**Resident’s Information System of**

**Barangay Banlasan, Tubigon, Bohol**

*A capstone project submitted in partial fulfillment of the requirements for the*

*Degree of*

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**Executive Summary**

**Chapter 1**

**INTRODUCTION**

* 1. **Project Context**

Computer-based information retrieval operates through the use of software that can offer information services for an institution. Information technology is a significant in process of upgrading leadership through services that every Barangay are work with. The Barangay Banlasan in Tubigon, Bohol seems far from civilization in terms of taking notes or listing their residents' information. Like other Barangays who don't have the technology to keep track of their information, they use a manual system to document and maintain information and records about their residents. The secretary will produce handwritten lists of every person's information living in each purok household. Moreover, collecting the information of residents, mainly the Registry of Barangay Inhabitants (RBI) data, is handwritten on paper and filed into a folder. In every meeting of the barangay, like the assembly meeting, the data of the attendance meeting is usually handwritten, as well as the meeting minutes.

When the residents ask for barangay clearance and certificates, the secretary still asks for the resident's valid IDs for their information and give it to the secretary for processing. In tracing the records, the barangay secretary or officials will find them one by one, which takes a lot of time. And since its primary tool is paper, there's a tendency that it will decay in time. These records are vital for different purposes and should be stored securely.

This study's primary concern is to perform an appropriate method; that way, it would be more efficient and valuable. The Computerized Barangay Residents Information System is suitable for use by barangay officials who have access to profile information of barangay residents for direct reports. Due to this, barangay staff and residents may operate effectively and efficiently. They will be able to do their duties more quickly and without the aid of a sizable team.

Thus, the researchers will propose a computerized Information System for Barangay Banlasan, Tubigon, Bohol that will provide storage, fast retrieval, maintenance, and faster tracking of the files. Proposing system software for the records is very useful to the staff, from handwritten documents and manual issuing of barangay clearances, certificates, and other barangay issuances.

**1.2 Purpose and Description**

To develop a Barangay Resident’s Information System that improves management, issues clearances and certifications, and maintains all residents' private records. It would provide an accurate information, secure data, reliable reports, accessible documents and automated and systematized process keeping for the barangay. This system aids barangay management by enabling the client barangay to retain their resident records as comprehensive and up-to-date as feasible and as easily accessible for verification, monitoring and reference purposes based on the available resident’s data stored by client. It will reduce the workload of the staff in keeping records and managing the file. It also gives ease and satisfaction to the client requesting for a document.

**1.3 Objectives**

**General Objectives**

To develop a computerized Barangay Residents Information System for Barangay Banlasan that will aid the difficulties in handling the resident's records.

**Specific Objectives**

The specific objectives of the researchers in conducting this study are the following:

* To switch from the current manual recording system process to a fully automated and computerized record keeping and storing system.
* To secure resident’s confidential records and reduce long-time procedures.
* To gather accurate reports, proper automated file management.
* To provide the information with relatively less effort on the users’ part and conveniently put a vast amount of data.
* To provide backup of the file records, issues certificate, permits and other related records in every resident to avoid loss of information.
* To maintain, search information, store documents, and generate up-to-date reports of the residents as possible.
* To lessen the barangay staff/ secretary’s burdensome record-keeping duties.

**1.4 Significance of the Study**

         The proposed system will be beneficial to the Residents of the Barangay and Barangay Officials who manage the system and the Barangay itself. Implementing the system will change the method and processes that the Barangay was accustomed to keeping their files. This will also ensure that all the records will be intact and updated. Rest assured that the file will be protected and safe, for it will require authorization from designated personnel before someone can access the system. This will therefore benefit the community who struggle in issuing and maintaining the security of their data.

The following group of people will benefit from the study:

**Barangay Officials**

         They will have quick access to the data they require, thanks to the person who oversees the barangay's files and information. Additionally, it will allow the system to retain the vast amount of paperwork they currently maintain so that anyone can readily access it.

**Residents**

        It will also be easier for them to request some documents and services because of the information that the barangay already has about them. This will also assure the residents that their data is adequately secured and maintained through the proposed system.

**Future Researchers**

         It will give them background or an overview for this kind of study. This may be one of the bases where new ideas for innovation will uncover.

**Researchers**

         To increase the personal knowledge of problem-solving and contributing to the community, developing skills and interests in programming is the right thing to do.

**1.5 Scope and Limitations**

**1.5.1 Scope**

This study will focus on the computerized Residents Information System in Barangay Banlasan, Tubigon, Bohol, wherein the researchers aim to develop an appropriate method: the concept of a database. This study will be conducted at the Barangay in Banlasan, Tubigon, Bohol since this is the place that the researchers choose for the proposed project to be implemented with the sympathy of their Barangay management situation. All the information needed will be collected from the records of the residents from the Barangay Officials for future purposes in building the system.

The scope of the study is to provide efficient, reliable, fast and accurate information of the residents. It would provide better file management, enhance barangay’s transactions and good quality services.

**Features**

The said system has the following features that only an authorized barangay staff can manage and operate the system. It can produce good services and outputs needed by the residents in the barangay.

* It has a security for the admin and staff assigned in this work.
* It would allow the authorized staff to access the system to add, update, save and keep track of the barangay resident’s records.
* It would be the basis for the resident’s important documents and generate prints (e.g., clearances, barangay certificates and permits).
* It saves time and effort to find the residents records.
* It has a local drive or cloud storage for backup and recovery purposes, to avoid the loss of data.
* It has a swipe reader that check the attendance (assembly meetings).

