



Project Report

Cross-Platform Billing & Inventory Management Application

1. Introduction

The **Cross-Platform Billing & Inventory Management Application** is a full-stack business solution designed to manage **billing, invoices, payments, stock, and financial tracking** from a single system.

The application supports **Android, iOS, Web, and Desktop** platforms using a unified architecture, making it suitable for small and medium-scale businesses.

This system eliminates manual billing processes, reduces errors, and provides real-time insights into sales and inventory.

2. Problem Statement

Many small businesses rely on manual billing systems or separate tools for invoices, stock, and payment tracking. These systems are:

- Error-prone
- Time-consuming
- Not synchronized across devices
- Difficult to scale

The objective of this project is to develop a **secure, scalable, and cloud-based billing system** that works across multiple platforms.

3. Objectives of the Project

- To create a **cross-platform billing application**
 - To manage **products, stock, invoices, and payments**
 - To provide **real-time financial reports**
 - To ensure **secure authentication and data integrity**
 - To offer a **user-friendly interface**
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4. Scope of the Project

The application can be used by:

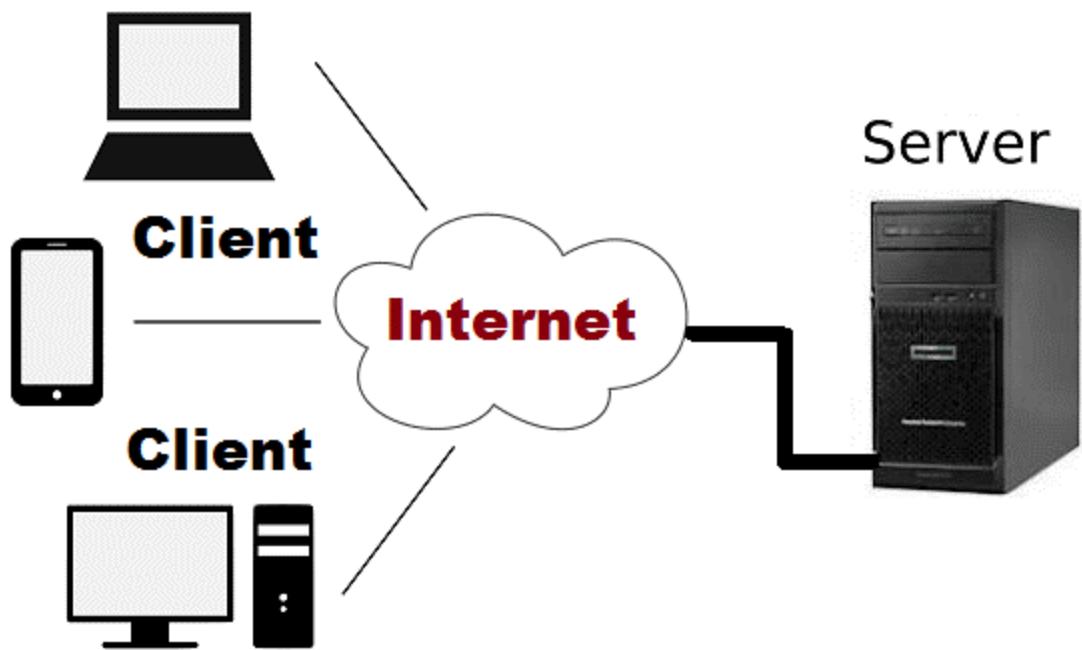
- Retail shops
- Small businesses
- Service providers

