



Barangay Profiling and Monitoring System

College of Engineering and Information Technology

CSC106 : Software Engineering

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Abstract

This project presents the development of a Barangay Profiling and Monitoring System designed to modernize community data management at the grassroots level in the Philippines. The study addresses the prevalent inefficiencies and inaccuracies arising from manual, paper-based systems used by many barangays, which hinder effective governance, reporting, and service delivery.

The primary purpose is to create a centralized, computerized platform that automates the storage, organization, and management of resident profiles, household information, and community resources. The methodology follows a systematic software development lifecycle, encompassing requirements analysis, system design, database development, and module implementation. Key features include modules for adding, updating, searching, and deleting records, alongside automated report and statistical generation tools to aid in planning and decision-making.

The expected results of the system are a significant reduction in administrative workload, enhanced data accuracy and security, improved accessibility of information for barangay officials, and the generation of reliable reports. By digitizing these core operations, the system aims to foster transparency, efficiency, and data-driven governance within the barangay unit, contributing to the broader national agenda for digital transformation in public service.

Keywords: Barangay Information System, E-Governance, Community Profiling, Data Management, Digital Monitoring



CHAPTER I

Background of the Study

The Barangay is the smallest administrative division in the Philippines and is considered the foremost unit of planning and implementing government policies, programs, and activities in the community. Good barangay governance requires accurate, updated, and systematically organized data on the residents, households, and community resources. However, many barangays still rely on manual or even paper-based profiling and monitoring systems that tend to delay, duplicate, and inaccurately manage information.

The Barangay Profiling and Monitoring System is envisioned to alleviate these problems by offering a computerized platform where residents' profiles and community data are stored, organized, and managed. This system enables barangay officials to easily access resident records, household information, and community projects for updating and monitoring in real time. The system is designed to lessen paperwork, increase data accuracy, and enhance administrative operations.

This initiative aligns with the national goal of promoting digital governance and improving public service efficiency at the grassroots level. By integrating technology into barangay operations, the project aims to enhance transparency, accountability, and data-driven decision-making.



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Statement of the Problem

General Problem:

The current manual system of profiling and monitoring in the barangay often results in inefficiency, data inaccuracy, and difficulty in information retrieval and reporting.

Specific Problems:

- Manual recording of resident and household data leads to errors and inconsistencies.
- Retrieval of information is time-consuming and prone to data loss.
- Lack of centralized storage makes it difficult to update and monitor resident profiles.
- Difficulty in generating reports and statistical data for decision-making.
- Limited access to up-to-date community information for barangay officials.

Objectives

General Objective:

To develop a Barangay Profiling and Monitoring System that will automate and simplify the management of resident and community information in the barangay.

Specific Objectives:

- To design a database that stores resident, household, and community records systematically.
- To develop modules for adding, updating, deleting, and searching resident profiles.
- To generate reports and statistics for barangay planning and decision-making.
- To ensure data security, accuracy, and accessibility through a user-friendly interface.
- To assist barangay officials in monitoring community development and activities effectively.

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Significance of the Study

This study is significant to the following:

- Barangay Officials – It provides an efficient tool for managing and monitoring community data, reducing administrative workload.
- Residents – Ensures accurate and up-to-date records for accessing barangay services such as certificates and assistance programs.
- Local Government Units (LGUs) – Enhances data sharing and reporting for policy formulation and project implementation.
- Researchers and Developers – Serves as a reference for future studies in developing e-governance systems.

Scope and Delimitation

Scope:

The system covers the recording, updating, and monitoring of resident profiles, household data, and community information. It includes features for searching records, generating reports, and viewing demographic statistics. The system will be used by authorized barangay personnel.

Delimitation:

The system does not include online application or mobile support in its initial phase. It focuses only on the internal barangay operations and excludes external government integrations such as national ID or PhilSys databases. Internet connectivity is required only for cloud-based data backup (if applicable).



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Definition of Terms

- Barangay Information System – A digital system designed to manage barangay-level data efficiently.
- Database – A structured collection of data that can be easily accessed and managed electronically.
- Monitoring – The act of observing and tracking changes in population, resources, and community projects.
- Profiling – The process of collecting and recording personal and household information of barangay residents.
- Report Generation – The automated process of producing summaries and statistical outputs from stored data.



CHAPTER II

Review of Related Literature

2.1 Related Literature

The literature on e-governance and information systems in local government units provides a foundational understanding of the benefits and challenges of digitizing administrative processes. According to Heeks (2001) in his seminal work *Information Systems and Developing Countries: Failure, Success, and Local Improvisation*, information systems in developing nations often face implementation hurdles due to resource constraints, lack of technical expertise, and resistance to change. This is particularly relevant to barangay-level operations in the Philippines, where manual systems dominate, leading to inefficiencies that hinder service delivery. Heeks emphasizes the importance of context-specific design to ensure sustainability, aligning with the need for a tailored Barangay Profiling and Monitoring System.

Further, in *E-Governance: A Global Perspective* by Bhatnagar (2004), the author discusses how digital platforms can enhance transparency and accountability in public administration. Bhatnagar highlights case studies from India and other Asian countries, where community information systems have reduced corruption and improved data accuracy. This literature supports the project's goal of fostering data-driven governance at the grassroots level, as digital tools enable real-time monitoring and reporting, which are critical for barangay officials in decision-making processes.

