**Feasibility Analysis**

Member Names:

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The feasibility analysis aims to determine whether the proposed system can be developed and successfully implemented by assessing its technical, economic, and operational aspects. It ensures the project is practical, cost-effective, and suitable for the company’s needs.

**Technical Feasibility**

To determine if the student developers and the company have the necessary technology, resources, and skills to build and use the proposed system.

**Development Side (Students)**

1. Skills and Knowledge

[State the programming skills and knowledge the student developers have.]

**Knowledge and Abilities  
  
The following project-related abilities and expertise are possessed by the student developers:  
  
Programming Languages: Intermediate to basic understanding of HTML, CSS, JavaScript, and PHP.  
  
Frameworks & Tools: Proficiency with Bootstrap for frontend design and CodeIgniter for backend programming.  
  
Database Management: Designing and administering relational databases requires an understanding of MySQL.  
  
System Development: Knowledge of session management, user authentication, and CRUD operations.  
  
Hardware Integration: Fundamental understanding of RFID technology for tracking attendance.  
  
Collaboration Tools: Knowledge of online communication systems for teamwork, such as GitHub and Google Drive**

1. Tools and Platforms

[List the programming languages, frameworks, or tools that will be used.]

**Platforms and Tools  
  
The following platforms and tools will be used in the project's development:  
  
Languages used for programming: PHP, HTML, CSS, and JavaScript  
  
CodeIgniter is the PHP framework.  
  
MySQL is the database.  
  
Development Tools: XAMPP/Laragon (local server) and Visual Studio Code  
  
Design Tools: Frontend style with Bootstrap  
  
GitHub and Google Drive for version control and collaboration  
  
Hardware: RFID tags and a reader**

1. Resources Available

[State if the students can access the computers, software, and internet required.]

**Available Resources  
  
The necessary materials for the project are available to the students, including:  
  
Laptops and PCs for documentation, testing, and coding  
  
Software tools like MySQL, XAMPP/Laragon, and Visual Studio Code (all free and open-source)  
  
Reliable Internet access for online meetings, research, and teamwork  
  
The team supplied the RFID hardware (reader and tags) or obtained it from other sources.  
  
Platforms for collaboration that facilitate file sharing and version control, such as GitHub and Google Drive**

**Client Side (Company)**

1. Existing Hardware/Software

[List the hardware and software the company already has.]

**Current Software and Hardware  
  
The following software and hardware resources are already available to the barangay, which can aid in the system's development and implementation:  
  
Hardware  
  
Laptops and desktop PCs for system use  
  
Basic networking hardware, such as cables, routers, and Wi-Fi  
  
A printer for attendance sheets and reporting  
  
Program:  
  
Computers come with the Windows operating system pre-installed.  
  
Office programs for documentation, such as Microsoft Office and LibreOffice  
  
Web browsers for system access (Microsoft Edge, Google Chrome)**

1. Readiness to Adopt System

[Describe the company’s ability or willingness to adopt the system, including staff’s technical skills.]

**System Adoption Readiness  
  
The barangay is very eager to implement the suggested RFID-based attendance monitoring system. Employees already know how to use computers for routine tasks including data encoding, report preparation, and record management. Although technical abilities might be restricted to simple computer functions, the system is made to be intuitive and simple to use, requiring little training. As long as brief orientation and assistance are provided, the barangay is prepared to incorporate the system into its everyday operations given the availability of existing computers and internet connectivity**

1. Ease of Use

[Explain if the system will be easy for non-technical employees.]

**Usability  
  
Because of its straightforward and easy-to-use design, even non-technical staff may easily manage the system. The personnel will be guided by the interface's obvious labels, buttons, and instructions. It only takes a few clicks to complete common operations like scanning RFID cards, accessing attendance data, and creating reports. Even individuals with only rudimentary computer skills will be able to operate the system efficiently with a brief introduction.**

**Economic Feasibility**

Costs and benefits are considered to determine if the proposed system is financially reasonable for the student developers and the company.

**Development Side (Students)**

1. Estimated Development Costs

[List any expenses the students might incur, such as printing, transportation, or domain hosting.]

### **Estimated Development Costs**

| **Item / Expense** | **Estimated Cost (PHP)** | **Notes** |
| --- | --- | --- |
| **Printing** (reports, forms) | ₱300 – ₱500 | For documentation and reports. |
| **Transportation** | ₱500 – ₱800 | For visits/meetings at the barangay. |
| **Domain/Hosting (optional)** | ₱800 – ₱1,000 | Only if the system will be online. |
| **Miscellaneous** | ₱300 – ₱500 | Unexpected small expenses. |

**Total Estimated Cost:** ₱1,900 – ₱2,800

1. Funding Source

[Explain if students will self-fund or receive support from the school or other sources.]

**The project will be funded mainly by the students to cater to nominal expenses like printing, transportation, and odds and ends. In case additional resources are needed (e.g., RFID hardware or hosting), assistance may be sought from the school, barangay councilors, or contributions from group members.**

1. Cost Minimization

[Describe how the students plan to keep costs low, e.g., using free tools or open-source software.]

