

**Strategic Workforce Optimization: Development of HR Management System
with Prescriptive Insights for Carigara Local Government Unit**

A Capstone Project

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of the Requirements for the Degree
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APPROVAL SHEET

In partial fulfillment of the requirements for the degree of **Bachelor of Science in Information Technology**, this Capstone Project entitled: "**STRATEGIC WORKFORCE OPTIMIZATION: DEVELOPMENT OF HR MANAGEMENT SYSTEM WITH PRESCRIPTIVE INSIGHTS FOR CARIGARA LOCAL GOVERNMENT UNIT**" has been prepared and submitted by MARIS ADRALES, JASMIN C. RAGRAG, ARWIN O. ROCHA, and CHRISTIAN KIT V. ROTAIRO, who are recommend for Oral Examination.

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The Capstone Project hereto attached, entitled "**STRATEGIC WORKFORCE OPTIMIZATION: DEVELOPMENT OF HR MANAGEMENT SYSTEM WITH PRESCRIPTIVE INSIGHTS FOR CARIGARA LOCAL GOVERNMENT UNIT**" prepared and submitted by **Maris Adrales, Jasmin C. Ragrag, Arwin O. Rocha, and Christian Kit V. Rotairo**, in partial fulfillment of the requirements for the degree of **Bachelor of Science in Information Technology**, is hereby accepted.

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Abstract

MARIS ADRALES, JASMIN C. RAGRAG, ARWIN O. ROCHA, CHRISTIAN KIT V. ROTAIRO. “**Strategic Workforce Optimization: Development of HR Management System with Prescriptive Insights for Carigara Local Government Unit**”, (Eastern Visayas State University – Carigara Campus, Carigara Leyte).

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The Carigara Local Government Unit (LGU) faces challenges in optimizing its workforce, hindering efficient service delivery and hindering its potential. With a focus on maximizing IT potential, the study had aimed to create an HR Management System that not only streamlined administrative processes but also integrated features such as Prescriptive Insights, tailored to the specific context of the Carigara Local Government Unit.

This study contributes to the field of public sector HR management by demonstrating the transformative potential of data-driven, prescriptive HR systems in optimizing local government workforces. By empowering Carigara LGU with the tools and insights to strategically manage its workforce. Incorporating prescriptive insights into our HR Management System holds strategic significance for the Carigara Local Government Unit. Ultimately, prescriptive insights – it is prescribes the age of all employees, and notify that this employee are ready for retirement.

By interviewing the HR Management, the proponents were able to obtain data and information that was useful in analyzing the issue and developing a reliable system. The researchers employed a survey questionnaire in order to standardize the data collection procedure. Using a Likert scale, the sample's responses were also analyzed for intensity and magnitude.

Based on the results that were discussed and presented, it was determined that the Strategic Workforce Optimization Development of HR Management System with Prescriptive Insights for Carigara Local Government Unit was effective, efficient, usable, and satisfactory. It also ensured that the results met the end-user demands and helped the study achieve its goals.

Keywords: *Strategic Workforce Optimization, Human Resource Office, PHP*

Chapter I

INTRODUCTION

Background of the Study

Traditional HR management systems often relied on manual and paper-based processes, leading to delays, errors, and a lack of transparency. These has hindered organizations from making informed decisions about their workforce, such as resource allocation, training program development, and future staffing planning. As organizations across sectors embraced digitalization, local government units had come to recognize the potential of IT solutions to streamline their operations, enhance efficiency, and better serve their constituents [4]. This HR Management System focused on User Authentication, Document Organizer, Prescriptive, and Tabulation. The "Users Authentication" system acted as the guardian of data security, making sure that only those with permission could access sensitive data. This element was essential in maintaining the integrity and confidentiality of personnel records and other confidential data. By implementing strong authentication measures, such as multi-factor authentication and role-based access controls, the system ensured that sensitive employee information remained protected from potential breaches. Moving forward, the "Document Organizer" took center stage. With the help of this function, it became easier to effectively manage the many documents that were essential to local government activities. This system simplified document management, storage, and retrieval by combining a digital repository. The time spent looking for important documentation was drastically reduced by

categorizing papers based on relevancy and providing quick, safe access to authorized individuals. This encouraged good departmental collaboration and helped create a paperless office environment.

Furthermore, the "Tabulation" acted as a link between knowledge and understanding. Through well-structured tables, charts, and visualization complex data was distilled into easily understandable formats and made accessible to all users. This enhanced decision-making capabilities by providing users with a clear and concise overview of complex information. It also facilitated communication and collaboration by making it easier for users to share and discuss data.

Information Technology (IT) had altered established methods in all industries at a time when technological innovation had come to be seen as a sign of progress. The changing nature of governance, especially within local government entities, had driven this study. With a focus on maximizing IT potential, the study aimed to create an HR Management System that not only streamlined administrative processes but also integrated features such as Prescriptive Insights, tailored to the specific context of the Carigara Local Government Unit. The Carigara Local Government Unit, which was located at a central point in the public sector, was aware of the potential for IT-driven solutions to increase operational effectiveness, and service delivery, and promote data-driven descision-making [20].

Statement of the Problem

The efficiency of work in HRMO is extremely important to the Local Government Unit since it is critical to making a smooth workflow and a safe workplace. This research aimed at enhancing the efficiency, effectiveness, and decision-making capabilities of the Carigara LGU's HR operations through the integration of a comprehensive HR Management System, leveraging prescriptive insights to optimize workforce management, employee engagement, and organizational performance.

Specifically, it sought to answer the following:

1. To develop a system that will organize the documents, and tabulate, them with prescriptive insights that caters to the diverse needs of HR personnel regardless of their technical expertise.
2. To evaluate the system as to its:
 - a. Effectiveness
 - b. Efficiency
 - c. Usability
 - d. Satisfaction
 - e. Freedom from Risk

Scope and Delimitation

The HR Management System for the Carigara Local Government Unit was the subject of this study. The scope of this project was to develop and implement an innovative Strategic Workforce Optimization: the Development of an HR Management System with Prescriptive Insights for Carigara Local Government

Unit. The system integrated solutions for HR document management and heightened security measures, and aimed to create tabulation and prescriptive insights of the employees together with their prescriptive. This system reduced the time and effort of the personnel and other employees inside the office in locating and retrieving the HR documents.

However, this project had some limitations or delimitations. First, only documents within the HR Management Office of the Local Government Unit of Carigara, Leyte were eligible for use of the system. The study was focused specifically on the Carigara Local Government Unit. The findings and conclusions did not directly apply to other local government units or organizations in different regions or countries. Second, the system's recommendations might be affected by some factors and its effectiveness might depend on how it would work and be handled inside the HR Management Office.

Significance of the Study

The results of this study conducted by the researchers benefitted the HRMO personnel, other staff/employees inside the Local Government Unit in Carigara, Leyte, Citizens and Constituents, other Local Government Units (LGU), HR Departments, Academic and Research Communities, the Researchers or the Proponents, and Future Researchers. The significance of this study was multifaceted.

HRMO personnel. Firstly, it contributed to the HR Personnel who were assigned to manage important documents of different employees, by providing a more precise and accurate method of implementing an HR Management System

with **AAPI**. This helped ensure swift access and eased the process of showing prescriptive insights to every employee.

Staffs and Employees. The employees working for the Carigara Local Government Unit benefited from the implementation of the HR Management System. This research helped them to be more knowledgeable on how to retrieve important HR documents when necessary. This also was a great help for the employees to lessen their time in managing any other type of documents.

HR Department. The study had substantial advantages for the HR department. They gained access to strong insights, enabling data-driven decisions for hiring, performance management, employee development, and training. The system streamlined HR processes, reduced administrative burdens, and enhanced their ability to support the organization strategically.

Citizens and Constituents. As the HR Management System enhances HR processes, it can lead to improved public services provided by the Carigara Local Government Unit. Effective HR procedures produce more qualified and driven workers, which improves service delivery and overall governance for Carigara's constituents.

Other Local Government Units (LGUs) and Organizations. The study provided a model for other LGUs and organizations interested in adopting HR management practices. It showcased the benefits of leveraging technology, and prescriptive insights to enhance HR operations and overall organizational performance.

Academic and Research Communities. The study can contribute to academic research and knowledge in the fields of HR management, and organizational development. It may provide insights into best practices and innovative approaches for similar studies in the future.

Researchers. The outcomes of this study also benefited the researchers, and it was an honor for them to succeed in this research.

Future Researchers. This study also benefited the researchers, as it served as a guide for their future studies related to the topic.

Overall, the study's beneficiaries extended beyond the Carigara Local Government Unit alone because its conclusions and application might benefit several stakeholders, resulting in improved public services, more effective government operations, and better resource management for the community.

Chapter II

REVIEW OF RELATED LITERATURE AND STUDIES

The purpose of this Review of Related Literature (RRL) is to delve into the existing body of research and knowledge surrounding HR Management Systems with Prescriptive Insights, with a particular focus on their impact on employee performance and engagement within local government units. This RRL intends to provide light on the advantages, difficulties, and opportunities presented by these cutting-edge systems in the context of local government organizations by examining pertinent research, reports, and academic articles.

Related Literature

Human Resource (HR) Management Systems with Prescriptive Insights have become essential tools for streamlining HR procedures and promoting data-driven decision-making in today's fast-paced, technologically advanced society. These innovative systems integrate prescriptive insights to enhance talent management, employee performance, and engagement across various sectors, including local government organizations. An HR system can be defined as a combination of HR practices that "aim to achieve some overarchin1g results" and "that are espoused to be internally consistent and reinforcing"^[12]. HRM is primarily focused on "the pattern of planned HR deployments and activities" that are intended to help organizations achieve their objectives. Human Resource Management must be undertaken taking into consideration. It can be viewed as a field of study that is focused on the requirements of the organization as a whole; geared at investigating the methods and techniques that can be used using

personnel in the context of organizational objectives. However, for Human Resources Management to be appropriately effective and help in making alterations and introductions that yield positive results or have profitable implications, it should be oriented towards gaining a deeper insight into behavioral particularities and characteristics of its employees.

Paper investigates the basis for the assertion that HR analytics by offering data that is supported by statistics and has been independently verified, adds value to managerial and HR decision-making. According to the study, to stop HR analytics from becoming another "management fad," it should try to change the status quo. A strategy used by HR and related endeavors to make sure it is efficient in terms of producing tangible and material results. Decision-making has been identified as one of the most critical organizational processes including employee behavior, work performance, levels of motivation, and the amount of stress levied on employees. The type of HRM procedures used must be linked and coordinated with broader standards and directives for employee conduct competing objectives.

Related Studies

According to a study on HR: A Modern Tool In HR For Predictive Decision Making, HRM is oriented towards identifying tools and measures and relies on the basic principle that the employers and employees can work together and realize shared goals within the operative space of hierarchies and structured systems. HRM includes a variety of established strategies and practices that

have been proven to be effective and also the creation of new ones particular to the organizational context.

Human resource analytics is a relatively novel intervention in the larger domain of HRM, and it refers to the use of statistical tools, measures, and procedures, which can be used in employing and masking the most effectual decisions such as HRM strategies and practices. It is often referred to as people analytics talent analytics or workforce analytics. HR analytics can be understood as being more credible because it provides statistically valid data and evidence that can be used in the process of creating new strategies during the implementation of existing HR strategies and other measures.

According to Sunlin [28] in their study Determinants of Information and Communication Technology Adoption in Municipalities applied supervised learning that Local governments use various technologies to enhance responsiveness to citizens' demands and to improve efficiency. Public organizations have long been stereotyped as being highly bureaucratized and slow to innovate. Despite their rigid structures and the lack of flexibility to accommodate client and citizen needs public managers have made efforts to adopt organizational innovations.

