**A PROPOSED OFFERING OF INVENTORY AND SALES SYSTEM FOR APANDAYAN SCHOOL SUPPLIES STORE**

A Project Proposal Presented to the

Faculty of Datamex College of Saint Adeline, Inc.

In Partial Fulfillment of the Requirements for the

Degree of Bachelor of Science in Information Technology

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October 2025

**REQUIREMENT SPECIFICATION**

**INTRODUCTION**

This project we proposed the development of a desktop-based Inventory and Sales System specifically designed for Pandayan’s School Supplies Store. Through our observations we found that the store currently uses manual recording methods for tracking inventory and sales. This process is time-consuming, prone to human error, and makes it difficult to retrieve accurate data especially during busy school days.

Our goal is to create a system that simplifies and automates these tasks. With this system, users will be able to register products, monitor stock levels, and log daily sales all within a user-friendly interface. It will also feature role-based security.cashier will have full control over inventory and reporting, while Manager will be able to log sales and view product availability.

**Manager**

**Login Page** – Secure login form for managers with role selection, username, and password input.

**Dashboard** – Displays current date and username. Shows daily sales summary, inventory status (low stock, out of stock, expired items), and total accounts. Includes a daily sales graph and a table listing inventory notifications. Sidebar buttons allow navigation to Inventory, Accounts, and Logout.

**Accounts Module** – Allows the manager to view and edit employee details including full name, username, password, role, contact number, and Gmail. Employee records are displayed in a searchable data grid view.

**Inventory Module** – Displays product details such as product ID, name, category, quantity, unit price, and selling price. Includes a search bar and inventory statistics (total items, low stock, out of stock).

**Cashier**

**Login Page** – Secure login form for cashiers with role selection, username, and password input.

**Dashboard** – Displays current date and username. Shows total sales for the day, transaction count, and a table of recent transactions with details like transaction ID, date, time, gross, VAT, and total. Includes a daily sales graph.

**Sales Module** – Allows the cashier to select products, add them to the cart, and process transactions. The cart table shows product ID, name, quantity, price, and total. VAT is auto-calculated, and cash input is provided.

**Transaction History** – Displays past transactions in a searchable table with filters by date. Shows summaries of today’s sales, yesterday’s sales, and accumulated VAT.

**Inventory**

**Login Page** – Secure login form for inventory staff with role selection, username, and password input.

**Dashboard** – Displays current date and username. Shows inventory statistics such as total items, low stock, and out-of-stock counts. Includes a notification table listing products that need attention.

**Inventory Module** – Allows staff to add, update, delete, and clear product entries. The form includes fields for product ID, name, category, quantity, unit price, and selling price. Buttons are available for uploading images and generating barcodes.

**Inventory Table** – Displays all product details in a searchable data grid view. Helps staff monitor stock levels and maintain accurate records.

**FUNCTIONAL REQUIREMENTS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ID** | **Description** | **Priority** | **Dependencies** | **Acceptance Criteria** |
| FR-001 | Add new product with product ID, name, category, quantity, unit price, and selling price. | High | None | Product appears in inventory list |
| FR-002 | Update product details | High | FR-001 | Changes reflect in inventory |
| FR-003 | Log daily sales | High | FR-001 | Sale recorded with timestamp |
| FR-004 | Generate Graph report. | Medium | FR-001, FR-002 | Report displays current stock |
| FR-005 | Search product name/code/category. | High | FR-001 | Product found in search results |
| FR-006 | |  |  | | --- | --- | | Manager login with full access. |  | | High | None | Manager can access all modules |
| FR-007 | Cashier login with limited access. | High | FR-007 | Cashier can only encode/view data |

*Table 3. Revision History*

**NON- FUNCTIONAL REQUIREMENTS**

**Performance**

* System responds within 2 seconds for search and logging actions.
* Optimized queries for faster data retrieval from SSMS Access database

**Usability**

* Interface designed for users with basic computer skills.
* System is user-friendly it is easy to use.

**Reliability**

* The system should be available all the time.
* System auto-saves data after every transaction.
* Backup feature available to prevent data loss.

**Security**

* Role-based access control; password-protected login.
* System logs user activity for accountability.

**Scalability**

* Supports adding unlimited school supply products, depending on the available storage capacity of the device.

**Maintainability**

* Updates and bug fixes must be deployable without causing significant service interruption.

**USE CASES**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Use Case ID** | **Use Case Name** | **Description** | **Actors** | **Preconditions** | **Preconditions** | **Alternate Flows** |
| **Phase1** | Log New Products | Cashier inputs product details (name, category, quantity, price) into the system. | cashier, System | Cashier is logged in System is online. | Product is added to inventory stock count is updated. | If system crashes, entry is lost Cashier must re-enter. |
| **Phase2** | Record Sales Transaction | Cashier selects items sold, enters quantity and logs the sale. | Cashier, System | Admin is logged in Inventory has available stock. | Sale is recorded inventory is updated receipt is generated. | If item is out of stock, system shows warning - Admin adjusts quantity. |
| **Phase3** | Generate Daily Sales Graph | Manager views or exports summary of daily sales. | Admin, System | Admin is logged in Sales data exists. | Report is displayed or saved. | If no sales data, system shows “No transactions recorded.” |
| **Phase4** | Update Inventory | Admin edits product details or adjusts stock levels (restock, corrections). | Admin, System | Admin is logged in Product exists in inventory. | Product info or stock count is updated. | If invalid data entered, system prompts correction |
| **Phase5** | Manage User Access | Admin adds, edits. | Admin, System | Admin is authenticated; System is offline. | User account is created/updated/deleted. | If username exists, system shows error Admin must choose a new one. |

*Table 2. Uses Cases*

**DATA REQUIREMENTS**

**Product ID** – A unique number or code assigned to each product to help identify it and avoid confusion with other items in the inventory.