Journal articles also underscore the role of technology in community profiling. For instance, a study by Luna-Reyes and Gil-Garcia (2014) in *Government Information Quarterly* explores interoperability in e-government systems, noting that integrated databases improve information sharing among local entities. In the Philippine context, this relates to the challenges of fragmented data in barangays, where paper-based records often lead to inconsistencies. Additionally, literature on data security, such as that by Dhillon and Backhouse (2001) in *Information Systems Journal*, stresses the need for robust security measures in public systems to protect sensitive resident data, reinforcing the system's emphasis on accuracy and accessibility.



Overall, the literature converges on the transformative potential of information systems to modernize public services, while cautioning against over-reliance on technology without addressing human and infrastructural factors.

2.2 Related Studies

Several studies and projects have explored similar systems for community profiling and monitoring, offering insights into successful implementations and lessons learned. In the Philippines, a notable example is the Barangay Information System (BIS) developed by the Department of the Interior and Local Government (DILG), as discussed in a 2018 study by Santos and Cruz (2018) published in the Philippine Journal of Public Administration. This system digitizes resident records and facilitates online reporting, resulting in reduced processing times for barangay clearances. However, the study notes limitations in rural areas due to limited internet access, which parallels the delimitation in the current project that focuses on internal operations without initial online features.

Internationally, the Community Health Information System (CHIS) in Kenya, analyzed by Otieno et al. (2016) in International Journal of Medical Informatics, demonstrates how mobile-based profiling systems improve data collection in underserved communities. The CHIS uses SMS and basic apps to track household data, leading to better health outcomes and resource allocation. This study is relevant as it shows the scalability of simple digital tools in low-resource settings, similar to Philippine barangays, though it differs by incorporating mobile elements not included in the proposed system.

Another pertinent project is the Local Government Information System (LGIS) in Malaysia, evaluated by Abdul Rahman et al. (2015) in Journal of Theoretical and Applied Information Technology. The LGIS integrates profiling, monitoring, and reporting modules, enhancing efficiency in municipal governance. The study reports significant reductions in administrative workload and improved decision-making, with a focus on user-friendly interfaces. This aligns with the specific objectives of the Barangay Profiling and Monitoring System, such as automated report generation and data security.



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Additionally, a comparative study by Gupta and Jana (2016) in Electronic Government examines e-governance initiatives in India, including village-level information systems that automate profiling and monitoring. The research highlights successes in data accuracy but identifies gaps in training and maintenance, which are echoed in Philippine contexts where barangay officials may lack technical skills.

Synthesis:

While the reviewed literature and studies demonstrate the widespread adoption and benefits of digital information systems in local governance, including improved efficiency, transparency, and data management, a notable research gap exists in the context of Philippine barangays. Existing systems, such as the DILG's BIS, often require internet connectivity or external integrations, which are not feasible in many rural areas, and lack comprehensive modules for real-time monitoring and user-friendly interfaces tailored to barangay-specific needs. The current study addresses this gap by developing a centralized, offline-capable system focused on internal operations, emphasizing data security and automated reporting to overcome the inefficiencies of manual systems, thereby contributing to localized digital transformation in the Philippines.



CHAPTER III

Methodology

3.1 Research Design

This study employed a developmental research design, which is appropriate for creating and evaluating a new software system. Developmental research focuses on designing, developing, and testing innovative solutions to address specific problems, in this case, the inefficiencies in barangay profiling and monitoring. The approach integrates elements of descriptive research to analyze existing manual systems and experimental methods to test the system's functionality. The research followed a systematic process to ensure the Barangay Profiling and Monitoring System meets user needs, aligns with objectives, and adheres to software engineering principles. This design allows for iterative improvements based on feedback, ensuring the system's practicality and effectiveness in real-world barangay settings.

3.2 System Design and Development

The system was developed using the Software Development Life Cycle (SDLC) model, specifically the Waterfall model, which provides a structured, sequential approach suitable for this project. The phases included: (1) Planning and Requirements Analysis, (2) System Design, (3) Implementation, (4) Testing, and (5) Deployment and Maintenance. This model was chosen for its clarity in documenting each stage, ensuring thoroughness in addressing the project's objectives.



3.2.1 System Architecture / Framework

The Barangay Profiling and Monitoring System follows a three-tier architecture, which separates the system into three logical and physical layers to ensure modularity, security, and scalability. Each layer has distinct responsibilities and communicates only with adjacent layers.

The system is built on a three-tier architecture:

3.2.1.1 Presentation Layer (User Interface Tier)

This is the topmost layer, where users interact with the system. It consists of role-based web dashboards designed for different user types.

The key components of this layer are the:

Login Interface: Secure entry point with role-based authentication.

Dashboard Views:

Purok Leader Dashboard:

- Add/Edit resident information within assigned purok.
- View purok-specific demographic summaries.
- Submit data updates and requests.

Staff Dashboard:

- View barangay-wide profiles with filtering options.
- Access interactive charts and visualizations (e.g., population pyramid, voter distribution).
- Generate and export standard reports.
- Administrator Dashboard:
 - Manage user accounts and permissions.
 - Configure system settings (e.g., purok boundaries, data fields).
 - Monitor system activity and logs.
 - Export full datasets for backup or external analysis.