According to Guest [9] in a study, Human Resource Management and Performance: A Review and Research Agenda, the Impact of Human Resource Management on performance has become the dominant research issue in the field. There has been a rash of studies demonstrating a positive association between human resource management (HRM) and performance, encouraging

those who have always advocated the case for a distinctive approach to the management of human resources.

As per Ghani [8] the hiring procedure can vary across different companies and job roles. The duration of the process should not exceed two to four weeks. Ineffectiveness in recruitment can negatively impact the candidate's experience, leading to damage to the organization's reputation and the loss of highly skilled individuals. Additionally, the recruitment manager and recruiter might experience reduced efficiency and potential exhaustion in the long run.

According to Bandi [2] delve into the significance of Data Analytics instruments in Human Resource Management in their research and they concluded that the utilization of data analytics is highly beneficial in all HR aspects. By employing this statistical instrument, the HR department is capable of making well-informed decisions. The researchers specified that HR analytics concepts are highly useful for measuring employee performance, informing decisions about salary and promotions, increasing employee retention, examining employee engagement, and measuring employee development and learning outcomes.

One form of data analytics is prescriptive analytics and in the study conducted by Rousseau [23] the researcher shows how prescriptive analytics can assist HR leaders specifically in Ireland in examining the trends and procedures for recruitment efficiency and performance oversight, regarded as enforced under comprehensive principles of HR service's influence on the work environment. This study has employed a utilization of qualitative semi-structured interviews

that is reliable in the present research as it is grounded on assessing the efficacy of prescriptive analytics in HR. Since this is an exploratory study, semi-structured interviews with ten HR specialists have been utilized. The findings of the interviews uncovered that the majority of the interviewees exhibited a strong interest in HR Analytics. This is attributable to the immense importance of HR Analytics in the activities of human resource management. The majority of the participants from the HR field in the project disclosed that the utilization of prescriptive analytics is not difficult in itself as it encompasses the historical records of the employees and their performance criticality is dependent on the availability of organized and specified data. The conclusions of the study propose that organizations should incorporate the organizational data generated by HR analytics into their decision-making process.

According to Nyembezi [21] he stated that prescriptive analysis in HR involves examining the resumes, ATS, job descriptions, and HRIS to forecast talent acquisition outcomes. The term prescriptive analytics refers to the field of data intelligence that allows businesses to blend the insights of descriptive analytics with a forward-looking approach. HR users can learn to explore and shape future considerations in the recruitment process, but prescriptive analytics also offers guidance on what actions the organization should take to improve employee performance management. It utilizes historical data, including individual skills, productivity, and engagement within the organization, to predict future positions and outcomes for the betterment of the workplace. This also aids

in assessing the suitability of employees for the organization based on their skills and experiences, while preventing the loss of highly skilled employees.

According to Madrid^[10] conducted an investigation that focused on the implementation of data analytics in the human resources management information system in the chosen IT services companies and after the study, the researcher determined that the utilization of data analytics in the Human Resources Information System in the Recruitment of candidates is advantageous to the human resources. Besides that, Madrid also revealed that the utilization of data analytics in predicting the workforce in the human resources information system anticipates employees' qualifications, assesses redundant positions, and enhances management decisions. Lastly, the utilization of data analytics based on the findings strengthens the communication process between the HR department and employees.

Through the bibliometric analysis of the scientific literature on human resources (HR) analytics carried out by Chavez^[3] it has been confirmed that the field is still emerging and incorporating new terms of interest from the field of data science. At the same time, it is highly adaptable due to the necessity of accessing personal information through HR information systems and databases for ethical and practical use by companies, benefiting both employees and organizations. The advantages for individuals and organizations can be observed in the value of striving for improved performance in the context of the fourth industrial revolution (Industry 4.0) by utilizing available information for decision-making through the implementation of HR analytics to achieve strategic and

business objectives. Furthermore, HR analytics is proposed as an innovative approach to HR management, capable of expediting organizational changes and driving digital transformation in a manner that is always anchored to the importance of individuals, thus forming an intangible asset within the very essence and culture of companies.

Recruitment software has made significant progress in recent times, enabling companies to speed up tasks such as resume evaluation, interview arrangement, query response, and rejection correspondence ^[20]. As mentioned before, ineffective communication is a major cause of time wastage during the hiring process. Hiring managers and recruiters who evaluate candidates in isolation are more likely to make a poor choice. It is preferable to gather input from as many interested individuals as feasible to arrive at the optimal decision.

Local government entities (LGUs) occupy a unique position in the field of public service. This study aims for LGUs to effectively deliver services and is essential to human resource management

In the Philippines, human resource management (HRM) comprises a wide range of methodologies and techniques that combine conventional practices with new technological trends. Although the use of advanced analytics in HR is increasing on a global scale, the Philippines is only just beginning to incorporate new technologies into its HR landscape, particularly within local government organizations. The implementation of advanced analytics in HR is still in its early stages in the Philippines, but local government agencies and other enterprises are starting to recognize how it may revolutionize HR operations. To improve the

effectiveness and efficiency of its HR procedures, the Philippines must adopt these technologies as data-driven decision-making gains popularity across the globe.

Human Resources are the backbone of any organization. Every government sector is supposed to provide the public with services that are timely, adequate, polite, and effective ^[5]. The government organization in charge of human resources should focus on its workforce, which is its most valuable resource.

The performance of individual employees in an organization is as crucial as the performance of the organization as both contribute to achieving the goals and strategic objectives of an organization. The Philippine government has emphasized the need for a viable and effective performance management system as one of the human resource systems necessary to promote a civil service envisioned to carry out the constitutional mandate and the provisions of its Revised Administrative Code of 1987 ^[5].

The city government of Iloilo formulated reforms and policies, particularly with the development of its human resources. One of the policies adopted about the development of its human resources was the policy on the performance evaluation system, which had the dual goals of improving employee performance and providing efficient and effective service to the city government's people. To identify potential opportunities and problems for the existing PAS, it explains the performance evaluation system (PAS) of that city, focusing on the characteristics of identification, measurement, and management of its employees' performance.

city's performance evaluation system (PAS), in particular, is how employee performance is identified, measured, and managed to identify potential possibilities and difficulties facing the present PAS. Additionally, it is planned will ascertain how city employees see the function of their PAS as part of a larger review of its efficacy and for potential enhancements or adjustments to the current appraisal system.

Management experts, claim that managing performance is a more comprehensive and challenging human resource function because it includes tasks like setting joint goals, monitoring progress continuously, communicating frequently, providing feedback and coaching for improved performance, implementing employee development programs, and rewarding accomplishments [21]. Since human resources are an agency's most valuable asset and determine the effectiveness, efficiency, and overall quality of service in any organization, they assume full responsibility for performance management for both individuals and groups to continuously improve business processes and, at the same time, raise the bar by improving their own skill sets within the context of their organization. Furthermore, it depends on managers' duties to provide clear instructions on how staff should approach each work and on the review of past performance to influence future performance [19].

Batangas City's SPMS is a work in progress and its implementation guarantees that the organization's goals are met by the city's personnel. Additionally, it is believed to be everyone's business, not just that of human resource professionals. Given that it is a tool that demonstrates how well the

organization is doing its part to ensure that exceptional public service is delivered by its highly effective, knowledgeable, and reliable personnel. Currently, the City SPMS through the Human Resource and Development Office is on level one of implementation. However, the City continues to improve and enhance both individual and organizational performance and keeps pursuing its second level of SPMS implementation.

Batangas City Government Employee Handbook disclosed that in one of the objectives of SPMS, institutional accountabilities need to be cascaded to ensure organizational and individual effectiveness at the various levels of the organization. The SPMS applies to organizations that produce outputs, and it uses a common unit of measurement to assess the overall performance of an office that prioritizes outputs. This enables performance comparison across offices or functions and would consider the productivity and efficiency of individual workers as well as operational units.

Different performance management processes are being implemented in different organizations according to the goals and strategies. The planning phase, according to Nawaz [20], included a collaborative participatory approach and specified organizational goals in addition to particular goals for an individual. However, according to Sanvictores [25], performance management is a methodical attempt to enhance both individual and group performance through a continuous process of setting performance criteria and defining desired objectives during the planning stage.

In the context of organizational performance management in the government setting, it requires a comprehensive performance review and evaluation tools and techniques to allow the organization to review, evaluate, and performance report attained and to reflect on what worked and what didn't work in the organization. Sun [28] stated that evaluating performance in dimensions requires collecting performance data is must be gathered that is obtained through observations of behaviors or, less ideally, by inferring behaviors through knowledge of results. At the same time, Shane [26] goes on to further clarify that the fundamental goal of performance monitoring is to track and identify discrepancies between actual performance and initial plans.

Another study, HR review analysis, and several HR educational mapping projects have been made so far to surpass the challenges of today. One of these challenges is the use of HR Analytics and Metrics, to improve company performance by reducing workforce costs, improving the quality of recruitment, improving talent management and employee engagement, handling documents, and generally improving the business productivity itself.

Diliman College – Quezon City always uses the concept of HR Analytics and Metrics to ensure predictive management decisions always analyze, contribute, and fulfill the human resource demands of the organization. According to Mohammed [17] strategic workforce planning offers a multifaceted approach to developing human resources. HR analytics assist in identifying the competencies and producing tomorrow's leaders. Thus, the help of an HR

strategic workforce plan will reduce the attrition rate, mitigate risks, and build a value-added training culture for the organization.

HR practices in the Philippines show how established approaches and the potential of developing advanced analytics are dynamically interacting. There is a noticeable trend towards acknowledging the benefits of data-driven decision-making, even though local government units and organizations all over the country still struggle with manual processes and sparse technological integration. The Philippines is at a pivotal point as the world's HR landscape changes and embraces analytics as a foundational component of successful HR management. Local government entities can take the lead in the movement toward more effective, transparent, and responsive governance because of the ability to use prescriptive insights for better hiring, performance management, and resource allocation. In addition to improving HR operations, adopting this radical change in HR practices has the potential to spark wider positive effects on corporate success and, ultimately, the communities they serve

Theoretical Framework

This study is anchored on the theory of Human Resource Management (HRM), Local Government Management, and Strategic Management.

HRM Theories offer a valuable framework for understanding and shaping the management of an organization's human capital. Among these, the Harvard Framework emphasizes the alignment of HR practices with the strategic objectives of the organization through human resource flows, reward systems, employee influence, and work systems. It emphasizes the alignment of these

components with the overarching strategic goals of the organization. Complementing this, the Michigan Model organizes HRM functions into key areas such as selection, appraisal, development, and rewards, advocating for their strategic alignment. The Guest Model further enriches the theoretical landscape by introducing six dimensions, ranging from HRM strategy to financial outcomes, emphasizing the interconnectedness of these aspects in influencing organizational success.

The relevance of these HRM theories to our study lies in their ability to provide a theoretical foundation for understanding how HR practices can be strategically aligned with organizational goals. Integrating these theories into our theoretical framework demonstrates that our research is grounded in established concepts and principles, enhancing the credibility and applicability of our findings.

Local Government Management Theories represent a crucial set of frameworks designed to guide the intricate processes and unique challenges associated with administering public sector entities at the local level. As we delve into the development of a sophisticated HR Management System tailored for the Carigara Local Government Unit in our study on "Strategic Workforce Optimization," the incorporation of these theories becomes paramount.

Firstly, the Public Administration theories offer a comprehensive understanding of the organizational dynamics within local government, emphasizing bureaucratic structures, decision-making processes, and the roles of public servants. This insight is instrumental in crafting an HR management

system that resonates with the administrative nuances of a public sector organization, ensuring it aligns with the Carigara Local Government Unit's operational context.

