



COLLEGE OF COMPUTER AND INFORMATION SCIENCE

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IT PRACTICUM FINAL REPORT

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In Partial Fulfillment of the Requirements for the degree of

Bachelor of Science in Information Technology

Student Outputs

Overview of the Company

The City Government **Biñan**, located in the province of Laguna, Philippines, primarily responsible for governing the administration, development, welfare of the City Biñan. The city serves as one of the major urban and industrial centers in the Southern Region of Luzon. The local government of Biñan operates and serves under the principles of long-term transparency, sustainability, efficiency, aiming to provide quality public service, promote progress, encourage equality, among its citizens of Biñan overall improving the quality of life knowing the city calls itself the “city of life”. The city is being governed by Mayor, Vice Mayor, city councilors, congress representative of city itself, supported by various departments that handles multiple services, such as health, education, development, disaster management, social welfare, business licensing, sustainability programs, environmental, improving the and serving for the people of Biñan.

Vision

A modern and developed City where its responsible people are proud of their cultural, historical and artistic heritage; enjoy peace and security, economic stability, social justice, preserved environment, accessible quality education, responsive social services, well-planned infrastructure facilities all anchored on good governance thus making the City of Biñan as the Premiere Heritage and Trade Capital of the South, the best place to live, work and visit.

Mission

THE LEADERSHIP OF THE CITY OF BIÑAN IS COMMITTED TO EXERCISE ITS MANDATE TO:

- Promote social order and ensure public safety.
- Enhance economic prosperity through job generation, manpower and skills development, encourage and support local industries and its expansion.
- Guarantee social justice by way of ensuring basic services and equal opportunities.
- Deliver accessible and quality healthcare services.
- Protect and maximize the utilization of environment and natural resources towards the attainment of a disaster-resilient community.
- Ensure access to free and quality education to prepare our youth to be globally competitive.
- Support gender sensitivity, responsiveness and equality.
- Provide modern and needed infrastructure facilities.
- Preserve, conserve and nurture its cultural, historical and artistic heritage toward sustainable tourism; and
- Increase collection efficiency through reasonable taxes, fees and charges, ensure sound fiscal management.

Company Background

The City Government of Biñan is the official local government unit in one of the provinces in Laguna, its purpose and responsibilities for managing the administration and continuous development of City of Biñan. The city itself has rapidly grown into one of the many urban centers serving its purpose in the Southern Region of Luzon with its strong key roles and responsibilities under the public service delivery, urban development, economic growth, digital governance, disaster preparedness and response. Being guided by its mission to provide, efficient, transparent, people-centered governance, the city itself implements numerous services to its citizens, health care, social welfare, development, sustainability, economic development, disaster risk management in which it being manage by multiple individuals working together including the Mayor, Vice Mayor, City Council.

One of the departments **Information Communications Technology Office (ICTO)** its key roles and responsibilities for planning, developing, implementing, maintaining, providing quality services in the city's various information, communications, technology, digital infrastructures. The department ICTO plays a key role in the digital transformation of the city's government operations ensuring each of the department are equipped with modern, secure, reliable digital infrastructure and services improving efficiency and transparency when serving its citizens.

City Human Settlements and Livelihood Office (CHSLO), is another key department under the City Government of Biñan, tasked with issues related to housing, urban development, livelihood assistance playing a vital role in promoting in sustainable development, living conditions, economic empowerment among its residents. CHSLO's madates aligns with the city's mission of providing public service by ensuring right access to adequate shelter, livelihood opportunities or programs, community development initiatives. The department serves as a bridge between the local government programs and community needs, provide support through housing facilitation trainings, assistance.

Discussion of the Nature of Tasks

Throughout the course of the practicum engagement I was assigned in a three-member team and our stakeholders namely the **City Human Settlements and Livelihood Office (CHSLO)** in which our task aiming to digitalize a paper-based census and tagging form into a web-based form simplifying the need of re-printing numerous forms for data gathering, in which it enables faster identification, classification, retrieval of demographic information, each member in our group was assigned different workloads to accomplish, throughout the course of developing the system for CHSLO department the ICTO will be supervising our progress, weekly updates, suggesting improvements and revisions to the system, proper advising and collaboration.

Software Used:

- Visual Studio Code
- CodeIgniter 4 (CI4) Framework (Model, View, Control)
- PhpMyAdmin

Hardware Used:

- Lenovo Ideapad 3

Software Development Outputs

Throughout the course of the developing the system our supervisor introduce to us a new framework Code Igniter 4 that utilizes the aspects of Model, View, Control, practical for web-based applications in which our internship will be focusing on, languages such as Php, HTML, CSS, including the bootstrap feature providing templates for the View part of the framework, for the Controller part it will be the overall logic and flow of the system, and for the Model part in which is the backend part of the system, in our case us developers utilize the phpMyAdmin in creating data fields, columns, tables, the overall structure of database. In the planning part of the system us developers had draft some diagrams of the system will works, diagrams such as entity relationship diagrams, flowcharts, sitemaps, Gantt chart, utilizing the needs of proper flow or methodology in developing the system.