Admin Dashboard:

- Manage user accounts and permissions.
- Configure system settings (e.g., purok boundaries, data fields).
- Monitor system activity and logs.
- Export full datasets for backup or external analysis.

Technologies Used: ** HTML, CSS, JavaScript, Bootstrap

3.2.1.2 Application Layer (Business Logic Tier)

Also known as the middle tier, this layer processes user requests, enforces business rules, handles authentication, and manages data flow between the presentation and data layers.

Key Functions:

User Authentication & Authorization: Validates login credentials and assigns role-based permissions (e.g., Purok Leaders can only edit their purok's data).

Business Logic Processing:

- Validates data entries (e.g., age ranges, duplicate entries).
- Calculates statistics (e.g., total residents, voter turnout).
- Triggers notifications for data updates or approvals.
- Data Processing & Reporting:
 - Compiles data for visualizations and reports.
 - Handles data import/export functionalities.
 - Manages audit trails for data changes.

API Services: Provides endpoints for frontend-backend communication (RESTful APIs).

Technologies Used: PHP



3.2.1.3 Data Layer (Database Tier)

This is the foundation layer where all system data is stored, retrieved, and managed in a centralized, secure database.

Database Schema:

Residents table: Personal details, household info, purok assignment.

Voters table: Voter registration info, precinct details.

Users table: Login credentials, roles, permissions.

Activity_Logs table: Tracks user actions for transparency.

Purok table: Purok names, boundaries, assigned leaders.

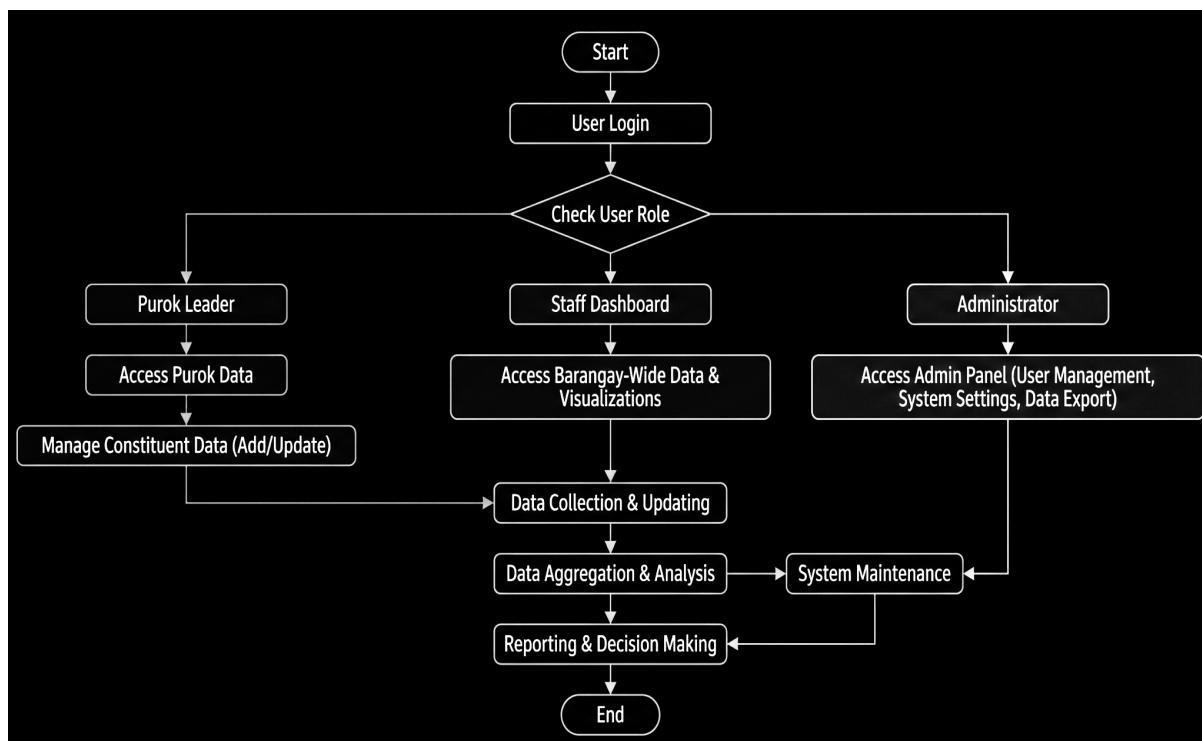
Database Management:

- Ensures data integrity through constraints and relationships.
- Supports querying, updating, and deletion of records via the application layer.
- Implements backup and recovery mechanisms.