Moreover, the application of New Public Management (NPM) theories advocates for the infusion of private-sector efficiency and performance measurement practices into public administration. Integrating these principles into the HR management system allows for a more streamlined and results-oriented approach, aligning the workforce strategy with broader organizational goals.

Within the field of governance theories, emphasis is placed on accountability, transparency, and citizen participation in the decision-making process. Integrating these governance principles into the HR management system guarantees moral behavior and promotes public confidence as the Carigara Local Government Unit provides services to its constituents.

Furthermore, the significance of theories related to local government management in our research is found in their capacity to offer a sophisticated comprehension of the operational environment, governance dynamics, and policy implementation obstacles unique to the Carigara Local Government Unit. Incorporating these theories into our theoretical framework contributes to the academic rigor of the study while also guaranteeing that the proposed HR management system is well-suited to the complexities of local governance, thereby improving its efficacy and sustainability within the public sector.

This study anchored on the theory of Strategic Management represents a cornerstone in guiding organizations toward sustained success by offering comprehensive frameworks for effective strategy formulation and implementation. The significance of these theories is further highlighted in the context of our study, "Strategic Workforce Optimization: Development of HR Management System with Prescriptive Insights for Carigara Local Government Unit". By critically analyzing the internal strengths and weaknesses of the Local Government Unit and offering a strategic roadmap for the development of an HR management system that seamlessly aligns with the overarching organizational goals, the application of SWOT analysis proves instrumental in the evaluation process. When used in the context of the public sector, Porter's Five Forces help identify distinct competitive dynamics and outside factors that could affect the effectiveness of the HR system, enabling the development of strategies to reduce potential obstacles.

The Local Government Unit's identification of critical human capital resources is greatly aided by the Resource-Based View. With this strategy, the HR management system is guaranteed to be strategically advantageously leveraged and optimized. Adopting the Balanced Scorecard framework also brings a holistic viewpoint, allowing for a comprehensive evaluation of the impact of the HR management system on the financial, customer, internal processes, and learning and growth dimensions. This well-rounded strategy makes sure that the system not only takes care of the day-to-day operations but also helps the Local Government Unit stay competitive in the ever-changing public sector.

These theories of strategic management are very applicable. They offer a methodical framework for coordinating the creation of the HR management system with the LGU of Carigara's overarching strategic goals. By implementing these theories, the research can develop strategies that improve organizational performance and competitiveness by gaining insights into the internal and external factors influencing workforce management. By using a strategic management approach, the Carigara Local Government Unit's HR management system is guaranteed to be successful in the long run in addition to being efficient in day-to-day operations.

Conceptual Framework

The conceptual framework of the study showed the input, process, and output of the system, all of which were based on the data provided by the proponents. It also showed how the system's functionality would run through the system. Input was the part where the user added all of the data to the system. The process was the step on what would happen to the data that was input into the system. Lastly, output was the outcome after adding the data to the system.

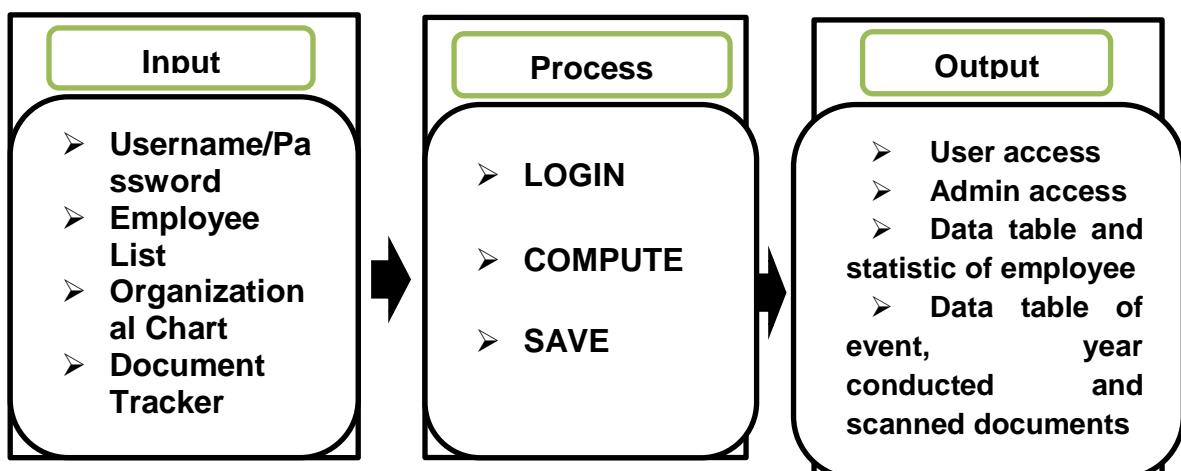


Figure 1. A framework that provides a visual representation of input, process and output of our research.

Definition of Terms

For a better understanding of the study, the following key terms are defined to provide a clear understanding of the concepts discussed.

Human Resource Management (HRM). A department within an organization that deals with the people who work for that organization. A strategic approach and practices within an organization that involves the recruitment, development, utilization, and management of its workforce [11]. In our study, HRM aims to enhance employee performance, satisfaction, and overall organizational effectiveness.

Local Government Units (LGU). An administrative division within a country that possesses a certain degree of autonomy and governance authority over a specific geographic area. LGUs are established by national laws or constitutions and are responsible for providing essential public services and managing local affairs within their jurisdiction [16]. Our study is valuable as it focuses on the practical application of workforce management solutions tailored to the specific challenges of Carigara LGU, contributing directly to improved efficiency in public service delivery and addressing the unique needs of the local community.

Tabulation. Tabulation is to arrange information in an organized way so it can be studied [29]. This serves as a systematic process of organizing and summarizing data collected from various sources, such as surveys, assessments, or evaluations, into a structured format. analyze and interpret the data in the proposed study of the researchers.

Chapter III

Methodology

This chapter presents the Lists of Software, System Environment, Experimental Design, System Flowchart, Data Flow Diagram, Database Schema, System Architecture, Deployment, Evaluation, Data Gathering, Research Instruments and Data Analysis.

List of Software

Tools	Used	Versions
Visual Studio Code	Users can specify and carry out actions, like creating, testing, and deploying apps straight from the editor, and it is used to generate programs.	v1.81.1
Xampp Control Panel	Aside from it serves as the local server for the program. Xampp can integrate the environment, makes database management easier, allows for local testing, offers multiple PHP versions, allows server configuration, and makes web project deployment	v5.2.1

Figure 2. List of Software

As seen in figure 2, it shows software material that the researchers use to develop a web application, Xampp is used as a storage of data for the system, upon data input, and directed to Xampp and stored. While Visual Studio Code is used as the main tool for coding, all codes can be done in Visual Studio Code.

Hardware

List of Hardware

1. Computer
2. Laptop

System Environment

To safeguard the system, the researchers must make a thorough effort to ensure its security and functionality. Among these are client devices, including PCs and PC units, which serve as interfaces for users to interact with the HR Management System. Additionally, databases that store crucial employee data need security measures to prevent unauthorized access and maintain data integrity. Furthermore, these measures work to ensure the security of data and operations, protect user privacy, and maintain the system's reliability in the face of potential threats and challenges. To secure the system, the lists below must be followed. The PCs and PC units must be placed in a cool area to prevent overheating. To ensure that only authorized personnel may access the system, the researchers implement the user authentication techniques like two-factor authentication. Keep all software components, including the operating system, server software, and database management system, up to date with the most recent security patches and updates. Deploy firewalls to filter and control the incoming and outgoing network traffic to prevent unauthorized access. Test and maintain a disaster recovery plan to ensure quick data restoration in case of system failures. Secure physical access to servers and hardware components through restricted access areas and controlled entry. This approach will help to

secure and trustworthy environment of the system, for stakeholders and the HR department.

Experimental Design / Model Used

The V Model Figure 3 in page 27, was used for the HR Management System project for the Carigara Local Government Unit due to its adaptability to changing requirements and priorities inherent in local government operations. The flexibility ensured that the system seamlessly accommodated evolving regulations and community needs. The V model's emphasis on stakeholder collaboration aligned to tailor the system to the unique processes of the Carigara LGU's HR department. The V model allowed for early access and insights, which were modified based on actual usage and progressed through the nine stages: requirements gathering, system design, software design, module design, coding, unit testing, integration testing, system testing, and user acceptance testing, ensuring an iterative and collaborative approach that was closely aligned with the changing needs of the LGU's HR department. Lastly, the V model's commitment to continuous improvement ensured that the system's capabilities remained relevant and valuable over time and effectively served the LGU's HR. The phases of the V-model are as follows:

Requirements gathering. This phase involves collecting and analyzing the requirements of the software system, such as its features, functionality, and performance requirements.

System design: This phase involves defining the overall architecture of the software system, including its components, interfaces, and data flows.

Software design. This phase involves designing the individual components of the software system, including their algorithms and data structures.

Module design. This phase involves breaking down the software system into smaller, more manageable modules.

Coding: This phase involves writing the code for the software system in a programming language.

Unit testing. This phase involves testing the individual modules of the software system to ensure that they work as expected.

Integration testing. This phase involves testing the modules of the software system together to ensure that they work together as expected.

System testing. This phase involves testing the entire software system as a whole to ensure that it meets all of its requirements.

User acceptance testing. This phase involves testing the software system with real users to ensure that it is easy to use and meets their needs.

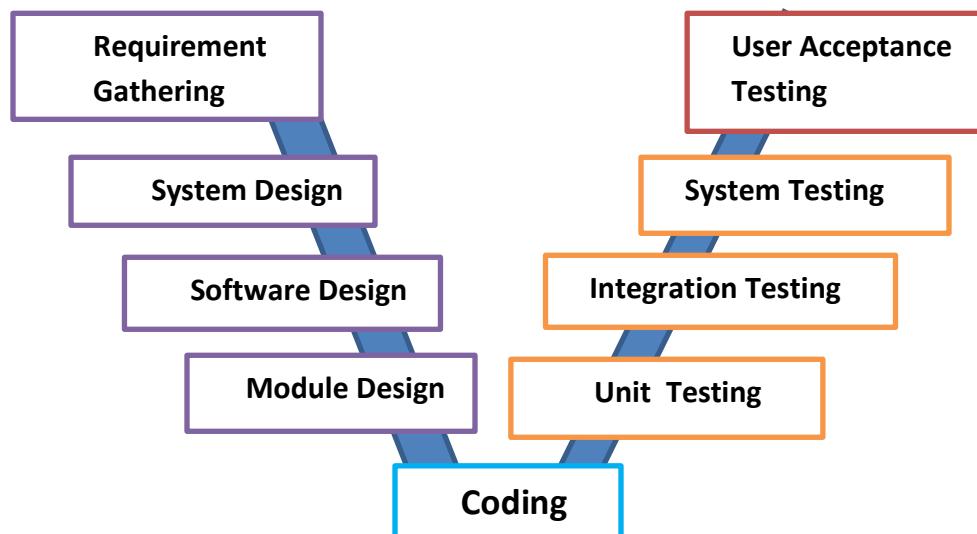


Figure 3. V Model

Communication

Figure 4 below, shown in the pursuit of understanding the dynamics of our research topic, effective communication emerged as a fundamental element in our investigative process. As researchers recognized the significance of acquiring accurate and insightful information from various sources. This section explored the complex web of communication techniques used during our investigation. Our research journey has been enriched by the exchange of ideas, data, and insights, from conducting interviews and surveys to encouraging collaborative brainstorming sessions. Respondents in the HR Office provided information to the researchers about the problem they were facing, particularly in finding their employees documents.



