

Technical Documentation

System Overview and Architecture

The system is a classic LAMP-stack (Linux, Apache, MySQL, PHP) application running on XAMPP. It uses procedural PHP, Bootstrap 5, and basic MySQL queries to manage and store data. All activities are logged in plain text for offline use.

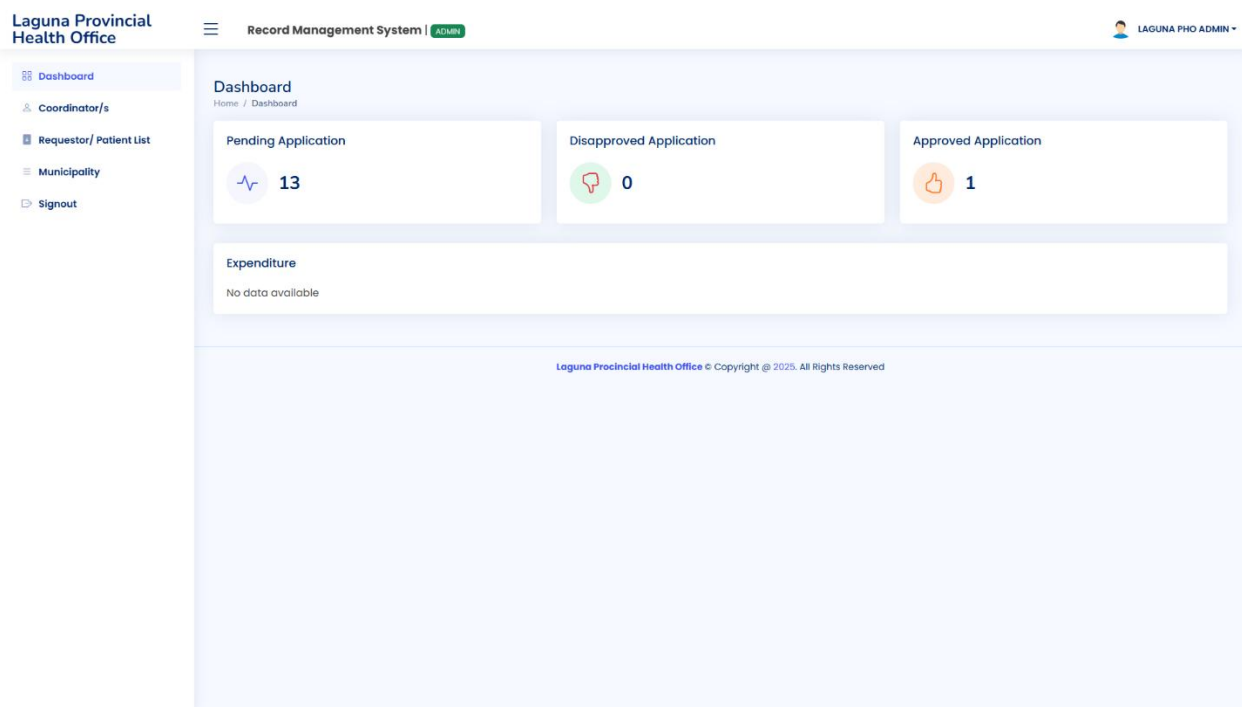
Summary of Enhancements and Rationale

Enhancement: Local activity logging system

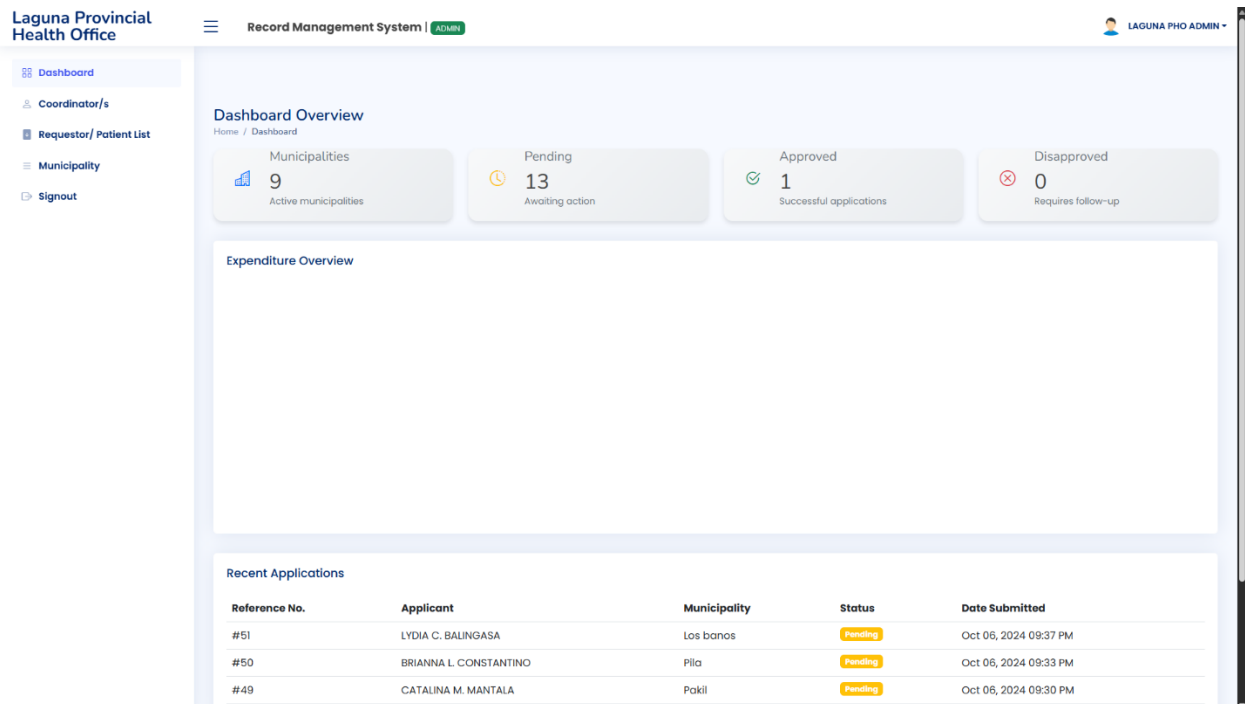
- **Why:** To add transparency and accountability to user interactions, especially in a system that runs offline and lacks real-time monitoring.
- **How:** Introduced logger.php, which uses PHP's file handling functions to write logs to activity_log.txt.

UI/UX Screenshots

Old:



New:



Testing Approach and Results

- **Manual Testing:** Simulated user logins, form submissions, and status updates
- **Observed Output:** Verified entries created correctly in activity_log.txt
- **Browser Compatibility:** Tested in Chrome on localhost
- **Status:** Passed

Technologies and Frameworks Used

- PHP 7.4
- MySQL
- Bootstrap 5
- HTML5/CSS3
- JavaScript (vanilla)
- XAMPP for local deployment

Developer Notes / Installation Instructions

1. Install XAMPP and start Apache/MySQL
2. Place system file folder in htdocs
3. Import lpho_db.sql in phpMyAdmin
4. Access http://localhost/lagunapho_Security_and_Automation_FINAL_UPDATED