees have limited access for billing and customer handling only.

Major features include:

• Login/Authentication module
• Product management

- Inventory tracking
- Customer database
- Billing & GST calculations
- Invoice generation
- Sales reports

2. FUNCTIONAL REQUIRMENTS

This SRS defines the requirements and specifications for a fully functional Jewellery Shop Management System. It aims to transform manual operations into digital workflows that improve efficiency and customer satisfaction.

- Authentication Module: Login page for Admin and Employee, password-based authentication, and role-based access control.
- Product Module: Add/edit/delete jewellery items, assign attributes like purity, weight, price, and type, and update stock in real-time.
- Billing Module: Add multiple products to invoice, automatic GST and discount calculation, and generate printable invoices.
- Customer Module: Add and retrieve customer details, link customer to every purchase, and maintain purchase history.
- Report Module: Generate daily/monthly sales reports, filter reports by item or date, and export in printable format.

3. Non-Functional Requirements

The Jewellery Shop Management System aims to eliminate these issues by offering a fully digital, user-friendly, and feature-rich platform.

- Performance: System should respond to user actions within 2 seconds and handle up to 500 transactions per day.
- Security: Only authorized users can log in. Passwords are stored in encrypted format with role-based rights.
- Reliability & Backup: Ensures no data loss on shutdown and includes database backup functionality.
- Usability: Easy-to-use interface requiring minimal training with clean and responsive design.
- Scalability: Supports future enhancements like SMS alerts, barcode integration, and multiple branches.

4. System Models & Constraints

This system allows shopkeepers and employees to manage jewellery items, perform quick billing, track customer purchases, generate invoices, and monitor inventory in real time. With a clean UI, role-based access, and database-backed operations, it ensures both security and productivity.

- Data Flow Diagram (DFD): Level 0 shows User, System, and Database interaction. Level 1 details modules such as Login, Product, Customer, and Billing.
- ER Diagram: Includes tables like Users, Products, Customers, Invoices, and Invoice_Items with relevant relationships.
- UML Use Case Diagram: Actors include Admin and Employee. Use cases cover Login, Add Product, Create Invoice, and View Report.
- System Constraints: Requires internet for cloud features, works on modern browsers, and compatible with MySQL 5.7 and Java 11.

6. Conclusion

This SRS defines the requirements and specifications for a fully functional Jewellery Shop Management System. It aims to transform manual operations into digital workflows that improve efficiency and customer satisfaction.

Key future enhancements may include:

• SMS and email alerts
• Barcode scanning
• Gold price API integration
• Cloud hosting for remote access