Technologies Used: MySQL



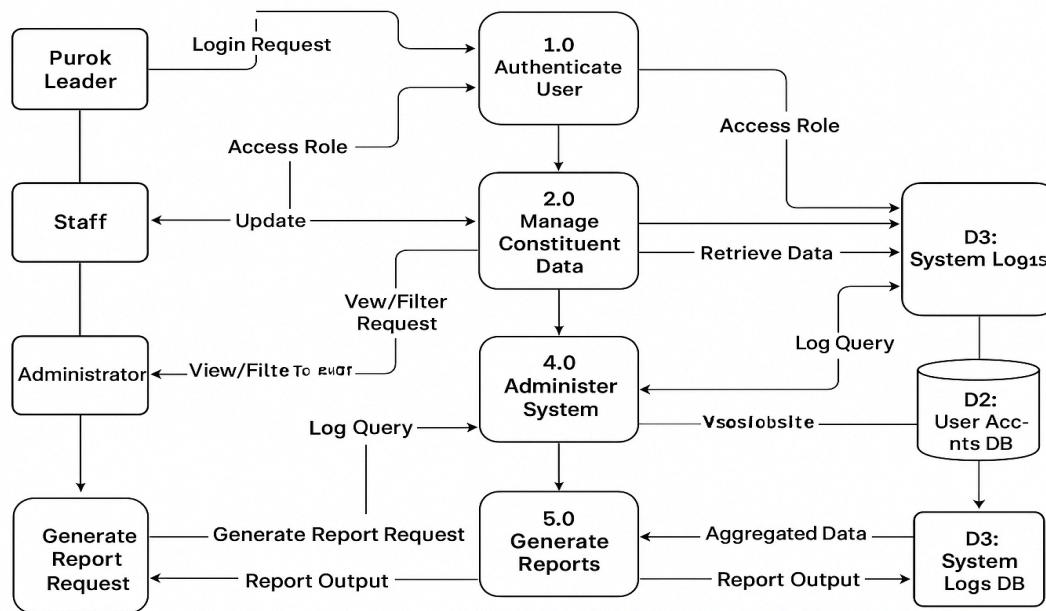
3.2.2 System Flowchart



The provided flowchart outlines the operational logic of the Barangay Profiling and Monitoring System, beginning with User Login and branching based on User Role. If the user is a Purok Leader, they are directed to access and manage constituent data within their assigned purok. If the user is Staff, they enter a dashboard where they can view barangay-wide data, utilize interactive visualizations, and contribute to data aggregation and analysis for reporting. If the user is an Administrator, they gain access to an admin panel for user management, system settings, and data export functions, focusing on overall system maintenance. All roles ultimately contribute to a streamlined workflow of data collection, updating, analysis, and reporting, supporting informed decision-making and efficient barangay governance before the process concludes.



3.2.3 Data Flow Diagram (DFD)



This Data Flow Diagram (DFD) illustrates how the Barangay Information System handles authentication, data management, system administration, and reporting among three main user roles: Purok Leader, Staff, and Administrator. All users begin by sending a login request to the Authenticate User process, which verifies credentials through the User Accounts Database (D2) and returns their appropriate access role. The Purok Leader can add or update resident information through the Manage Constituent Data process, which stores updates in the Resident & Voter Database (D1) and logs activities in the System Logs Database (D3). Staff members primarily retrieve and analyze resident data via the View & Analyze Barangay Data process, which also logs queries. Administrators oversee system configuration and user management through the Administer System process, updating user data, exporting information, and retrieving system logs. Both Staff and Administrators can generate various reports through the Generate Reports process, which compiles data from the Resident Database and logs report generation for accountability. This diagram shows a clear flow of information between users, processes, and data stores to maintain efficient and secure barangay operations.



3.3 Materials, Tools, and Technologies

Hardware: Computers, servers, network infrastructure.

Software:

- **Frontend:** HTML, CSS, JavaScript
- **Backend:** PHP
- **Database:** MySQL

Development Tools: Visual Studio Code, XAMPP, Git

3.4 Data Gathering Procedure

Data collection was conducted in three primary phases to ensure a comprehensive understanding of user needs and system performance:

1. Pre-Development Phase: Semi-structured interviews and direct observation were used to identify existing challenges in manual profiling, define functional requirements, and map user workflows with Barangay Captains, Purok Leaders, and administrative staff.
2. Development Phase: A structured online survey using a Likert scale was administered to 25 potential end-users to quantify their expectations regarding system features, ease of use, and data accessibility needs.
3. Post-Development Phase: Data was gathered through systematic User Acceptance Testing (UAT), where participants performed predefined tasks while researchers recorded completion times, error rates, and feedback through observation and post-test questionnaires.

3.5 Testing and Evaluation

The system underwent a multi-stage testing and evaluation protocol to ensure quality and usability:

- **Technical Testing:** Included unit testing of individual modules, integration testing to verify data flow between components, and security testing for user authentication and data protection.
- **User-Centered Evaluation:** Conducted via formal Usability Testing sessions, where representative users completed core tasks, measured by metrics like task success rate and time-on-task.
- **Quality Standard:** The system was evaluated against key quality characteristics from the **ISO/IEC 25010 standard**, with a focus on Functional Suitability, Usability, Performance Efficiency, and Reliability.

3.6 Statistical Treatment

Statistical analysis was applied primarily to the quantitative data from the Likert-scale surveys administered during the needs analysis and usability evaluation phases. **Descriptive Statistics**—including means, standard deviations, frequencies, and percentages—were calculated using Microsoft Excel to summarize user responses, satisfaction levels, and task performance metrics. The analysis aimed to identify trends, measure central tendencies in user feedback, and provide a clear, data-backed summary of the system's perceived effectiveness and areas for improvement.