Scope of the Project

The scope of the project is focused on digitalizing a paper-based form census and tagging into a web based-form for faster data-collection, identification, categorizing, documentation, labeling, retrieval of demographic information. Typically used by local government units or institutions for planning, developing household settlement programs and services through organized data management.

The project involves in creating census and tagging form one of the main function of the system which involves multiple data entry such tagging no., barangay, classification, name, gender, contacts, birthdates, addresses, and lot info to name a few entries, there are other forms such as beneficiary form but the logic of this form will be only those users who are registered users, print census reports for documentation, an account management for the department's staff, a system logs for keeping track pf records of the system. A map based for gathering coordinates of the gathered household. Overall, the features and logic of the project will simplify the department's traditional way of gathering demographic information among its residents, individuals, or settlements.

Scope of the project includes:

- Manage Census and Tagging

Enables encoding, data entry, categorizing, management of individuals, household assets within the community, supports a full CRUD functionality (Create, Read, Update, Delete) operations, integrating search and filtering methods allowing quick access and identification among those tagged data, provides numerous validation and verification for ensuring data integrity and accuracy.

- Manage Beneficiary

Beneficiary handles the registration, eligibility validation, verification, and management among individuals and households that are qualified and accepted by the system for aid, support, programs, integrating with census data that only those individuals and households registered by the census and tagging module are verified as beneficiaries. Full CRUD functionalities is also utilized for this scope as well.

- Account Management

Enables administrators to manage user accounts that includes account creation, editing, updating, activation and deactivation, archive/deletion, supports a role-based access such as Admin, Encoder, Viewer, assigning different permission levels based on roles.

- System Logs

The system logs records system activities, events , actions such as logins, user actions (create, update, delete), providing administrators with searchable, filterable logs for accountability, integrity, troubleshooting, maintain transparency and monitor security related events.

- User Interface and Design

Offers users a responsive and user-friendly interface accessible via a desktop and mobile devices, consistent navigation and layout across the system, providing accessibility usability, reliability, clean visual design.

Screen of the Features

Manage Census and Tagging

City of Biñan Human Settlements and Livelihood Office

emmanadmin

Manage Census Tagging Page

Home / Manage Census Tagging Page

Search by name or tagging no

All Classifications

All Barangays

Filter

Clear

Add Census Form

Census Records

ID	Tagging No.	Name	Family Size	Classification	Actions
12	2025-CAN-0002	JOHN DOE	2	TABI NG LAWA	Actions

Census and Tagging Form

Barangay

Choose...

Tagging No:

2025

Code

0001

Classification of Area

Choose...

A. INFORMATION ON THE HOUSEHOLD

Name of Household Head

Lastname

Firstname

Middle Name

Maiden Name

Suffix (e.g. Jr., Sr.)

Date of Birth

dd/mm/yyyy

Sex

Civil Status

Religion

Lastname

Firstname

Middle Name

Maiden Name

Suffix (e.g. Jr., Sr.)

Date of Birth

09/06/1986

Sex

Civil Status

Religion

Occupation

Average Monthly Income

25000

Contact

09356481988

Present Address

BLOCK 4 LOT 67, KING STREET, GANADO SU

Place of Work

SUPREME COURT MANILA BRANCH

Manage Beneficiary

City of Biñan Human Settlements and Livelihood Office

emmanadmin

Manage Beneficiary Page

Home / Manage Beneficiary Page

Search by name, tagging no, or disaster

All Disasters

All Damage

Filter

Clear

Add Beneficiary

Beneficiary Records

Export

ID	Tagging No.	Name	Disaster	Damage	Vulnerability	Date Added	Actions
6	2025-CAN-0002	JOHN DOE CANLALAY	Bagyong Emman	Partially Damaged	5 criteria Deaths, Children, Ill/Disabled, Women-Headed, Senior-Headed	Jul 10, 2025	Actions
1	TAGGINGNO1		21312312	Partially Damaged	2 criteria Deaths, Senior-Headed	Jul 07, 2025	Actions

Add Disaster Beneficiary

Name of Disaster

Choose...

Tagging Number

Enter tagging number

Search

Classification of Damage

Choose...