Figure 4. Communication

System Flowchart

Figure 5 in page 29, shown the operation of the system depended on the user type, namely Admin and User. Figure 3.5 represents the Admin flowchart and Figure 3.6 represents the User. The admin had the functions to add and edit data in the system, while the user could only add data. The reason for this was the security of data and also based on the interviews the researchers conducted. Moreover, they also indicated the delete function should not be included when the Admin or User logged in to the system upon verifying the username and

password from the database DB. The system prompted three main options, the dashboard, organizational structure, and document retrieval. In Figure A, the dashboard had two sub-options, the statistics and the employee lists, both of which had a view function, but the employee lists had an add and edit function. The organizational structure and document retrieval had the view, add, and edit functions for the admin.

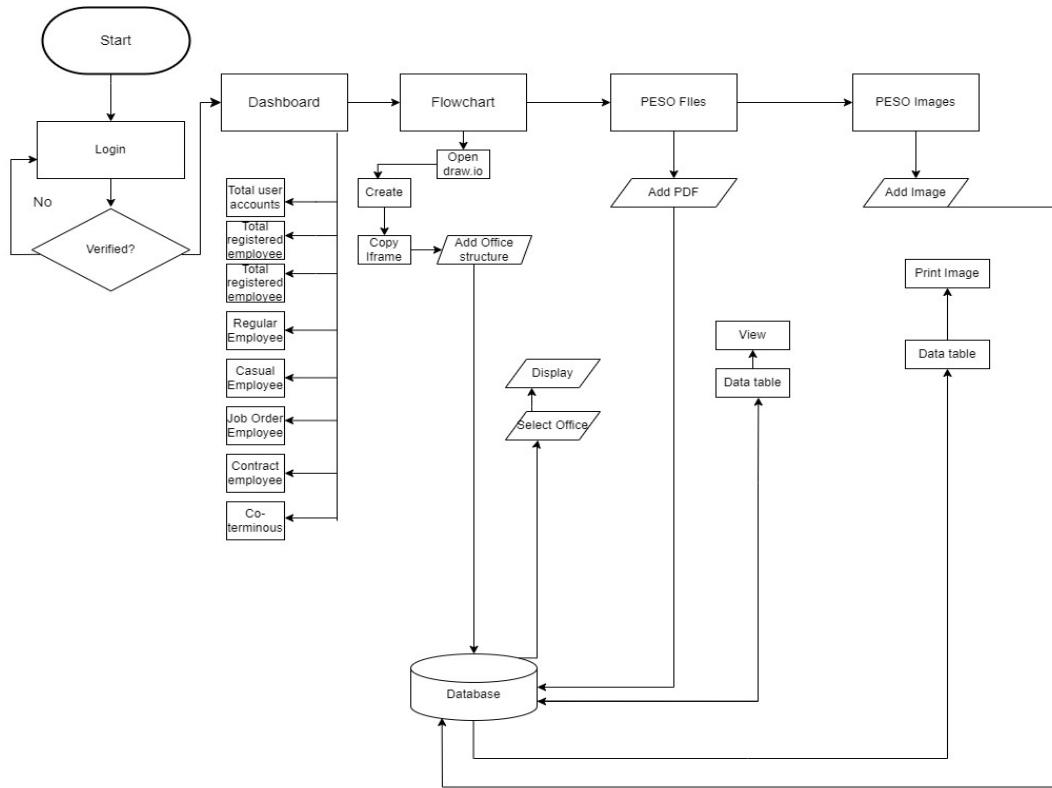


Figure 5. System Flow chart

User System Flowchart

Figure 6 in page 30, shown the flow of the system and data for the User was the same as for the Admin but without the edit function shown in Figure B. The user also had the three main options and the same contents. The User could view or add data to the system. All the functions and features of the system

were connected to the database, from logging in down to adding or editing documents.

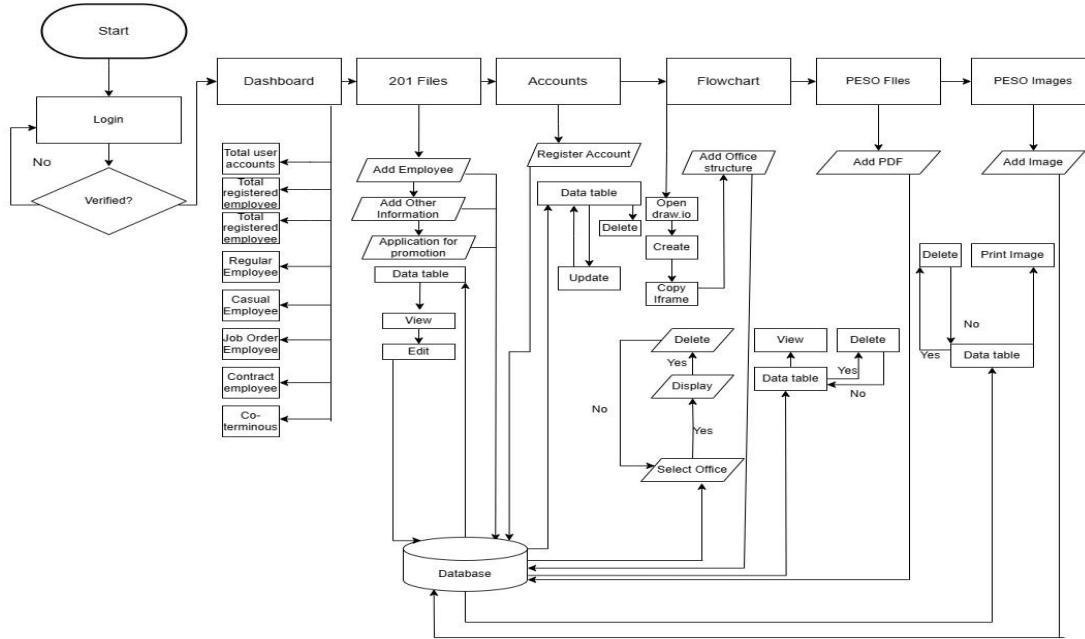


Figure 6. User System Flowchart

Data Flow Diagram

Figure 7, below shown a data flow diagram represented the flow of every data that was input into the system. Upon observing, the researchers created this data flow diagram to show how the data was added to the database.

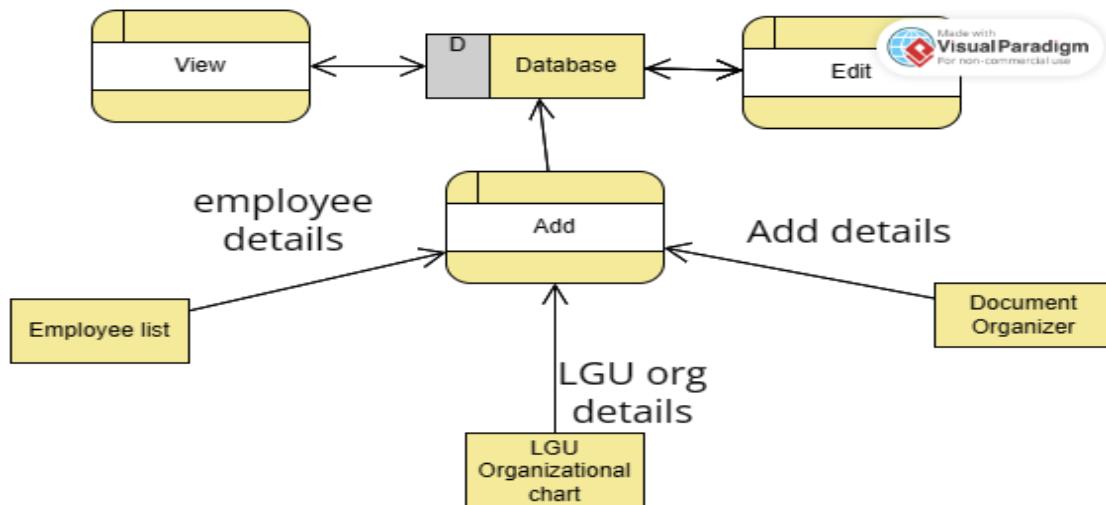


Figure 7. Data Flow Diagram

The figure showed how well the data ran through the system itself, how it would run through the system, and that all entities had a feature where they could store and add data to the database. The data was connected to the database where it was all stored. From the database, the user could edit or view the data as it fetched all the data from the database.

Database Schema

Figure 8, below shown the data schema served as a fundamental cornerstone of any system. It functioned as the bedrock upon which all data was stored, ensuring not only the cleanliness of the database but also optimizing it by eliminating data redundancy. Meticulously crafted by the researchers, this data schema allocated ample space for accommodating data while pre-emptively sidestepping the menace of data overload. The database itself found its genesis in the meticulously curated data furnished by the HRMO personnel.

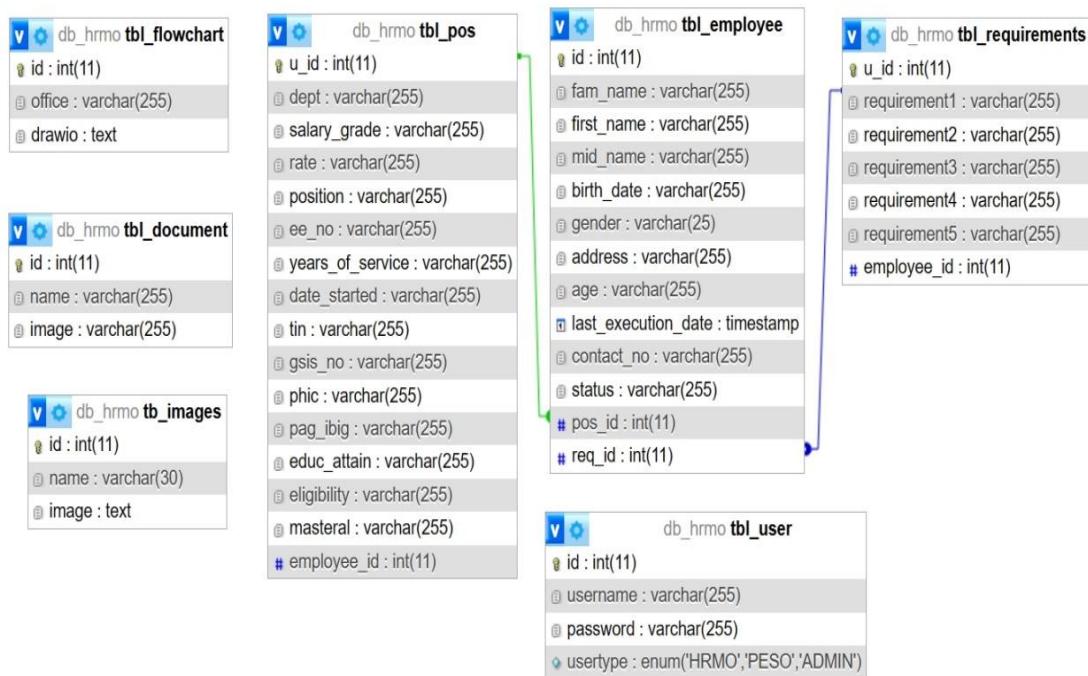


Figure 8. Database Schema

System Architecture

This Figure 9 in page 32, presented a visual representation of the system. As depicted, the system incorporated two levels of user authentication: regular users and administrators. The administrator held the privilege to add and modify any inaccurate information within the system. Once added or altered, all information was securely stored within the database. Notably, the system lacked a deletion feature. This design choice aligned with feedback from the respondents, particularly the HRMO of LGU Carigara. They had expressed a preference for retaining all data due to its sensitive nature, necessitating the preservation of records. Conversely, regular users possessed the capability to input necessary information into the system. However, their access is restricted to ensure data security and prevent any unauthorized data tampering.