CHAPTER IV

RESULTS AND DISCUSSION

4.1 System Implementation and Modules

This section provides an overview of the developed system and its primary functional modules, serving as the artifact produced by the methodology outlined in Chapter III.

4.1.1 Overview of Key Modules

The Barangay Profiling and Monitoring System is composed of the following key functional modules, designed to fulfill the project's specific objectives:

- User Authentication and Access Control Module: Manages user logins and enforces role-based permissions, ensuring that Purok Leaders, Staff, and Administrators have appropriate access levels (as detailed in Figure 4.11).
- Resident Profiling and Management Module: Facilitates the Create, Read, Update, and Delete (CRUD) operations for all resident and household records (corresponding to high user ratings in Figures 4.7 and 4.8).
- Data Monitoring and Statistics Module: Automatically calculates and displays real-time demographic statistics, such as population counts, age groups, and voter distributions, often visualized through interactive charts.
- Automated Report Generation Module: Compiles data from the central database to produce exportable summaries and statistical reports required for barangay planning and LGU reporting (confirmed by Figure 4.9).
- System Administration Module: Provides the Administrator with tools to manage user accounts, configure system settings (e.g., purok boundaries), and maintain data integrity via backups and activity logs.



4.1.2 System Screenshots



Figure 4.1: Login Interface

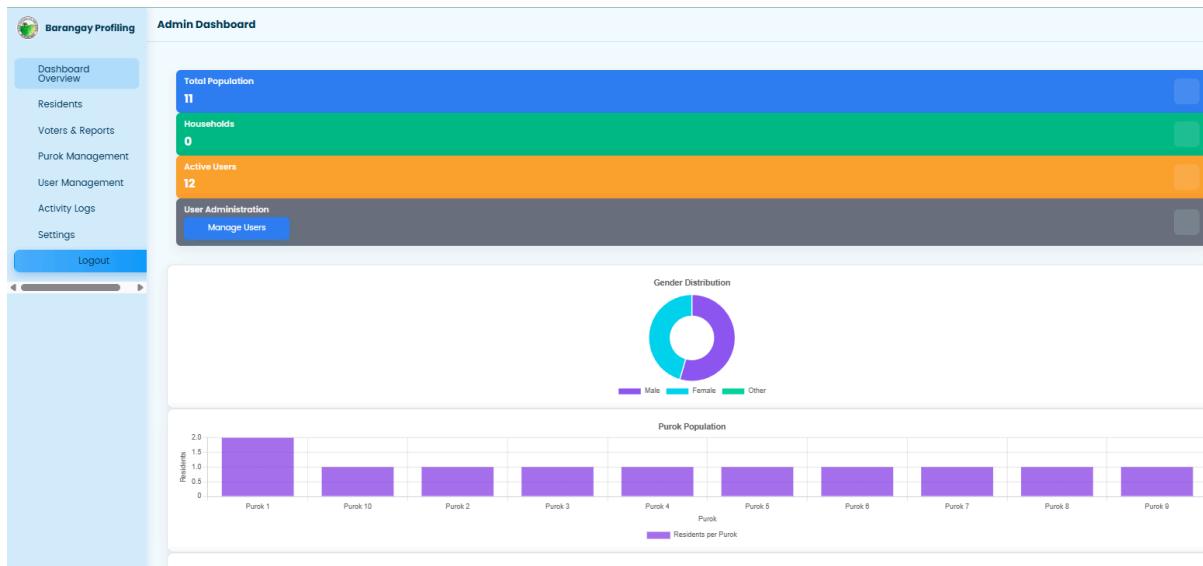


Figure 4.2: Administrator Dashboard



Add Resident

Purok ID *	Last Name *	First Name *
Middle Name	Birth Date *	Age *
Gender *	Civil Status *	Contact Number *
Email *	Religion *	Citizenship *
Blood Type *	Occupation *	Educational Attainment *
Voter Status *	Household	Address *
Select Status	Select Household (optional)	

