**A PROPOSED OFFERING OF ENHANCING BARANGGAY SERVICES IN NBBS PROPER: THE DEVELOPMENT OF A REQUEST SYSTEM VALENZUELA BRANCH**

A Project Proposal Presented to the Faculty of Datamex College of Saint Adeline, Inc.

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**TECHNICAL DOCUMENTATION**

**INTRODUCTION**

This document explains how the Barangay Request System was built and how it should be used. The main goal is to give both technical teams and barangay officials a complete guide From installing the software to maintaining it.

The system is designed to make life easier for residents of NBBS Proper, Navotas. Instead of lining up at the barangay hall, residents can now request certificates, permits, or other documents online. Barangay staff will be able to process these requests more quickly, and officials can monitor activities and generate reports.

**SYSTEM OVERVIEW**

The system is a web-based application built with PHP and MySQL, and it runs through XAMPP. It follows a 4-layer architecture:

Presentation Layer – what residents and staff see, like forms and dashboards.

Application Layer – processes user actions, like submitting forms.

Business Logic Layer – applies barangay rules, like approving requests.

Database Layer – stores resident details, requests, and reports.

It’s installed on a local barangay office server, and residents can access it through the local network using any web browser.

**INSTALLATION GUIDE**

Server: Windows 10/Server 2016 or later, XAMPP, at least 8GB RAM, SSD storage.

Client: Any modern PC with Windows 10, Chrome or Firefox, 4GB RAM.

Steps to Install

Install XAMPP and enable Apache & MySQL.

Import the database file using phpMyAdmin.

Copy all system files into the htdocs folder.

Edit the config.php file with the correct database settings.

Tip: Always set a strong root password and enable HTTPS for security.

**CONFIGURATION GUIDE**

Most settings can be found in the config.php file. Here you’ll set:

Database username and password.

Role-based access (Resident, Staff, Admin).

Security options like password policies.

Best Practice: Schedule daily backups and never store plain-text passwords.

**API DOCUMENTATION**

The system doesn’t expose public APIs, but it uses built-in functions that act like them:

registerUser – creates new user accounts.

loginUser – checks usernames and passwords.

createRequest – submits new service requests.

approveRequest – allows staff to approve or reject.

generateReport – creates reports by type or date.

**DATABASE DOCUMENTATION**

The database is the heart of the system. Key tables include:

Users – stores residents, staff, and admin accounts.

ServiceRequests – logs all requests (clearance, permits, certificates).

RequestActions – records staff actions (approved, forwarded, resolved).

Reports – stores monthly/weekly summaries.

Data Safety: Automatic backups and rollback features keep the records safe and reliable.

**USER MANUAL**

For Residents: Register, log in, submit your request, and check its status anytime.

For Staff: Review requests, update their status, print documents, and keep records organized.

For the Barangay Captain/Admin: Oversee activities, monitor reports, and track overall system performance.

**TROUBLESHOOTING GUIDE**

Common Problems and Fixes

Can’t log in - Check if your account is active and the database connection is running.

Request not saving - Make sure all required fields are filled in.

Server offline - Restart Apache and MySQL from the XAMPP control panel.

For more serious issues, barangay staff should escalate to the technical team.

**CODE DOCUMENTATION**

The system was built with:

Frontend: HTML, CSS, JavaScript

Backend: PHP

Database: MySQL

Folder Structure:

requests – request handling

reports – reporting tools

config – configuration and DB connection

**TESTING DOCUMENTATION**

Testing included:

Unit Tests – checking small features like login and request submission.

Integration Tests – making sure modules worked together.

User Acceptance Testing (UAT) – barangay staff tested the system with sample data.

Performance Tests – checking speed when multiple users accessed the system.

**MAINTENANCE GUIDE**

To keep the system running smoothly:

Do daily database backups.

Monitor logs for unusual errors.

Apply software updates and patches regularly.

Use Git for version control and keep release notes.