**A PROPOSED OFFERING OF INVENTORY AND SALES SYSTEM FOR EVA’S 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

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**TESTING DOCUMENTATION**

**INTRODUCTION**

The purpose of the testing phase is to ensure that the system functions correctly and meets the intended requirements before deployment. This phase allows the development team to identify bugs, verify system behavior, and confirm that all modules operate as expected.

The main objectives of the testing process are to validate system features, detect and resolve errors, and ensure compatibility with client devices and network configurations. It also aims to confirm that user inputs, database operations, and report generation work smoothly.

The scope of testing includes core modules such as login, inventory management, report generation, database connectivity, and user interface responsiveness. However, the testing does not cover third-party API integrations, mobile compatibility, or stress testing under high-volume data, as these are not applicable to the current system setup.

**TESTING ENVIRONMENT**

The following devices and configurations were used during testing to ensure compatibility and performance.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Device Type** | **Processor** | **RAM** | **Operating System** | **Storage Type** | **Device Type** |
| Laptop (Dev PC) | AMD Ryzen 5 6600H with Radeon Graphics | 16 GB | Windows 11 | 16GB | LAPTOP-A9AC5445 |

*Table 1: Testing Environment*

|  |  |  |
| --- | --- | --- |
| **Software Tool** | **Version** | **Purpose** |
| **Visual Basic (VB.NET)** | Version 10 | Used for developing system forms, modules, and user interface. |
| **SQL Server Management Studio** | Version 2019 | Used for testing SQL queries, managing the database, and validating data. |

*Table 2: Software Requirements*

**Test Data**

Sample data was created to simulate realistic scenarios and user inputs.

**50 Sample Supply Records**

* **Categories:** Notebooks, Pens, Pencils, Folders, Art Materials, Calculators.
* **Brands:** Mix of local and popular school supply brands**.**
* **Stock Levels:** Ranged from 0 to 100 units per item.

**2 Simulated User Accounts**

* Roles: Admin 1, Staff.
* Used to test access control, transaction permissions, and UI visibility.

**Transaction Logs**

* Simulated purchase and restock actions with timestamps.
* Included low-stock alerts.
* Used to test reporting, inventory updates, and sales tracking.

**TESTING METHODOLOGY**

The testing Methodology refers to the structured approach used to evaluate a system’s functionality, reliability, and performance before it is deployed. It ensures that the software works as intended, meets user requirements, and handles real world scenarios effectively.

**Testing Approaches**

* Black-Box Testing **-** Focused on validating the system’s external behavior without inspecting internal code. This included testing modules such as product entry, stock updates, sales transactions, and report generation.
* White-Box Testing - Applied to backend logic and database operations to verify correct data flow, calculations (example of stock deductions, total sales), and error handling.
* User Acceptance Testing (UAT) - Conducted with Pandayan store staff to confirm that the system meets operational needs, including ease of use, transaction speed, and inventory accuracy.

**Testing Tools and Frameworks**

* SQL - Used to test database operations such as data insertion, updates, deletions, and queries. SQL scripts were executed to validate the accuracy of inventory records, sales transactions, and report generation.
* Manual Testing - Conducted by executing test cases directly on the system interface to verify functionality such as item registration, stock updates, and sales processing.
* Github - Served as the version control platform to manage source code, track changes, and collaborate during development and testing. GitHub Issues and Pull Requests were used to document bugs, enhancements, and testing feedback.

**Text Cases and Criteria**

* **Functionality:** All features perform as intended across inventory and sales modules.
* **Usability**: Interface is intuitive for store staff with minimal training
* **Performance:** System responds quickly during peak usage.
* **Security**: User roles and data access are properly restricted.
* **Data Accuracy**: Inventory levels and sales records are consistently correct.

**Test Cases**

**Overview**

The test cases for the Pandayan Sales and Inventory System are designed to validate the system’s core functionalities, data accuracy, and user experience. These test cases cover both inventory and sales modules, ensuring that the system supports daily operations of the store efficiently and without errors

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Test Case  ID | Test Description | Test Steps | Expected Output | Actual Output | Status | Remarks |
| TC001 | Login with valid credentials | 1. Enter username 2. Enter password 3. Click login | User is redirected to dashboard | User is redirected to dashboard | Pass | N/A |
| TC002 | Login with invalid password | 1. Enter username 2. Enter incorrect password 3. Click login | Error message appears | No eeror message apperead | Fail | Bug identifie |

*Table 4. List of Test Cases*

**Bug Tracking & Issue Log**

During the testing phase, several issues were identified and logged for resolution. Each bug was categorized based on its severity and tracked according to its current status.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Bug ID | Description | Severity | Reported By | Status | Resolution |
| B001 | Login page crashes on incorrect password | High | Tester Name | Open | Pending fix |

*Table 5. List of Bug Tracking*

**User Acceptance Testing (UAT)**

**Overview**

User Acceptance Testing (UAT) was conducted to ensure that the Sales and Inventory System meets the practical needs of Pandayan School Supplies store staff. The goal was to validate usability, accuracy, and reliability from the perspective of actual end-users.

**Test Scenarios**

* Users tested adding various products to the inventory, including notebooks, pens, and art materials.
* Cashiers simulated customer purchases, including multi-item transactions and discounts.
* Inventory tested manual stock adjustments after deliveries and returns.
* Admin users reviewed daily summaries to verify total sales and item breakdowns.
* Users searched for products by name, category, and stock status.
* The system was tested to ensure it blocked sales of items with zero quantity and displayed appropriate alerts.
* Different user roles (manager, cashier) were tested to confirm access restrictions and permissions.

**Feedback Summary**

The overall feedback from end users during User Acceptance Testing (UAT) was positive, highlighting the system’s usability, accuracy, and relevance to daily store operations. Users appreciated the streamlined workflow and improved efficiency compared to manual processes.

**CONCLUSION & RECOMMENDATION**

The Sales and Inventory System for Pandayan School Supplies Store underwent comprehensive testing across its core modules, including product management, sales transactions, inventory tracking, and reporting features. All critical functionalities performed as expected under normal and edge-case scenarios.

**Key Observations**

* The system accurately updates inventory levels in real time after each transaction.
* SQL queries used for validation returned consistent and correct results, ensuring reliable data handling.
* User interface is intuitive, allowing staff to navigate and perform tasks with minimal training.
* Minor delays were observed during bulk data operations, especially in inventory adjustments.

**Recommendations**

* Optimize database queries for bulk operations to reduce latency.
* Expand reporting features to include graphical summaries and export options like PDF, Excel.
* Provide a restore function for accidental deletions or system failures.
* Enable receipt reprinting and transaction lookup by customer name or ID.