Remarks

Additional remarks about the damage

VULNERABILITY CRITERIA

☐ Household with deaths in the family or were incapacitated as a result of the disaster

☐ Household with children

☐ Household with seriously ill members, disabilities, or special needs

☐ Women-headed household at risk (e.g. single mothers, widows, older women, survivors of violence, pregnant/lactating women)

☐ Household headed by senior

PHOTOS OF DAMAGED HOUSE

Account Management

Manage User Account

Employee Number

13461346

Firstname

dummy2

Lastname

dumm2

Email

dummy2@gmail.com

Username

dummy2encoder

Account Level

Encoder

New Password

Leave blank to keep current password

Close

Update

City of Biñan Human Settlements and Livelihood Office

emmanadmin

Account Management

Home / Account Management

Search name, username, email, or role

All Roles

All Status

Filter

Clear

Add User

Username	Employee Number	Firstname	Lastname	Email	Role	Status	Action
jayronadmin	141414	JAYRON	DIMAANO	jayrondimaano14@gmail.com	Admin	Active	Actions
ranieadmin	12512512512	ranie	santiago	ranie@gmail.com	Encoder	Inactive	Actions
emmanadmin	1251231	emman	banares	emman@gmail.com	Admin	Active	Actions
jayronencoder	1346134	jeron	pogi	jeron@gmail.com	Encoder	Active	Actions
carlosencoder	1346134	carlos	pelino	carlos@gmail.com	Encoder	Active	Actions

System Logs

City of Biñan Human Settlements and Livelihood Office

emmanadmin

System Logs

Home / System Logs

Total Logs

111

Successful Logins

36

Failed Logins

6

Active Sessions

22

Search by username

All Actions

dd/mm/yyyy

dd/mm/yyyy

Filter

Clear

Date & Time	User	Action	IP Address	Details	User Agent
Jul 15, 2025 07:11 AM	emmanadmin	User Login	:::1	User 'emmanadmin' logged in successfully	<div>View</div>

Date & Time	User	Action	IP Address	Details	User Agent
Jul 15, 2025 07:11 AM	emmanadmin	User Login	:::1	User 'emmanadmin' logged in successfully	<div>View</div>
Jul 10, 2025 02:29 PM	emmanadmin	Add User	:::1	Added new user: raniesanti (RANIE NATHANIEL SANTIAGO) with role: Viewer	<div>View</div>
Jul 10, 2025 02:27 PM	emmanadmin	User Login	:::1	User 'emmanadmin' logged in successfully	<div>View</div>
Jul 10, 2025 01:44 PM	emmanadmin	Delete Disaster Beneficiary	:::1	Deleted disaster beneficiary ID: 5 - Tagging: 2025-CAN-0002	<div>View</div>
Jul 10, 2025 01:44 PM	emmanadmin	Delete Disaster Beneficiary	:::1	Deleted disaster beneficiary ID: 7 - Tagging: 2025-CAN-0002	<div>View</div>
Jul 10, 2025 01:44 PM	emmanadmin	Add Disaster Beneficiary	:::1	Added disaster beneficiary for tagging number: 2025-CAN-0002 - Disaster: Bagyong Emman	<div>View</div>
Jul 10, 2025 01:43 PM	emmanadmin	Add Disaster Beneficiary	:::1	Added disaster beneficiary for tagging number: 2025-CAN-0002 - Disaster: Bagyong Emman	<div>View</div>

Discussion

The project involves improving the traditional census and tagging paper-based logic turning into a web-based logic that can access both desktop and mobile devices, simplifying the needs of reprinting multiple forms for gathering data among individuals and households, while in this project where the user such as the City Human Settlements Livelihood Office (CHSLO) will be only using their respective devices in their data gathering, categorizing, identifying throughout the course of their workload where three key users under that department will be utilizing the system Admin, Encoders, Viewers. The project was divided into 4 main functionalities for now: **Manage Census and Tagging** in which accessible for both admin, encoders, while the viewer has the only ability to view the module and can't perform more other functionalities. The **Manage Beneficiary** accessible for admin, encoders, while viewer has the only privilege of viewing as well. The **Account Management**, and the **System Logs** are only accessible by an admin role for overseeing all users accounts, events, activities, actions and the whole system itself.

Programming languages and tools that was used throughout the course of the development such as the framework that our supervisor introduced to us the CodeIgniter 4 (CI4) being our Php framework due to its MVC approach or methodology, in developing the user-interface design of the system tools such as HTML, CSS, Bootstrap for providing a user-friendly interface, responsive system, for the database management MySQL and Phpmyadmin was utilized. Modals in the system provides easier accessibility, performance, and reliability this simplifies of creating multiple view files and window for further functionality of the system.