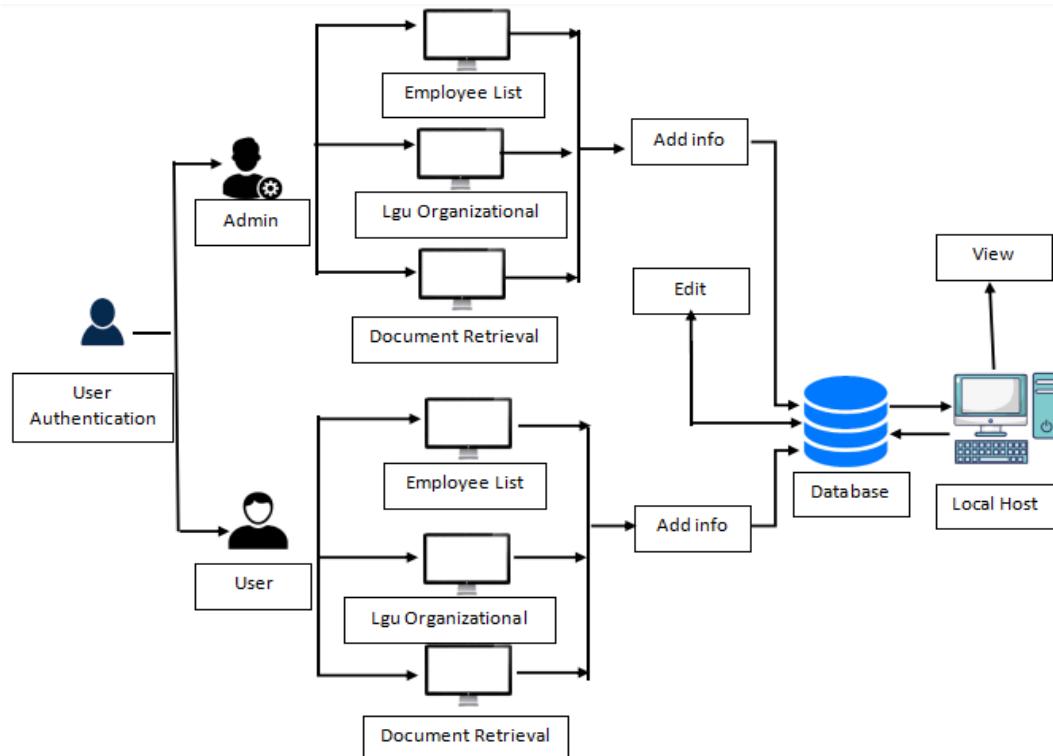


Figure 9. System Architecture

Deployment

The researchers launched the developed HR management system within the HR Department of the Carigara Local Government Unit (LGU). To deploy our system, there are several steps. Firstly, the researchers set a suitable deployment date, taking into account the operational availability of the Carigara Local Government Unit's HR department. This aimed to minimize disruptions during the transition. Secondly, during the deployment, the research team conducted comprehensive sessions to guide the installation, operations, and exploration of the system's diverse functionalities and features. These interactive demonstrations empowered LGU personnel to confidently navigate the software. Furthermore, the researchers engaged closely with the intended users, providing hands-on guidance to ensure their familiarity with the system's interface and capabilities. This step facilitated a seamless transition to the HR management system to ensure efficient utilization.

Evaluation

As the researchers deployed the system, the stakeholders, including the LGU's HR department, were very pleased because the system we created exceeded their expectations and was very helpful for their work. Since it worked well and significantly reduced the time and effort required to locate and manage HR documents.

Data Gathering

The researchers went to the HRMO LGU Carigara, the researchers collected all the data that needed in this research such as Employee information, Document organizer, Organizational structure, and the features they want to include in the system. The researchers were able to brainstorm from all of the

data that was given, all the data that was given to the researchers that taken care of and kept confidential to secure all data. Employee information had been added to the system to integrate their existing system and come up with one system along with the document organizer. During the data gathering the researchers found that document organization in HRMO is a problem specifically in locating a document in a workplace with other documents is time-consuming so with this proposed system the proponent are able to look at the system and easily locate the documents. The organizational structure of the LGU is on different files, the researchers integrated this sub-system into our proposed system to lessen the time of finding the different organizational structures of different offices of the LGU.

Research Instrument

The study utilized the survey checklist questionnaire based on the ISO 25010 standard with the following parts. Effectiveness, Efficiency, Usability, Satisfaction, Freedom from Risk, and Freedom from Content Coverage.

Data Analysis

The data gathered were subjected for averages, percentage and counts, to determine the system's acceptability level. The data collected from the survey questionnaire, provided to the research respondents, data were trailed and evaluated using a Likert Scale, these approaches enable a complete examination of the adoption of the system as well as the efficacy among users.

Chapter IV

PRESENTATION, ANALYSIS, AND INTERPRETATION OF DATA

The findings, analysis, and interpretation of the data obtained from the field participants' responses to the questionnaires are presented in this chapter. According to the precise questions posed in the problem description, the aforementioned data were provided in tabular form.

Ensuring and timely accurate the researchers presents HR manage system that designed specifically for the LGU's needs. This innovative system leverages prescriptive analytics to not only manage the workforce but also strategically optimize it, ensuring the Carigara LGU has the right personnel in the right places at the same time and improve efficiency, productivity and service delivery within the Carigara LGU.

Figure 10 shown, a login page where it is the entry point to a secure system, it verifies your identity by checking your username or email and password against a database. If everything matches, you're granted access to the system's features.

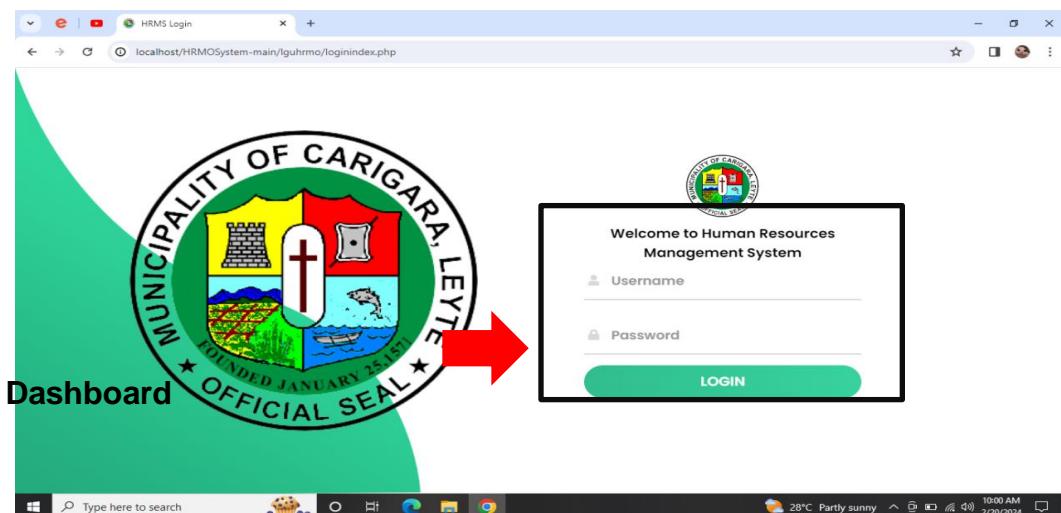


Figure 10. Admin Login Page

These pages prioritize security with encryption and by hiding your password as you type. They may also offer options to recover forgotten passwords or keep you logged in for convenience.

After you input valid credentials, you will able to access Dashboard as the landing page of the system, the dashboard shows all the data about the employee.

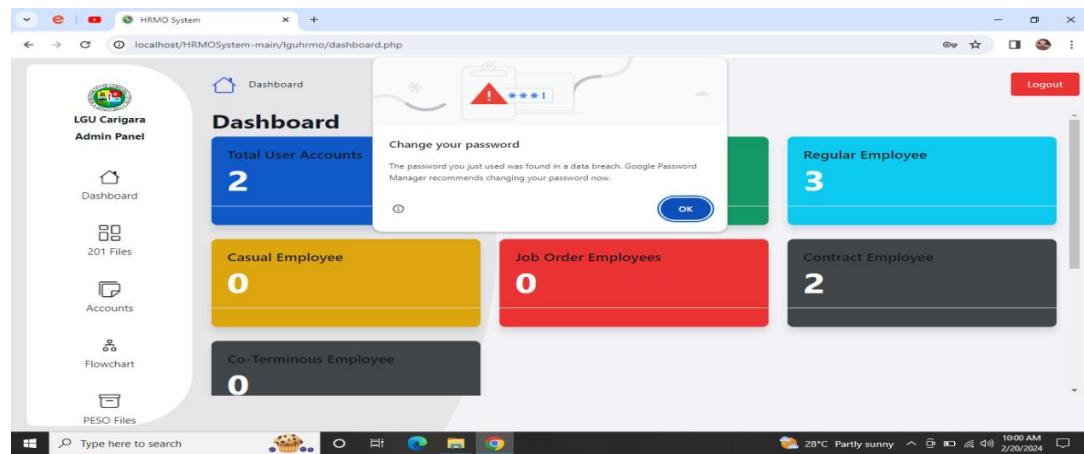


Figure 11. Dashboard

Effective HR management techniques were of the utmost importance for local government units (LGUs) to provide citizens with high-quality public services. Unfortunately, a lot of local government units (LGUs) struggled to manage their workforces efficiently because they lacked information-driven choices, had antiquated HR systems, and limited resources. An HRMS with prescriptive insights was a data-driven system that could provide HR members and employees with recommendations on how to improve workforce performance. These recommendations could be based on a variety of factors, such as organizational objectives, personnel abilities, and performance

information. The researchers focused their efforts on creating a strategy that made it easier for the employees to complete their tasks.

The study's proponents believed that the suggested system, which was discussed in the chapter before this one, might be finalized as stated above.

The Carigara Local Government Unit (LGU) was committed to improving its HR management practices and recognized the potential benefits of implementing an HRMS. Moreover, this thesis research aimed to develop an HRMS with prescriptive insights for the Carigara LGU that would help the LGU to optimize its workforce and achieve its organizational goals. The table below provides a summary of the responses given to the survey questionnaire statements. For ease of reference, the responses have been organized.

In table 1 below, which was displayed on the following page, indicated that, of the 320 replies, 167 fell into the Strongly Agree category, 150 fell into Agree, 3 for Undecided, 0 into Disagree, and 0 under Strongly Disagree. The vast majority of participants were quite convinced by the system's effectiveness.

TABLE 1. User Perception of Effectiveness: Document Organization, UI, Tabulation, and Retirement Insights

Statement	5	4	3	2	1	Total
1	46	18	0	0	0	64
2	29	35	0	0	0	64
3	31	33	0	0	0	64
4	28	35	1	0	0	64
5	33	29	2	0	0	64
Total	167	150	3	0	0	320

Legend: Statement 1,2,3,4,5 (See Appendix C)

In table 2 below, displays the survey results about the efficiency of the Strategic Workforce Optimization Development of the HR Management System. The table showed that, of the 256 replies, 120 were classified as Strongly Agree and 133 as Agree, 3 for Undecided, and we got 0 for both Strongly Disagree and Disagree.