Add Resident **Clear Form**

Figure 4.3: Resident Profiling/Data Entry Form

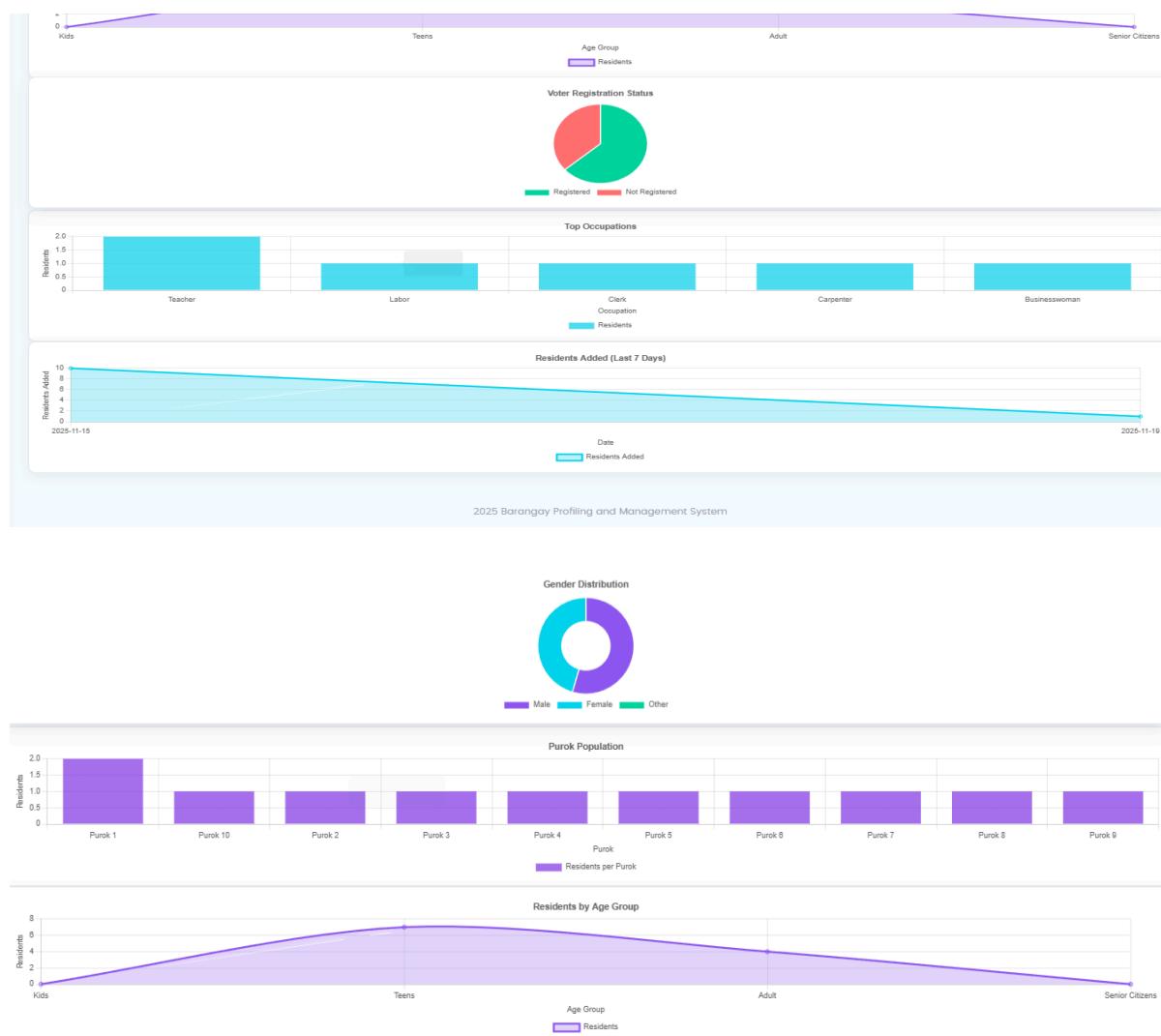


Figure 4.4: Data Monitoring/Statistics View

Admin Dashboard

Voter Statistics



Voter Distribution by Purok



Export Data

Voter Age Distribution



Figure 4.5:Report Generation Interface/Output

4.2 Presentation of Evaluation Results

This section presents the demographics of the participants who engaged in the User Acceptance Testing (UAT) to evaluate the Barangay Profiling and Monitoring System. The distribution ensures feedback was gathered across all intended user roles.

Role:
14 responses

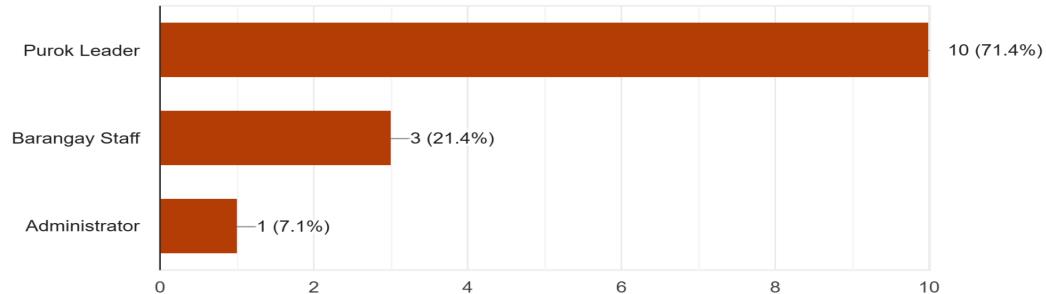


Figure 4.4: Distribution of Respondents by Role

The respondents consisted of Purok Leaders, Barangay Staff, and an Administrator, providing a diverse set of perspectives from different user groups within the barangay. This distribution ensures that system feedback reflects various operational roles.



How long have you been using the system?

14 responses

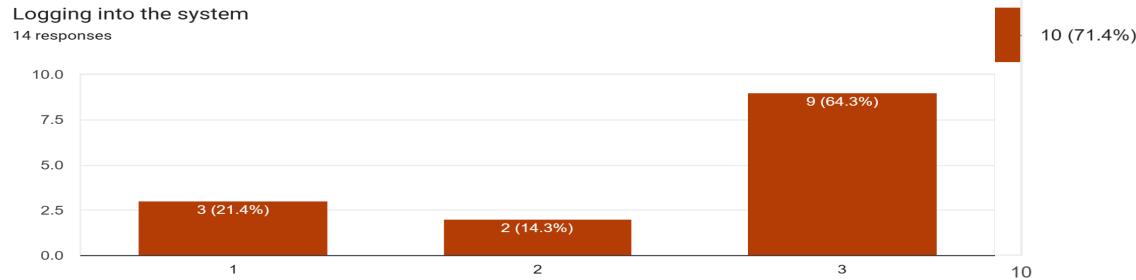


Figure 4.5: System Familiarity of Respondents

Most users reported being first-time users or having used the system for less than a week, meaning their ratings primarily reflect initial impressions and early-stage user experience rather than long-term familiarity.