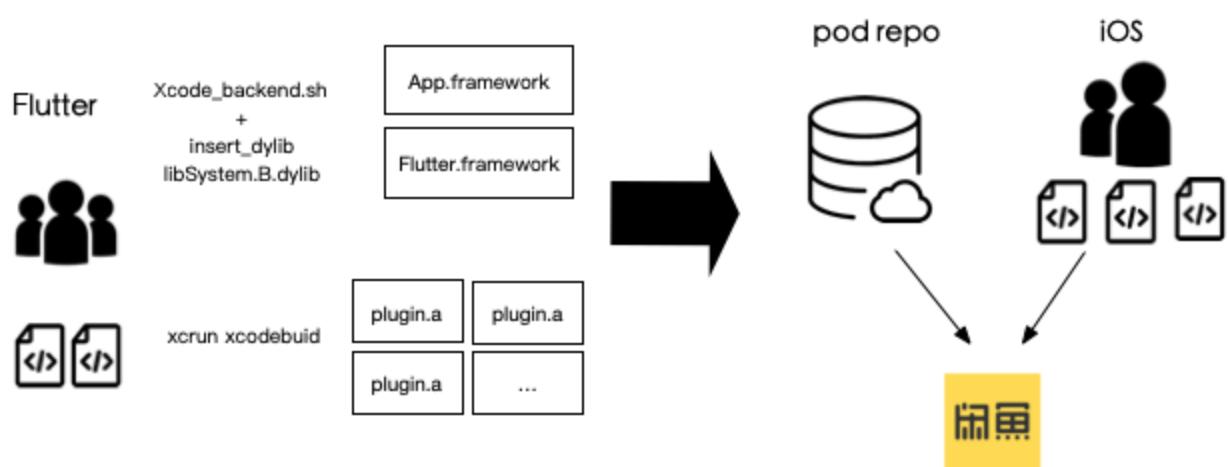
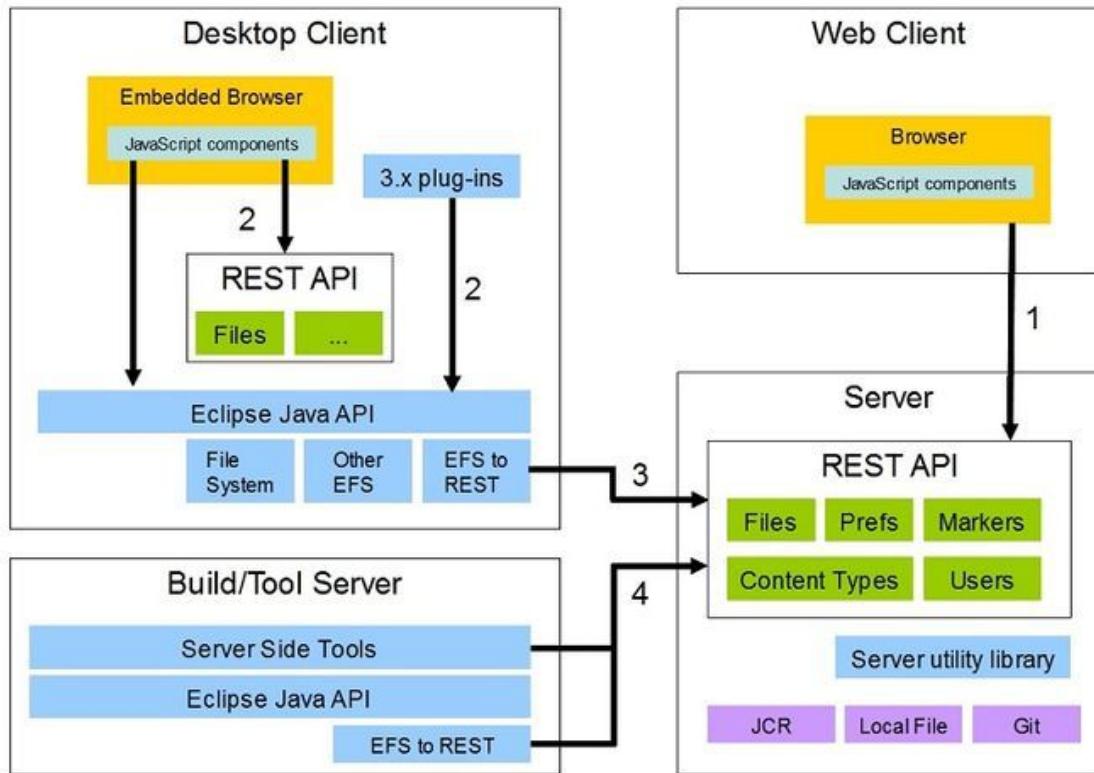
The system supports:

- Invoice generation
 - Stock management
 - Payment tracking
 - Business reports
 - Multi-device access
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5. System Architecture

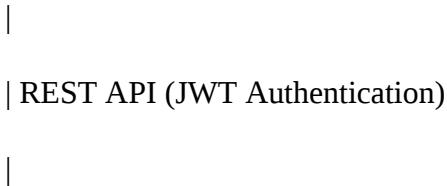
The application follows a **client–server architecture**.



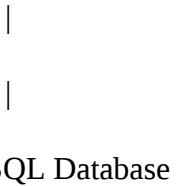


Architecture Flow:

Flutter Application
(Android / iOS / Web / Desktop)



Spring Boot Backend



6. Technology Stack

Frontend

- **Flutter** – Cross-platform UI framework
- **Dart** – Programming language
- **REST API Integration**

Backend

- **Java**
- **Spring Boot**

- Spring Security (JWT Authentication)

Database

- MySQL

Payment Integration

- UPI / Card / Wallet (via Payment Gateway API)

Tools & Platforms

- Git & GitHub
 - Postman
 - Android Studio
 - VS Code
 - MySQL Workbench
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7. Modules Description