TABLE 2. Impact on HR Workflow: Respondent's Perception of System Efficiency

Statement	5	4	3	2	1	Total
1	34	30	0	0	0	64
2	24	40	0	0	0	64
3	30	32	2	0	0	64
4	32	31	1	0	0	64
Total	120	133	3	0	0	256

Legend: Statement 1,2,3,4, (See Appendix C)

In table 3 below, provided the results of the survey about the usability of the proposed system in HR are displayed in Table 3.

TABLE 3. Impact on User Experience: Respondent's Perception of System Usability

Statement	5	4	3	2	1	Total
1	53	11	0	0	0	64
2	29	35	0	0	0	64
3	23	41	0	0	0	64
4	22	38	4	0	0	64
5	28	33	3	0	0	64
Total	155	158	7	0	0	320

Legend: Statement 1,2,3,4,5 (See Appendix C)

According to the table, 153 of the 320 total responses were in the Strongly Agree category, 160 were in the Agree category, 7 for Undecided, and for Strongly Disagree and Disagree we got 0.

Table 4 below, provided a nuanced understanding of respondents' satisfaction levels with the functionality of the system. Out of 192 responses, 98 indicated that they were satisfied with the system by selecting "Strongly Agree," demonstrating that they strongly agreed with its features and functionalities. Furthermore, 85 respondents agreed by choosing "Agree," which added to the positive assessment of the system's operation. Although 9 responses were "Undecided," the overall satisfaction rate stood at 51%. See at the page 45.

TABLE 4. Measuring Effectiveness Through Satisfaction: Survey Results on Proposed System

Statement	5	4	3	2	1	Total
1	35	29	0	0	0	64
2	30	30	4	0	0	64
3	33	26	5	0	0	64
Total	98	85	9	0	0	192

Legend: Statement 1.2.3 (See Appendix C)

Table 5 in page 40, provided the findings, as highlighted in Table 5, underscored the paramount importance accorded by participants to the security of information within the proposed system. A substantial 43% of respondents expressed confidence in the system's ability to handle information securely. This

resonated strongly in the survey results, where 111 participants strongly agreed and 137 agreed that the system ensured data security.

TABLE 5. Freedom from Risk Takes Center Stage: User Perception of Secure Data Handling

Statement	5	4	3	2	1	Total
1	26	38	0	0	0	64
2	25	37	2	0	0	64
3	30	31	3	0	0	64
4	30	31	3	0	0	64
Total	111	137	8	0	0	256

Legend: Statement 1,2,3,4,5 (See Appendix C)

The findings, as highlighted in Table 5, underscored the paramount importance accorded by participants to the security of information within the proposed system. A substantial 43% of respondents expressed confidence in the system's ability to handle information securely. This resonated strongly in the survey results, where 111 participants strongly agreed and 137 agreed that the system ensured data security.

Table 6 in page 41, underscored the respondents' perceptions regarding the security features embedded within the proposed system. Notably, a substantial 95 participants expressed a resounding affirmation by selecting "Strongly Agree," indicating a high degree of trust in the security protocols put in place. Moreover, 87 more respondents said they "Agreed," while there were 10 participants who remained undecided.

TABLE 6. Freedom from Content Coverage: User Perception of Secure Access and Control

Statement	5	4	3	2	1	Total
1	27	37	0	0	0	64
2	37	21	6	0	0	64
3	31	29	4	0	0	64
Total	95	87	10	0	0	192

Legend: Statement 1,2,3 (See Appendix C)

Based on the survey results table 7 in page 42, displayed the percentage distribution for each statement. It showed that 46.9% strongly agreed, 52.2% agreed, 0.9% were uncertain, and 0% disagreed or strongly disagreed. This indicated that the vast majority of respondents found the survey to be effective.

Similarly, 46.9% of respondents strongly agreed that the survey was efficient, 52.0% agreed, 1.2% were undecided, and 0% disagreed or strongly disagreed. In other words, a significant portion of participants thought the survey was effective.

Additionally, the table also showed that a large majority of respondents found the survey to be usable (48.4% strongly agreed, 49.4% agreed), satisfactory (51.0% strongly agreed, 44.3% agreed), and free from risk (43.4% strongly agreed, 53.5% agreed).

Finally, the table showed that a large majority of respondents found the survey to have good content coverage (49.5% strongly agreed, 45.3% agreed).

Overall, the table showed that the survey was well-received by the respondents. A large majority of respondents found the survey to be effective, efficient, usable, satisfactory, free from risk, and to have good content coverage

TABLE 7. Overall Survey Effectiveness: Percentage Distribution of Responses

Statement	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
Effectiveness	52.2	46.9	0.9	0	0
Efficiency	46.9	52.0	1.2	0	0
Usability	48.4	49.4	2.2	0	0
Satisfaction	51.0	44.3	4.7	0	0
Freedom from Risk	43.4	53.5	3.1	0	0
Content Coverage	49.5	45.3	5.2	0	0

Chapter V

SUMMARY, FINDINGS, CONCLUSION AND RECOMMENDATION

This chapter presents the summary, findings, conclusions, and recommendations of the results of the study conducted by the researchers

Summary

This study determined the effectives, efficiency, usability, satisfaction, freedom from risk and content coverage of the responds in the Human Resource Management System.

Specifically, it sought to answer the following questions:

1. To develop a system that will organize the documents, tabulate, with prescriptive insights that caters to the diverse needs of HR personnel regardless of their technical expertise.
2. To evaluate the system as to its:
 - f. Effectiveness
 - g. Efficiency
 - h. Usability
 - i. Satisfaction
 - j. Freedom from Risk

Findings

1. The researchers used the HR Department's unique needs and objectives as a foundation to ensure that the proposed solution met the office's expectations. Regardless of the technical proficiency of HR staff, the

system can accommodate their varied needs with its user-friendly and intuitive interface, document organization, tabulation capabilities, and prescriptive insights regarding the ideal retirement age for employees.

2. Based on the evaluation conducted through a survey among respondents from LGU, the effectiveness of the system has a general score of 52.2%, efficiency has a general score of 46.9%, efficiency has a score of 46%, usability has a score of 48.4%, satisfaction has scored for 51%, freedom from risk 43.4% and content coverage has score 49.5% that

Conclusion

Strategic workforce optimization has become a vital part of efficient human resource (HR) management, allowing businesses to maximize performance and align employees with their strategic objectives. Strategic workforce optimization includes a range of practices used to optimize employees' capabilities, composition, and skills to promote organizational effectiveness. LGUs faced unique challenges in workforce optimization due to factors such as the need to ensure the efficient and effective delivery of public services. The Strategic Workforce played a particularly important role in this regard.

Prescriptive insights integration with HR management systems (HRMS) presented a substantial opportunity for LGUs to improve their strategic capacities. Prescriptive insights-enabled HRMSs could suggest strategic workforce initiatives, spot any skills gaps, and offer insightful information about workforce patterns. Because of the complementary services this study provided, both the organization and prospective clients benefited from it.

As a result, the researchers concluded that the Strategic Workforce Optimization Development of HR Management System with Prescriptive Insights for Carigara Local Government Unit may be implemented to address its workforce challenges, enhance operational effectiveness, and ultimately improve the quality of public services delivered to its constituents. By embracing these practices, the LGU could position itself for long-term success and serve the community effectively.

Recommendations

The foundation of effective workforce optimization lies in the quality and accessibility of workforce data. The study's findings allowed for the formulation of the following recommendations:

To increase the software system's independence from content coverage, more development was needed. This could be achieved by enhancing the flexibility and customizability of the current features or by adding new ones. To better understand how different user types perceived the software system, it should have been evaluated with a wider and more diverse set of users. Once the software system was made available to the general public, it should have been watched for user comments.

The system could have been further enhanced in the areas indicated by this input. All things considered, the data pointed to a promising and potentially effective software system.

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APPENDICES

APPENDIX A

Documentations



One of the researchers, Mr. Rotairo, led the survey's execution. He helped the HR Office staff members respond to the questions by presenting the system the researchers had suggested.



Mr. Rotairo in the presence of staff members from different Department offices.



Ms. Adrales, one of the researchers, gave a brief overview of the proposed study's objectives and reviewed on how to respond to the survey questions in one of the other LGU offices.



Employees of the other offices who are satisfied with the proposed study of the researchers.



Mr. Rocha, who carried out the survey, along with Mr. Ralph M. Saveret the person in charge of the HR Office's systems and serves as the researchers' coordinator.

APPENDIX B

Communication Letter

November 17, 2023

Municipality of Carigara
Carigara, Leyte
6529-Leyte Philippines

Ma'am/Sir,

We, the undersigned are fourth year students taking up Bachelor of Science in Information Technology. We are conducting research study entitled "Strategic Workforce Optimization Development of HR Management System with Prescriptive Insights for Carigara Local Government Unit ". The system aims to enhance the efficiency, effectiveness, and decision-making capabilities of Carigara LGU's HR operations through the integration of Prescriptive Insights that aims to auto prescribe and also will give features that provide actionable recommendations based on the analyzed data . In order to complete the said Capstone Project requirements, we are conducting a survey on perceptive and acceptability of the research study.

There are no risks associated with this research project that can be predicted. If you don't feel comfortable answering any of the questions, you can leave the survey at any time or skip a question. Your response is greatly appreciated and will be extremely beneficial.

Your survey responses will be kept strictly confidential, and the results of this study will only be reported in aggregate. Your personal information will be kept private. You may contact the researchers undersigned if you have any questions about the survey or the procedures at any time.

Thank you so much for taking the time to read this and for your support!

Respectfully yours,

Pataren, CHRISTIAN KIT
Rocha, ARWIN
Adrales, MARIS
Ragrag, JASMIN

Proponents/ EVSU-CC

BSIT IV Students

APPENDIX C

Survey Questionnaire

SURVEY QUESTIONNAIRE

"STRATEGIC WORKFORCE OPTIMIZATION: DEVELOPMENT OF HR MANAGEMENT SYSTEM WITH PRESCRIPTIVE INSIGHTS FOR CARIGARA LOCAL GOVERNMENT UNIT"

Name (optional): Royal **Address:** Brgy. Binal

Purpose: This survey questionnaire administered form is used to collect participant's acceptability and opinion about the study "STRATEGIC WORKFORCE OPTIMIZATION: DEVELOPMENT OF HR MANAGEMENT SYSTEM WITH PRESCRIPTIVE INSIGHTS FOR CARIGARA LOCAL GOVERNMENT UNIT".

We are hoping for your cooperation and authentic response to every statement stated below.

Direction: Indicate your agreement or disagreement on the following statements. Put a check in the box for your level of agreement or disagreement.

5 – Strongly Agree

4 - Agree

3 - Undecided

2 - Disagree

1 - Strongly Disagree

Qualitative questions on Effectiveness

Questions	5	4	3	2	1
1. The system executes its functions exactly	✓				
2. The system follows an standard set of rules		✓			
3. The system is secured through username and password scheme		✓			
4. The system process of recording was organized		✓			
5. The system classifies the category of every document	✓				

Qualitative questions on Efficiency

Questions	5	4	3	2	1
1. The system response time is fast	✓				
2. Appropriate resources are applied in the system		✓			
3. The system execution is fast		✓			
4. The system provide notification when a process is done	✓				

Qualitative questions on Usability

Questions	5	4	3	2	1

1. It is easy to learn to use this system		/			
2. The information provided for the system is easy to understand		/			
3. It was simple to use this system		/			
4. The interface of the system is pleasant		/			
5. I feel comfortable using the system		/			

Qualitative Questions on Satisfaction

Questions	5	4	3	2	1
1. The system is easy to understand		/			
2. The system functions are easy to execute		/			
3. The system user interface is neat and clean		/			

Qualitative questions on freedom from risk

Questions	5	4	3	2	1
1. The system responds appropriately when failures or error encounters		/			
2. The system warns user about invalid data input		/			
3. The system provide message to prevent error		/			
4. The system error/ warning message are helpful and easy to comprehend		/			

Qualitative Questions on freedom from Content Coverage

Questions	5	4	3	2	1
1. The system is flexible to change or updates that will occur		/			
2. The system has restrictions to unauthorized users and secures data		/			
3. The system can back up data stored		/			

SURVEY QUESTIONNAIRE

"STRATEGIC WORKFORCE OPTIMIZATION: DEVELOPMENT OF HR MANAGEMENT SYSTEM WITH PRESCRIPTIVE INSIGHTS FOR CARIGARA LOCAL GOVERNMENT UNIT"

Name (optional): DAVE T. NIVAL, LPT Address: LBU - CARIGARA

Purpose: This survey questionnaire administered form is used to collect participant's acceptability and opinion about the study 'STRATEGIC WORKFORCE OPTIMIZATION: DEVELOPMENT OF HR MANAGEMENT SYSTEM WITH PRESCRIPTIVE INSIGHTS FOR CARIGARA LOCAL GOVERNMENT UNIT'.

