SALES AND INVENTORY SYSTEM FOR KAPEÑA CAFE

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# INTRODUCTION

This testing documentation focuses on the evaluation phas**e** of the Sales and Inventory System for Kapeña Café, which serves as the final verification step before the system’s full deployment. The testing phase is crucial because it ensures that every feature of the system works correctly, consistently, and efficiently in real-world conditions. It helps confirm that all processes from recording sales and updating stock levels to generating reports perform exactly as intended and without technical issues that could disrupt daily café operations.

The main goal of the testing phase is to validate the reliability, stability, and usability of the entire system. Through a structured testing process, we aim to identify any potential errors, bugs, or inconsistencies that may have been overlooked during development. By addressing these issues early, the system becomes more dependable and secure for the café staff who will use it every day. The testing also ensures that the interface remains user-friendly and intuitive, allowing employees with basic computer knowledge to operate the system confidently.

Specifically, this phase evaluates each module of the system including Sales, Inventory, Reports, and User Management to verify that they perform their respective functions accurately and efficiently. It checks whether sales transactions update stock quantities in real-time, whether low-stock notifications appear at the right time, and whether reports reflect correct and complete data. In short, it’s about making sure that the system not only functions, but also supports the café’s operations smoothly and consistently.

The scope of this testing covers functional testing to confirm that every feature works, performance testing to measure speed and responsiveness, and user acceptance testing to gather real feedback from actual users. However, the testing does not include integration with online systems or multi-branch deployment since this project is designed for a single-branch setup only. The results from this testing phase will determine the system’s readiness for full implementation and its ability to meet the operational needs of Kapeña Café.

# TESTING ENVIRONMENT

The testing process was performed in a controlled setup that replicates the real environment of Kapeña Café.

## Hardware Specifications:

* Processor: Intel Core i3
* RAM: 4 GB
* Storage: 128 GB SSD
* Operating System: Windows 11

## Software Requirements:

* Microsoft Visual Studio 2010 (VB.NET)
* SQL Server with SQL Server Management Studio (SSMS)
* Guna.UI2 Framework for UI components
* .NET Framework 4.8

## Test Data:

Sample test data was created to simulate actual café operations. This includes product lists (coffee, pastries, drinks), user accounts (admin, cashier, staff), and sample sales transactions for several days. The data ensures realistic testing scenarios.

# TESTING METHODOLOGY

The testing of the Sales and Inventory System for Kapeña Café used three main methods: Black-Box Testing, White-Box Testing, and User Acceptance Testing (UAT). These methods were combined to make sure the system works correctly, runs smoothly, and is easy to use for café staff.

In Black-Box Testing, the system was tested from the user’s point of view. The testers didn’t look at the code but focused on how the system behaves when used. They performed common tasks such as logging in, recording sales, updating inventory, and creating reports. The goal was to see if each feature worked properly and if the outputs matched what was expected. This helped check the system’s functions and user interface for any visible problems.

In White-Box Testing, the focus was on the system’s internal code and logic. The developers checked if the program’s flow and database connections were correct. They reviewed how the system processes data, runs queries, and performs calculations to make sure everything works efficiently and securely. This method helped find and fix small bugs, logic errors, or code issues that could cause problems later on.

After that, User Acceptance Testing (UAT) was done with actual users from Kapeña Café. The cashier, manager, and staff tried out the system in a real café setup to see if it fit their daily workflow. Their feedback helped the developers improve the system’s design, layout, and usability making it more comfortable and reliable to use during daily operations.

Throughout testing, tools like SQL queries and in-app checking were used to confirm that sales, inventory, and report data were correct. Every action in the system was double-checked to make sure the database updated instantly and accurately.

Overall, this testing process made sure that the Sales and Inventory System for Kapeña Café was stable, accurate, and easy to use. The results of these tests are shown in the next section, which includes the test cases and their outcomes.