**Product Name** – The actual name of the item being sold (e.g., notebook, ballpen, eraser), used for display and search purposes.

**Category** – A classification or group that the product belongs to, such as writing materials, paper products, or art supplies. This helps organize items and makes searching easier.

**Quantity** – The number of units currently available in stock. This helps the admin and inventory staff know when to restock or monitor low supplies.

**Unit Price** – The original cost of the product before markup. This is used internally to calculate profit and track pricing.

**Selling Price** – The final price offered to customers, which includes the markup added to the unit price. This helps determine the store’s earnings per item.

**Relationship**

**Product can appear in multiple sales transactions. When the customer purchases an item, the system records which product was sold, its price, and how many quantities were included in the transaction. This relationship ensures that all sales are correctly linked back to the specific products.**

**Sales Transaction**

**ItemCode** - Unique code given to each item for identification. This makes it easier to track and avoid confusion between similar products.

**ItemName** - The actual name of the item being sold.

**Client**- The name or details of the customer who bought the item. This helps record who made the purchase.

**Date**- The exact day the transaction happened, so the store can monitor daily or monthly sales.

**Quantity**-The number of pieces or units the client bought in that transaction.

**Cost**-The price of one unit of the item. This shows how much a single piece costs.

**TotalCost**- The overall amount the client needs to pay. It is calculated by multiplying the quantity by the cost.

**Relationship**

Product can also be linked to multiple inventory log entries. Whenever stock is added, removed, or adjusted, the system records the product involved and the change in quantity. This relationship helps maintain accurate records of stock movement over time.

**User Account**

**UserID -** Unique number or code given to each user. This is used to identify users in the system without confusion.

**Username**- The name the user types in when logging in. It must be unique so no two users have the same login name.

**Password**- A secret word or code chosen by the user. In the system, it is stored in encrypted form to protect it from being stolen.

**Role** - It Defines what the user can do inside the system.

**Relationship**

Each sales transaction is associated with the user who processed it. This means Manager is accountable for every sale they handle. The relationship allows the system to track which user performed the transaction, supporting accountability and performance monitoring.

**Inventory Logs**

**LogID** - Number or code for each inventory log entry. This helps identify and separate one record from another.

**ProductID** - Refers to the ID of the product that was changed. It connects the log to a specific product in the inventory.

**QuantityChanged** - The number of items added or removed during the change.

**Date** - The exact date when the stock change happened.

**UserID** - Identifies the user (Manager) who made the change, so the system knows who updated the inventory.

**Relationship**

Each inventory log entry is also associated with the user who updated the stock. This means only authorized admin can adjust the inventory, and the system records who made the changes. This relationship helps ensure transparency and security in stock management.

**ASSUMPTIONS AND CONSTRAINTS**

**Assumptions**

* Manager are expected to have basic computer knowledge, allowing them to use the system without the need for extensive training.
* Every product in the store will have a unique Product ID to make sure items are not duplicated or confused with other products.
* All sales transactions will be recorded immediately after they happen, ensuring that the records are accurate and up to date.
* The store will regularly create backup files of the system data to protect against accidental loss or damage.
* The system will run in an offline desktop environment, making it reliable for stores that do not have stable internet access.

**Constraints**

* The system is designed only for desktop use and does not include mobile or online versions.
* Only one Manager and Cashier account can be active in the system at a time to avoid conflicts in control and management.
* The system relies on proper computer hardware and electricity, which means it cannot function during power outages or if the equipment fails.
* The system is not designed for multiple computers to use it at the same time only one device can actively access it at once.

**Login Page –** A secure login form used by the admin to access the system. It requires entering a username and a password, which is masked with asterisks for protection.

**Dashboard** – The main screen that shows the current time, total number of products and stock items, and a list of products with zero quantity. It also includes sidebar buttons for navigating to quantity updates, stock management, and logout.

**Manage Stock –** A module that allows the admin to search and filter products by category and view specific item details using an ID input.

**Manager –** The system user with full access to all modules, including login, dashboard, and stock management.

**REVISION HISTORY**

*Table 3. Revision history*

|  |  |  |
| --- | --- | --- |
| August 10, 2025 | Introduction, Client Information, Project scope. | Revision of the consistent format and parts of the document follow the same structure, style, and layout. |
| August 12, 2025 | Project Approach, Project Team, Project timeline. | Revision of not consistent font, and figure table, fix the simply words. |
| August 16,2025 | Project Resources, Risk Management, Communication Plan. | Revision of the Format, fix the words that are deeply, creating tables. |
| August 22,2025 | Project Governance, Approval, Appendix. | Fixing the words are deeply. |

**APPENDIX**

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