**System Sync Project Scope**

**Project Name:** Small Business Inventory Management & Sales Record System

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**Business Problem**

A large number of small retail store owners manage their sales and inventory using manual spreadsheets, processes lacking automation and accuracy. Not only will this method lead to data inaccuracies, but delayed decision-making and a limited amount of inventory and sales visibility are results of manual management. This may lead to false stockouts, over-purchasing, delayed restocks, poor product performance tracking, and poor sales tracking. Since there is no up-to-date system that allows store owners to view product performances, high-demand items or excessive purchases of lower-demand items may occur. This can result in lost revenue and wasted inventory.

Additionally, sales owners may not be able to properly analyze sales trends or calculate profits. Lacking a point-of-sale (POS) workflow, transaction errors may occur more frequently, and accountability is harder to determine as there is no audit trails. These inefficiencies in a business make management and tracking a very complicated task.

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**Scope Statement**

This project will design and implement the Small Business Inventory Management & Sales Record System to automate product management, sales tracking, and inventory monitoring.

The solution will include:

* POS-style sales entry interface
* Sales trend and product performance tracking
* Inventory control database
* Dashboard for sale summaries
* Product and supplier management component
* Sales and inventory reports
* Low-stock alerts
* Audit trails (who/what/when)

The system will improve customer satisfaction, data accuracy, operational efficiency, and decision-making processes.

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**In-Scope**

System features will include:

* Role-based log-in (Admin, system owner, cashier access levels); admin/owner override
* Product and supplier management (add, update, delete, or view data from database)
* POS-style sales entry interface for managing and recording all transactions
* Printed/emailed receipts
* Inventory and restock tracking
* Stock integrity (prevent sales that drop stock below zero, allow administrator/owner override with justifiable reason and log all overrides with user, timestamp, item, quantity, and reasonR)
* Block negative stock and administrator override
* Audit logging (timestamps included)
* Revenue tracking
* Service activity tracking
* Automatic inventory updates
* PO receive and discrepancy handling
* Inventory value and stock movement, filters, CSV/PDF export
* Low-stock alerts with per-product thresholds, visible in dashboard and optional email notifications
* Email receipts/alerts via system SMTP

Integrations will include:

* Internal integration between product, supplier, inventory, POS, and reporting modules
* Central database that is connected to all modules

Reporting dashboards will include:

* Daily/weekly/monthly sales summaries
* Inventory valuation and stock movement reports
* Filters (date range, product category, service type)
* Exporting to CSV and PDF.

**Out-of-Scope**

* Loyalty programs or customer membership tracking module
* Third-party integration (transaction gateway or accounting platform)
* Email cannot use a third-party gateway (email receipts/alerts via system SMTP is within scope)

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**Objectives**

1. Reduce inventory errors by replacing manual tracking methods with automatic inventory management.
2. Enable store owner or staff to save time viewing sales summary reports with automated sale summary creation.
3. Generate sales summary reports automatically after requested in the system.
4. Provide real-time low stock indications when quantity drops below a set threshold level.

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**Deliverables**

Deliverable 1 – Database design and system requirements

Deliverable 2 – Product, supplier, sales, POS integration, and inventory modules (working MVP)

Deliverable 3 – Reporting dashboard

Deliverable 4 – Final presentation and demonstration

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**Constraints**

* Timeline: Must be completed within two academic semesters
* Technology: PHP, JavaScript, MySQL, and Python
* Team size: 3 developers
* Environment: restricted to an online environment

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**Assumptions**

* Store owner will provide store product and supplier data to migrate into system.
* All users have access to a computer for system operations.
* Reliable Internet access is available.

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**Risks and Mitigation**

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| **Risk** | **Impact** | **Likelihood** | **Mitigation Strategy** |
| Inaccurate spreadsheet data | High | Medium | Confirm data accuracy before migration, and make manual corrections |
| Scope creep | High | Medium | Confirm project scope and do not change it; document future features if possible another time |
| Issues with large sales history and summaries | Medium | Low | Set report size limits |
| Poor user adaption | High | Medium | Perform user testing before full implementation. |

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