**In order to keep costs down, students will be using free and open-source programming for system development (e.g., Visual Studio Code, MySQL, and CodeIgniter). Documentation for the project will be distributed electronically in order to lower the cost of printing. Hosted solutions will be avoided through local server development (XAMPP/Laragon). Transportation expenses will be cut back by scheduling online meetings whenever feasible. RFID hardware will be borrowed or purchased at the lowest available student-friendly price.**

**Client Side (Company)**

1. Implementation Costs

[State the possible expenses for the company, such as hardware upgrades or internet subscriptions.]

**Costs of Implementation  
  
The barangay may incur the following costs in order to adopt the system:  
  
RFID hardware includes an RFID reader and resident or employee RFID cards or tags.  
  
Upgrades to the computer (if necessary): More RAM or new components for improved performance  
  
For creating attendance records and reports, use a printer and ink.  
  
If necessary, an internet subscription is needed to facilitate online backups or system updates.  
  
Other expenses: upkeep, cables, or replacement components  
  
Depending on the quantity of RFID cards and hardware needed, the estimated range is between ₱5,000 and ₱10,000.**

1. Return on Investment (ROI)

[Explain the benefits the company will get compared to the costs, e.g., time saved, reduced paperwork, increased efficiency.]

**ROI (return on investment)  
  
The advantages of implementing the Barangay Attendance System with RFID will exceed the initial expenses. The solution will reduce paperwork, save staff time, and avoid errors caused by manual encoding by automating the recording of attendance. The speed at which reports can be produced enhances the effectiveness and precision of attendance tracking. When weighed against the low setup and maintenance costs, the system's long-term benefits of transparent record-keeping, decreased operational workload, and improved accountability result in increased production.**

**Operational Feasibility**

To assess whether the proposed system will work smoothly within the company’s day-to-day operations and if the users can use it effectively.

**Development Side (Students)**

1. Understanding the Requirements

[Explain how the students will gather and understand the company’s needs to ensure the system meets them.]

**Recognizing the Needs  
  
Through interviews and meetings with barangay officials and workers, the students will gather requirements to make sure the system satisfies the needs of the community. To find issues and potential improvements, they will observe the present attendance procedure. Specific demands, such reporting formats and usability, will also be clarified through questionnaires and feedback sessions. Students can create a system that is user-friendly, practical for everyday operations, and in line with the barangay's workflow by speaking with end users directly.**

1. Training & Support

[Describe any training materials, manuals, or support students will provide for system users.]

**Instruction and Assistance  
  
To guarantee that barangay employees can utilize the system efficiently, the student developers will offer fundamental instruction and assistance. This will include:  
  
User orientation is a brief training session that covers how to view attendance, scan RFID cards, log in, and create reports.  
  
User Manual/Guide: A straightforward written or digital handbook that includes screenshots and detailed instructions.  
  
On-Call Support: Throughout the first phase of implementation, the students will be on hand to answer queries or resolve problems.  
  
Knowledge Transfer: While sophisticated issues may be forwarded back to the developers, barangay workers will be trained to handle basic troubleshooting.**

1. Adaptability

[Explain how the student developers can adjust the system if operational issues arise.]

**Flexibility  
  
The system was created by the student developers to be adaptable and flexible in the event that operational problems occur. Students can change the code, update the database, or edit system settings to fix issues that arise, such as mistakes in RFID scanning, report generating, or attendance tracking. The system can be updated and improved without incurring significant costs because it makes use of modular coding and open-source tools. The technology will also be regularly improved and refined for more seamless operations using input from the barangay staff.**

**Client Side (Company)**

1. User Readiness

[State whether the company staff have basic computer literacy or prior experience with similar systems.]

**Readiness of Users  
  
Basic computer literacy is possessed by the barangay personnel, who can use word processors, spreadsheets, and web browsers. They may be unfamiliar with RFID-based systems, but they can pick up the new system because they are accustomed to basic digital chores. The personnel will be prepared to use the Barangay Attendance System effectively after a brief orientation and training.**

1. Workflow Compatibility

[Explain if the system will fit into the current operations without significant disruptions.]

**Workflow Interoperability  
  
Without generating any disturbances, the suggested solution is made to blend in perfectly with the barangay's current activities. Staff members only need to scan their RFID cards for the system to automatically log their attendance rather than manually inputting it on paper. It is now possible to generate reports instantaneously that were previously prepared manually. The solution guarantees a smooth transition with few staff adjustments required because the procedure replicates the barangay's present operation but does so more quickly and accurately.**

1. Management Support

[Mention if the company management is supportive and willing to implement changes.]

**Assistance for Management  
  
The suggested RFID-enabled attendance system has the backing and willingness of the barangay management. They understand the advantages of increased openness, accuracy, and efficiency in attendance tracking. The management is ready to make the required adjustments, grant access to resources, and motivate employees to use the system efficiently with their consent and participation.**