7.1 Authentication Module

- User Registration
- Secure Login using JWT

- Role-based access control

7.2 Billing & Invoice Module

- Create invoices
- Auto invoice numbering
- Tax calculation
- Invoice history

7.3 Inventory Management Module

- Product management
- Stock tracking
- Auto stock update after billing

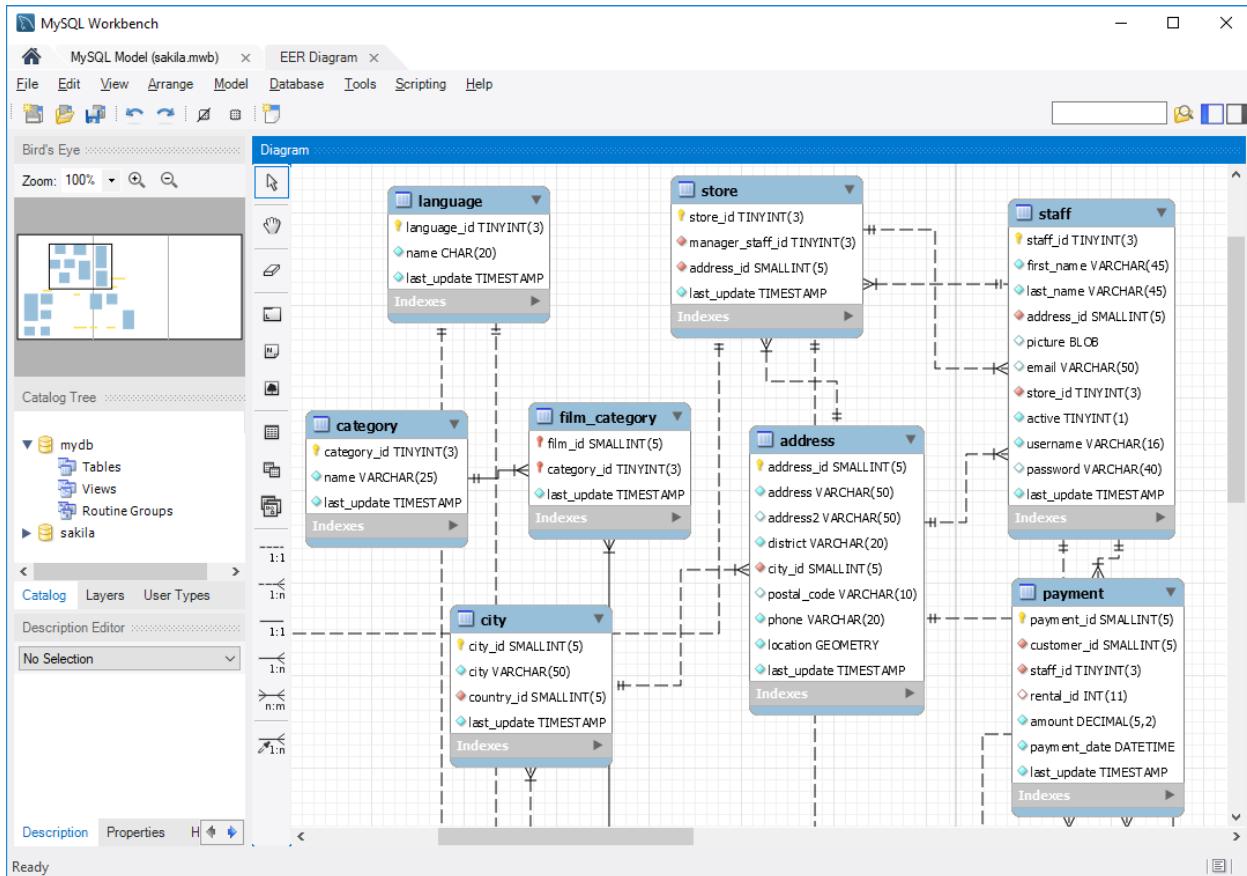
7.4 Payment Module

- Multiple payment modes
- Payment status tracking
- Transaction history

7.5 Reports Module

- Sales reports
- Monthly revenue
- Stock reports

8. Database Design (Overview)



Main Tables:

- Users

- Products
 - Invoices
 - Invoice_Items
 - Payments
 - Stock_Logs
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9. Security Features

- JWT-based authentication
 - Role-based authorization
 - Secure REST APIs
 - Encrypted passwords
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10. Advantages of the System

- Cross-platform support
- Centralized data management
- Reduced manual work
- Scalable architecture
- Secure and reliable

11. Future Enhancements

- Online payment gateway integration
 - GST reports
 - Cloud backup
 - Notification system
 - Subscription-based plans
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12. Conclusion

The **Cross-Platform Billing & Inventory Management Application** provides a reliable and efficient solution for managing business operations.

By leveraging modern technologies like **Flutter** and **Spring Boot**, the system ensures scalability, security, and ease of use.



Where to Paste This Report?

- ✓ 1. College / University Project Submission

- Paste into:
 - **MS Word (.docx) or PDF**
 - Sections are already in **academic format**
 - Add:
 - Cover page
 - Certificate
 - Acknowledgement
-

2. GitHub Repository

Paste in:

- **README.md**

 Use sections:

- Introduction
 - Tech Stack
 - Features
 - Architecture
 - Future Scope
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3. Resume (Short Version)

Add this under **Projects**:

Cross-Platform Billing & Inventory Management App

- Built using Flutter, Spring Boot, and MySQL
 - Implemented billing, inventory, and payment tracking
 - Designed secure REST APIs with JWT authentication
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4. YouTube / Portfolio Website

- Use **Introduction + Features + Tech Stack**
 - Add screenshots and demo link
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