**1.5.2 Limitations**

The system is limited only to gather, examine and monitor the resident’s information and records. To issue requested and needed documents such as certificates and clearances of the residents quicky and efficiently. This system is not capable of monitoring the resident’s life events and cannot be used online.

The data collected covers only the records of the residents residing in the area. It will only be implemented in Barangay Banlasan, although it cannot be disputed that other Barangays might adopt it if they want a similar structure.

**Chapter II**

**REVIEW OF RELATED LITERATURE**

In this chapter, it will tackle about the review of the related works or other previous studies and publications relevant to the Barangay Information System then and now which serves as the proponents in developing the project.

A Barangay Residents Information System is an information system used for decision-making, and for the coordination, control, analysis, and visualization of information in an organization. The study that involves people, processes and technology in an organizational context.

Gurewich (1999) states that the database system makes the work faster for every institution, For the mere fact that instead of doing things manually, with the use of computer technology everything is done faster.

(Dick, Lawrence Raymond, 2008) computerization of agency information system is proliferating as evidenced by numerous recent articles in the human service literature. Although information system and computer jargon is unfamiliar, the promises and potentials are enticing.

According to Lado et. al. (2017) computerized barangay information system is appropriate for use of barangay employees, who have access to profile of barangay residents for the direct report. Moreover, departmental organizational staffs which have business need for this information for their business unit can also benefit.

This kind of project Is not the very first in the Philippines. The same project successfully operated in other barangays. Similar system to our project Mr. Galorio, Eugenio and his group - Former BSIT Graduate (2020) proposed a computerized barangay information system for the adopted barangays of Macaas, Cabulijan, Tinangnan and Ubojan. Their system has a feature that would allow the barangay staffs to access the system to add, update and keep track of the barangay residents records.

**Chapter III**

**Technical Background**

**Installation**

* XAMPP v. 3.3.0 and higher
* Laragon v. 5.0 and higher

**Developing Tools**

**Hardware**

For laptops and computers

* Maximum of 250 SSD Space
* At least Intel Corei3 processor
* At least 12 GB RAM

**Software**

Operating System

* Recommended Windows at least version 10 and above

**PHP**

PHP is a script language and interpreter that is freely available and used primarily on Linux Web servers. It is widely-used open-source general-purpose scripting language that is especially suited for web development and can be embedded into HTML.

**JAVASCRIPT**

JQuery is a JavaScript library that allows web developers to add extra functionality to their websites. It is open source and provided for free under the MIT License. In recent years, JQuery has become the most popular JavaScript library used in web development.

**CSS**

CSS stands for Cascading Style Sheets. CSS describes how HTML elements are to be displayed on screen, paper, or in other media. CSS saves a lot of work. It can control the layout of multiple web pages all at once. External style sheets are stored in CSS files.

**BOOTSRAP**

Bootstrap is a free and open-source front end development framework for the creation of websites and web apps. The Bootstrap is the most popular CSS Framework that is built on HTML, CSS, and JavaScript (JS) to facilitate the development of responsive, mobile-first sites and apps.

**MySQL**

MySQL pronounced either “My S-Q-L” or “My Sequel,” is an open-source relational database management system. It is based on the structure query language (SQL), which is used for adding, removing, and modifying information in the database. Standard SQL commands, such as ADD, DROP, INSERT, and UPDATE can be used with MySQL.

MySQL can be used for a variety of applications, but is most commonly found on Web servers. A website that uses MySQL may include Web pages that access information from a database. These pages are often referred to as “dynamic” meaning the content of each page is generated from a database as the page loads. Websites that use dynamic Web pages are often referred to as database-driven websites.

MySQL will use by the researcher because it is one of the databases that is compatible with the development of the system.

**LARAVEL**

Laravel is a web framework of PHP that is a server-side programming language. This means that the Laravel framework is used for the backend side of web development. This top-rated framework comes with the model view controller (MVC) architecture.

Frontend development languages like HTML, CSS, and JavaScript can be used for client-side data output. Front-end development frameworks and tools like ReactJS, VueJS, AngularJS, Ionic, and others help in HTML data presentation.

**LARAGON**

Laragon is a portable, isolated, fast & powerful universal development environment for PHP, Node.js, Python, Java, Go, Ruby. It is fast, lightweight, easy-to-use and easy-to-extend. This is great for building and managing modern web applications. It is focused on performance - designed around stability, simplicity, flexibility and freedom.

Laragon is very lightweight and will stay as lean as possible. The core binary itself is less than 2MB and uses less than 4MB RAM when running. It doesn’t use Windows services. It has its own service orchestration which manages services asynchronously and non-blocking so you’ll find things run fast & smoothly with Laragon.

**Chapter IV**

**Methodology**

**Requirements Analysis and Requirements Documentation**

In describing how the project was designed, the researchers used the Use Case Diagram and DB.IO for the database, to explain how project functioned**.**

**Use Case Diagram**

|  |  |
| --- | --- |
| **Use case name:** | Create Resident Profile |
| **Use case type:** | Essential, Detail |
| **Triggering event:** | New Resident |
| **Brief description:** | This case describes how to register, generate, store and maintain the resident’s information to the system. |
| **Actors** |  |
|  |  |
|  |  |

**Design of Software, System, Product, and Process**

**Output and User-Interface Design**