Adding a new resident record (for Purok Leaders) / Searching for a resident (for Staff)

14 responses

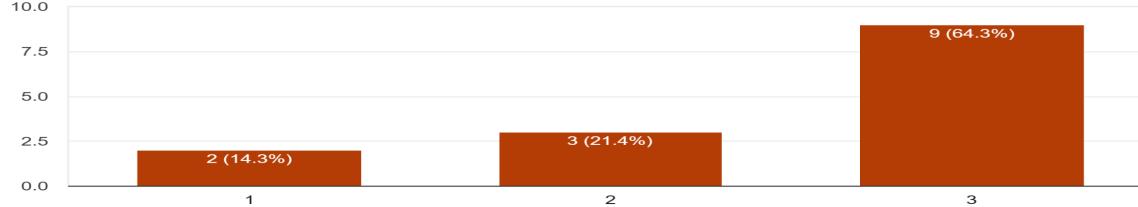


Figure 4.6: Logging into the System

A majority of respondents rated the login process positively, with 64.3% selecting 3 (Strongly Agree), indicating that accessing the system is easy and straightforward. Meanwhile, 14.3% were neutral (2) and 21.4% disagreed (1), suggesting that a small portion of users encountered difficulty during login.



Updating existing resident information

14 responses

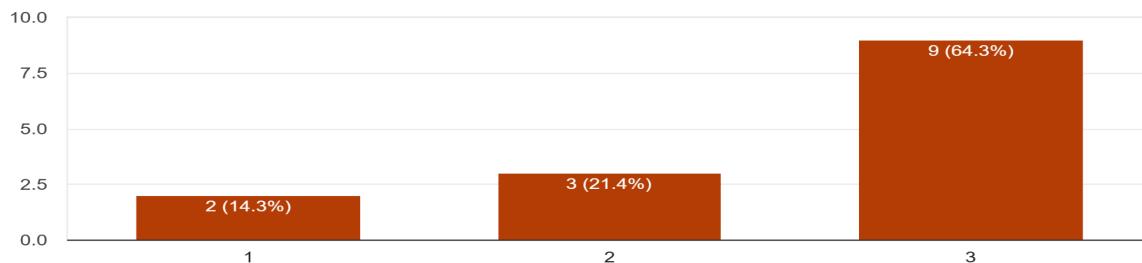


Figure 4.7: Updating existing resident information

The process of updating records received positive feedback, with 64.3% strongly agreeing (3) that the function is easy to use. Neutral responses accounted for 21.4%, and 14.3% disagreed, showing minor usability concerns among a small group of users.

Updating existing resident information

14 responses

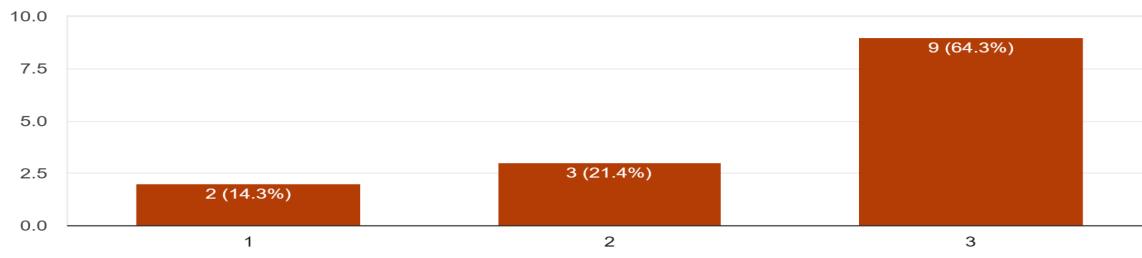


Figure 34.8 Generating reports

Report generation was perceived as efficient by 64.3% of respondents, who strongly agreed with its ease. Additionally, 21.4% were neutral, and 14.3% disagreed, suggesting that while the feature works well overall, some users may require further guidance.



SUMMARY

The evaluation results show that the majority of respondents hold positive perceptions of the Barangay Profiling System across its core functions. Specifically, **64.3%** of users strongly agreed that logging into the system is easy, with similar strong agreement levels (**64.3%**) for adding or searching records, updating information, and generating reports, although small portions (14.3%) expressed difficulty in these areas. The system interface received particularly high approval, with **78.6%** strongly agreeing that it is user-friendly and intuitive. Role-based access control also performed well, with **69.2%** strongly agreeing that permissions are appropriately assigned. Moreover, **71.4%** of respondents believed the system significantly improves barangay operations compared to manual processes. System reliability and data security earned strong agreement from **78.6%** of participants, demonstrating high trust in both performance consistency and protection of sensitive information. Although a minority (7–21%) expressed neutral or negative views across some categories, the overall findings indicate that the system is widely regarded as effective, easy to use, and beneficial for daily barangay operations.



CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This final chapter synthesizes the entire project.