We are hoping for your cooperation and authentic response to every statement stated below.

Direction: Indicate your agreement or disagreement on the following statements. Put a check in the box for your level of agreement or disagreement.

5 – Strongly Agree

4 - Agree

3 - Undecided

2 - Disagree

1 - Strongly Disagree

Qualitative questions on Effectiveness					
Questions	5	4	3	2	1
1. The system executes its functions exactly	/				
2. The system follows an standard set of rules	/				
3. The system is secured through username and password scheme	/				
4. The system process of recording was organized	/				
5. The system classifies the category of every document	/				
Qualitative questions on Efficiency					
Questions	5	4	3	2	1
1. The system response time is fast	/				
2. Appropriate resources are applied in the system	/				
3. The system execution is fast	/				
4. The system provide notification when a process is done	/				
Qualitative questions on Usability					
Questions	5	4	3	2	1

1. It is easy to learn to use this system	/				
2. The information provided for the system is easy to understand	/				
3. It was simple to use this system	/				
4. The interface of the system is pleasant	/				
5. I feel comfortable using the system	/				
Qualitative Questions on Satisfaction					
Questions	5	4	3	2	1
1. The system is easy to understand	/				
2. The system functions are easy to execute	/				
3. The system user interface is neat and clean	/				
Qualitative questions on freedom from risk					
Questions	5	4	3	2	1
1. The system responds appropriately when failures or error encounters	/				
2. The system warns user about invalid data input	/				
3. The system provide message to prevent error	/				
4. The system error/ warning message are helpful and easy to comprehend	/				
Qualitative Questions on freedom from Content Coverage					
Questions	5	4	3	2	1
1. The system is flexible to change or updates that will occur	/				
2. The system has restrictions to unauthorized users and secures data	/				
3. The system can back up data stored	/				

SURVEY QUESTIONNAIRE

"STRATEGIC WORKFORCE OPTIMIZATION: DEVELOPMENT OF HR MANAGEMENT SYSTEM WITH PRESCRIPTIVE INSIGHTS FOR CARIGARA LOCAL GOVERNMENT UNIT"

Name (optional): Bisanti Jason Address: Kalapituk Carigara Luk

Purpose: This survey questionnaire administered form is used to collect participant's acceptability and opinion about the study "STRATEGIC WORKFORCE OPTIMIZATION: DEVELOPMENT OF HR MANAGEMENT SYSTEM WITH PRESCRIPTIVE INSIGHTS FOR CARIGARA LOCAL GOVERNMENT UNIT".

We are hoping for your cooperation and authentic response to every statement stated below.

Direction: Indicate your agreement or disagreement on the following statements.
Put a check in the box for your level of agreement or disagreement.

5 - Strongly Agree

4 - Agree

3 - Undecided

2 - Disagree

1 - Strongly Disagree

Qualitative questions on Effectiveness

Questions	5	4	3	2	1
1. The system executes its functions exactly	✓				
2. The system follows an standard set of rules		✓			
3. The system is secured through username and password scheme		✓			
4. The system process of recording was organized		✓			
5. The system classifies the category of every document	✓				

Qualitative questions on Efficiency

Questions	5	4	3	2	1
1. The system response time is fast	✓				
2. Appropriate resources are applied in the system		✓			
3. The system execution is fast		✓			
4. The system provide notification when a process is done		✓			

Qualitative questions on Usability

Questions	5	4	3	2	1

1. It is easy to learn to use this system	✓				
2. The information provided for the system is easy to understand		✓			
3. It was simple to use this system		✓			
4. The interface of the system is pleasant		✓			
5. I feel comfortable using the system	✓				

Qualitative Questions on Satisfaction

Questions	5	4	3	2	1
1. The system is easy to understand	✓				
2. The system functions are easy to execute		✓			
3. The system user interface is neat and clean		✓			

Qualitative questions on freedom from risk

Questions	5	4	3	2	1
1. The system responds appropriately when failures or error encounters		✓			
2. The system warns user about invalid data input		✓			
3. The system provide message to prevent error		✓			
4. The system error/ warning message are helpful and easy to comprehend	✓				

Qualitative Questions on freedom from Content Coverage

Questions	5	4	3	2	1
1. The system is flexible to change or updates that will occur		✓			
2. The system has restrictions to unauthorized users and secures data		✓			
3. The system can back up data stored	✓				

User's Manual

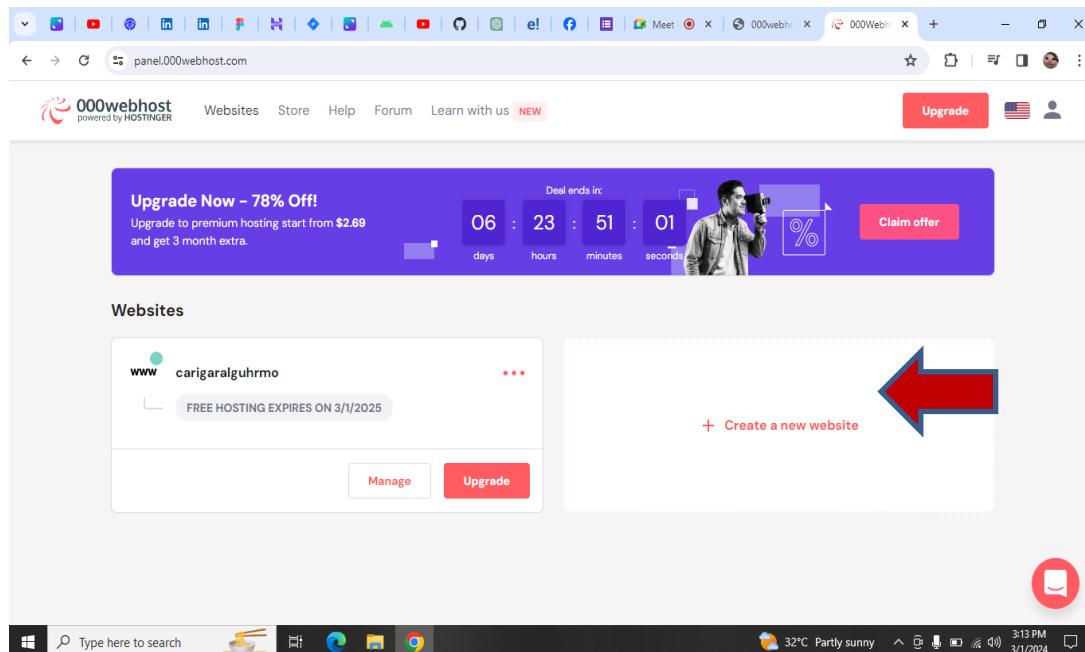
Strategic Workforce Optimization: Development of HR Management System with Prescriptive Insights for Carigara Local Government Unit

HR Management System Hosting

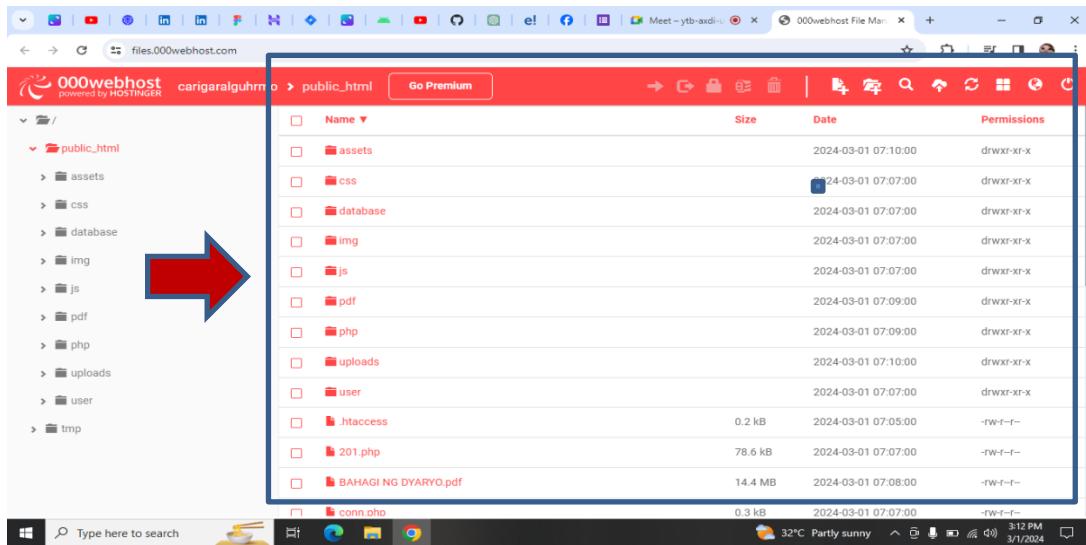
000webhost is a free web hosting service that served to host our websites at no cost. It provides features such as website hosting, subdomains, support for PHP and MySQL, a website builder tool, file manager, cPanel for account management, and FTP access for file uploading and management.

In order for the client to access the system, first Xampp version 8.2.12 for is needed to be installed. To access the system prompt, open chrome and Xampp client must access the localhost (localhost/HRMOsystem-main/lguhrmo/loginindex.php)

First, you have to create a new website for you to deploy the system online.



Second, you have to upload all the files that construct your system.



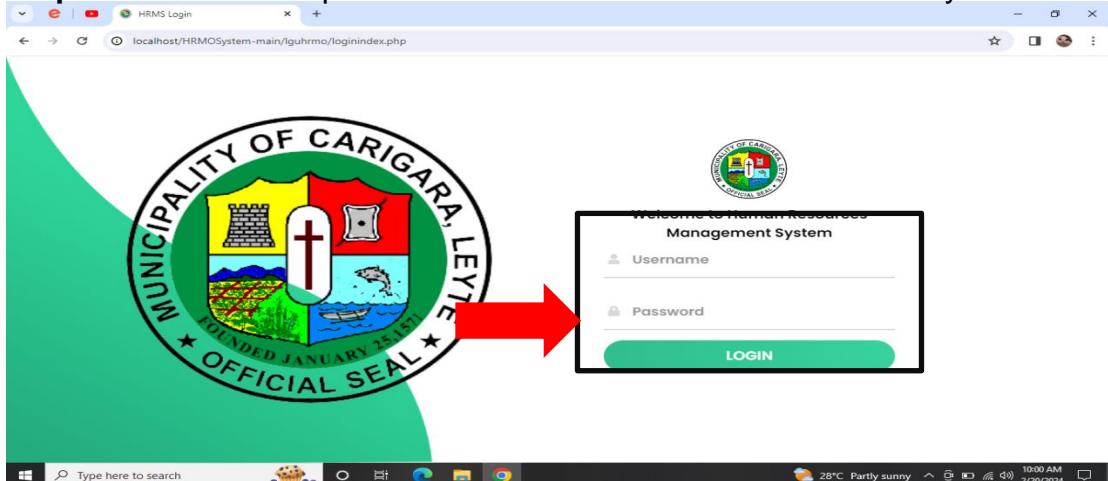
Lastly, you need to create a database for your system.