# TEST CASES

To make sure that each part of the Sales and Inventory System for Kapeña Café works properly, several test cases were created. Each test case focuses on a specific function of the system such as logging in, recording sales, updating inventory, and generating reports. The goal is to check whether the system behaves as expected and to identify any errors that may appear during normal use.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Test Case ID | Test Description | Test Steps | Expected Output | Actual Output | Status | Remarks |
| TC 001 | Login with valid credentials | Enter valid username and password  → Click Login | System redirects to dashboard | Redirected to dashboard | Pass | Working as expected |
| TC002 | Login with invalid password | Enter username  → Enter wrong password  → Click Login | Error message appears | Error message displayed correctly | Pass | Validated error handling |
| TC003 | Record sales transaction | Select product  → Input quantity  → Click Save | Sale recorded and stock reduced accordingly | Transaction processed, stock updated | Pass | Validated stock update logic |
| TC004 | Generate | Go to  Reports | Displays  sales data | Report  displayed | Pass | Reports  generate |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | sales report | → Select Date Range → Click Generate | for chosen date range | accurately |  | correctly |
| TC005 | Low stock alert | Reduce item stock below threshold  → Open Inventory Module | Low stock alert notification appears | Alert displayed | Pass | Alert logic functioning correctly |

# BUG TRACKING & ISSUE LOG

During the testing phase, several issues were encountered and resolved to improve system reliability. Each bug was recorded and categorized by severity.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Bug ID | Description | Severity | Reported By | Status | Resolution |
| B001 | Login form did not  validate empty input fields | Medium | Tester 1 | Resolved | Added input validation |
| B002 | Incorrect stock update after sales refund | High | Tester 2 | Resolved | Fixed SQL update query |
| B003 | Report export button unresponsive | Low | Tester 1 | Resolved | Re-linked export event handler |

# USER ACCEPTANCE TESTING (UAT)

The User Acceptance Testing (UAT) phase was conducted with the participation of Kapeña Café’s staff and management to ensure that the system truly met their operational needs and expectations. This stage was important because it allowed the actual users those who will use the system daily to test it in real café scenarios and confirm that it performs well in real-life conditions.

During the UAT, several test scenarios were carried out. These included recording actual sales transactions, updating inventory after each sale, viewing reports of daily and monthly sales, and checking system responses to low-stock situations. The purpose of these tests was to ensure that all core features were not only functional but also practical and convenient for the café’s workflow.

The staff found the system intuitive, organized, and easy to use. They appreciated how the system provided real-time stock updates, allowing them to see immediately when products were running low. The sales and report modules were also well-received because of their simple design and clear presentation of data, which made it easier for the management to review sales performance and make quick decisions.

Through this phase, valuable feedback was gathered from the users. Some suggested small improvements, such as adjusting the font sizes on printed reports for better readability and adding shortcut buttons on the dashboard to make navigation faster. These suggestions were taken into account and implemented, resulting in a smoother and more user-friendly system.

Overall, the UAT confirmed that the Sales and Inventory System for Kapeña Café is both reliable and easy to operate. The end users expressed satisfaction with the system’s performance and design, proving that it is ready for full deployment in the café’s daily business operations.

# CONCLUSION & RECOMMENDATIONS

After completing all phases of testing, the Sales and Inventory System for Kapeña Café proved to be a reliable, accurate, and efficient tool for managing the café’s daily operations. The testing process covering functional, performance, and user acceptance tests showed that all key features of the system worked as expected. From recording sales and tracking inventory to generating reports and managing user access, every function performed smoothly and without major errors.

The results confirmed that the system successfully achieved its main goals to simplify the café’s workflow, reduce human errors, and provide real-time updates on stock and sales. The automated features, such as low-stock notifications and instant report generation, help the staff make faster and smarter decisions. With these improvements, daily operations became more organized, and the café’s management can now focus more on customer service rather than manual record keeping.

Throughout testing, a few minor issues were found such as small layout adjustments and button functions but all were quickly resolved. The feedback gathered from actual café staff during the User Acceptance Testing also helped make the system more user-friendly. Their suggestions, like clearer report text and easier navigation buttons, were implemented to improve usability and comfort during daily use.

In conclusion, the system is now ready for full implementation. It meets both the functional requirements and the expectations of its users. To keep the system performing well in the long run, the following recommendations are suggested:

1. **Regular Maintenance** – Conduct routine checks and updates to ensure the system remains stable and compatible with future software versions.
2. **Database Backup** – Perform daily or weekly backups to protect important sales and inventory data from accidental loss or corruption.
3. **User Training** – Continue providing basic training for new staff so they can use the system effectively and confidently.
4. **Future Enhancements** – Consider adding new features such as multi-branch support, cloud backup, or mobile access for management to monitor operations remotely.

Overall, the testing phase showed that the Sales and Inventory System for Kapeña Café is a well-developed, practical, and dependable solution that meets the needs of the business and contributes to smoother, more efficient café operations