5.1 Summary

This research project presented the development of the Barangay Profiling and Monitoring System, a computerized platform designed to modernize data management and governance at the grassroots level in the Philippines.

Objectives: The general objective was to automate and simplify the management of resident and community information. Specific objectives focused on designing a systematic database, developing functional modules for CRUD operations, generating reports, and ensuring data security and usability.

Methodology: The study employed a Developmental Research Design using the Waterfall Software Development Life Cycle (SDLC). The system was engineered using a Three-Tier Architecture (HTML/CSS/JavaScript, PHP, MySQL) to ensure modularity and scalability. Data validation was conducted through a multi-phase process, culminating in a User Acceptance Testing (UAT) session evaluated against the ISO/IEC 25010 standard and analyzed using Descriptive Statistics.

Key Findings: The evaluation results demonstrated strong user acceptance and success in fulfilling project objectives. Key findings include:

- **High Usability:** 78.6% of respondents strongly agreed that the system interface is user-friendly.
- **Core Functionality Success:** 64.3% of users strongly agreed on the ease of performing core tasks, including logging in, adding/updating records, and generating reports.



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- Reliability and Security: The system earned strong agreement (78.6%) on data protection and consistent reliability.
- Operational Improvement: Overall, 71.4% of respondents believed the system significantly improves barangay operations compared to manual processes.

5.2 Conclusions

Based on the system's successful implementation and the quantitative results from the User Acceptance Testing, the following conclusions are drawn, directly addressing the Statement of the Problem:

1. Resolution of General Inefficiency: The project successfully developed a Barangay Profiling and Monitoring System that automates and simplifies the management of resident and community information. The high positive rating for system effectiveness (71.4% finding significant improvement) concludes that the system effectively addresses the general problem of inefficiency, data inaccuracy, and difficulty in information retrieval inherent in the manual system.
2. Enhanced Data Accuracy and Consistency: By implementing a centralized Data Layer (MySQL) with input validation enforced by the Application Layer (PHP), the system eliminated data duplication and inconsistency common in paper-based records, thus resolving the problem of manual errors.
3. Improved Information Retrieval: The systematic, electronic storage of data resolves the problem of time-consuming retrieval and data loss. The system's search and filtering functionalities provide real-time access to accurate resident and household records for authorized personnel.

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4. Centralized Management and Updates: The three-tier architecture with a central database provides a unified platform for updates and monitoring. The successful Role-Based Access Control (69.2% strong agreement) ensures that updates and monitoring efforts are tracked and systematically applied, resolving the difficulty in profile monitoring.
5. Effective Report Generation: The Automated Report Generation Module successfully met the objective of providing essential statistical data. The high rate of agreement (64.3%) regarding the ease of report generation confirms that officials can now efficiently produce reliable data for planning and decision-making.

5.3 Recommendations

To build upon the success of the initial implementation and address the limitations identified in the study, the following recommendations are suggested for future development and research:

5.3.1 System Enhancements and Improvements

1. Mobile Support Development: To increase accessibility and efficiency, the system should be expanded to include a mobile application component, allowing Purok Leaders to input and update resident data directly in the field, aligning with international e-governance trends.
2. Refinement of Interface: Although the overall usability rating was high, minor difficulties were reported (14.3% disagreeing on login ease). The developers should conduct further micro-usability tests to refine specific interface components for an entirely intuitive user experience.
3. Integration of Notification System: Implement an automated alert system for expiring records (e.g., permits, clearances) or critical demographic changes to assist barangay officials in proactive monitoring.



5.3.2 Future Studies

1. **Inter-Agency Integration Study:** Future research should explore the feasibility and mechanisms for integrating the Barangay Profiling and Monitoring System with higher Local Government Unit (LGU) databases or national systems (e.g., PhilSys/National ID) to streamline data sharing and compliance.
2. **Long-Term Performance Analysis:** A follow-up study should be conducted 6 to 12 months after full deployment to assess the system's long-term maintenance costs, sustainability, and continuous reliability in a real-world production environment.
3. **Comparative Cost-Benefit Analysis:** Conduct a comprehensive study comparing the administrative cost and time savings of the developed system against the traditional manual system to provide a strong economic justification for system adoption across other barangays.



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APPENDICES

Appendix A: Questionnaires / Survey forms



Barangay Profiling System Evaluation Form

* Indicates required question

Name: (optional)
Your answer

Role: *

Purok Leader
 Barangay Staff
 Administrator

How long have you been using the system? *

First time
 Less than 1 week
 1-4 weeks

TASK COMPLETION EVALUATION

(Rate your experience completing these tasks: 1-Very Difficult to 3-Very Easy)

Logging into the system *

1 2 3



Adding a new resident record (for Purok Leaders) / Searching for a resident (for Staff) *

1 2 3



Updating existing resident information *

1 2 3



Generating reports (population, voter lists, etc.) *

1 2 3





SYSTEM SATISFACTION (Likert Scale 1-3)

(1=Strongly Disagree, 3=Strongly Agree)

The system interface is user-friendly and intuitive *

1	2	3

Role-based access control works appropriately

1	2	3

The system improves barangay operations compared to manual methods

1	2	3

SYSTEM QUALITY ASSESSMENT

Overall system reliability

1	2	3

Data security and privacy protection

1	2	3