Name	User	Host	Tables	Size	
id21944885_db_hromo	id21944885_hromo	localhost	0	0MB	...

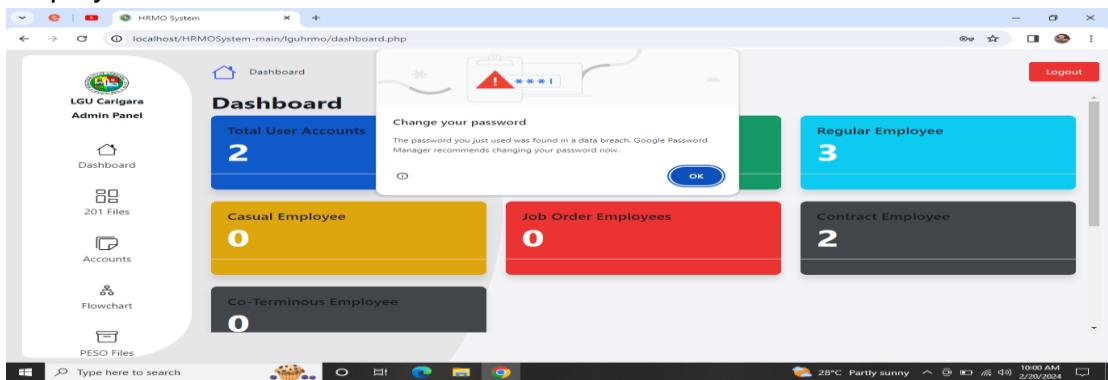
The system is finally deployed. This step ensures that any modifications or updates made to the configuration settings take effect, allowing the web application to run smoothly within the hosting environment. By visiting the application's URL, you can verify that it is functioning correctly and assess its performance and functionality.

USER'S MANUAL

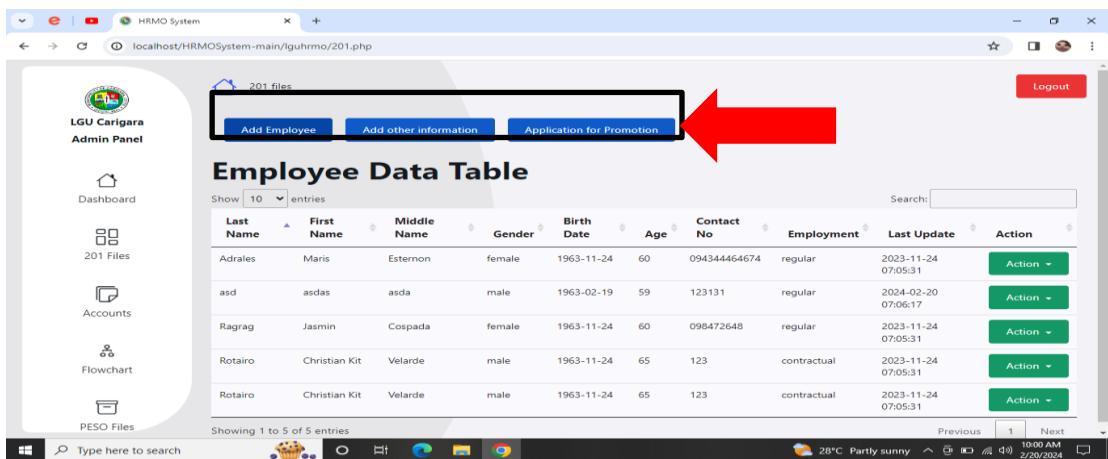
Step 1. Admin must input valid credentials in order to access the system.



Step 2. After you input valid credentials you will be able to access Dashboard as the landing page of the system, the dashboard shows all the data about the employee.



Step 3. In 201 Files the admin will be able to see list of employee and all of their data, admin must click the button to access the modals.



Step 4. First button is Add Employee which will access to the modal for personal information after adding all the data you can now click submit to save the data.

Employee Information

Family Name * Smith

First Name * John

Middle Name (optional)

Gender * Select Gender

Birthday * mm/dd/yyyy

Age * Auto-calculated

Address Brgy/Municipality/Province

Contact Number 09*****

Select employment status Select

Close **Submit**

Step 5. Next, is the other information of the employee and other government information of the employee.

Add Other Information

Select Employee Select

Department

TIN

Salary Grade

GSIS No

Rate

PHIC

Position

Pagibig

EE Number

Educational Attainment

Date Started mm/dd/yyyy

Eligibility

Years of Service

Years of Experience

Close **Submit**

Step 6. Lastly, the last button will show a modal that the admin will be able to add all requirements for promotion of a certain employee.

Update Requirements

Requirement1 Seminar 300

Requirement2

Requirement3

Requirement4

Requirement5

Close **Update Requirements**

Step 7. The admin can also edit the information of the employee by clicking the action button

The screenshot shows a web-based HRM system interface. On the left, there's a sidebar with icons for Dashboard, 201 Files, Accounts, Flowchart, and PESO Files. The main area has tabs for 'Add Employee', 'Add other information', and 'Application for Promotion'. Below these is a table titled 'Employee Data Table' with columns: Last Name, First Name, Middle Name, Gender, Birth Date, Age, Contact No, Employment, Last Update, and Action. A red arrow points from the bottom right towards a context menu that appears when hovering over one of the rows. The menu includes options: View, Edit Employee, Edit Other Information, and Update Requirements.

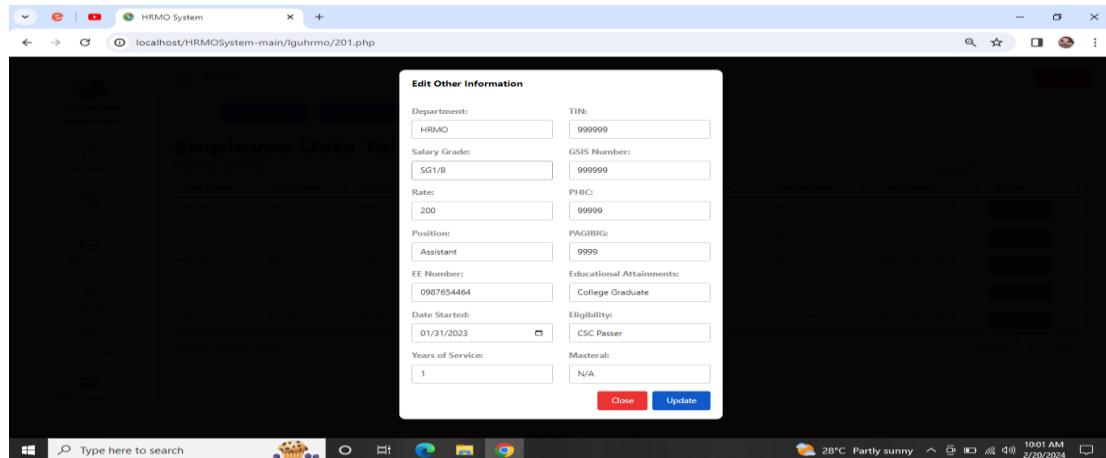
The view button will display all the data of the employee.

This screenshot shows a 'Employee Details' modal window overlaid on the main Employee Data Table page. The modal contains a grid of information fields for a specific employee, such as Family Name, First Name, Middle Name, Gender, Birth Date, Age, Address, Contact Number, Department, Employment Status, Salary Grade, Rate, Position, and EE Number. At the bottom of the modal is a 'Close' button.

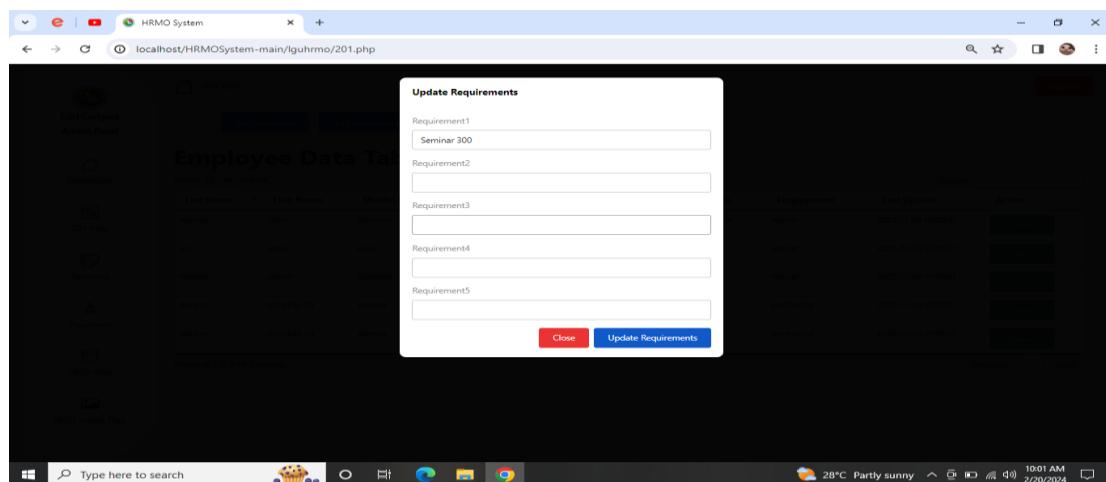
Step 8. Admin can edit/update the employee information.

This screenshot shows an 'Edit Employee Information' modal window. It contains input fields for Family Name (Adrales), Address (Banugo), First Name (Maris), Contact No (09434464674), Middle Name (Estermon), and Employment Status (Regular). There are 'Close' and 'Update' buttons at the bottom. The background shows the Employee Data Table page with some rows visible.

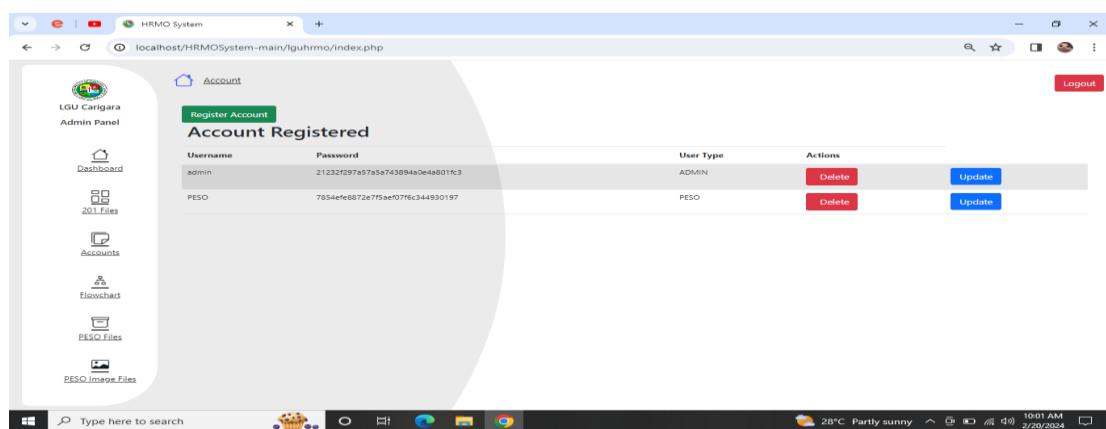
Step 9. Admin can also update/edit other information of the employee.



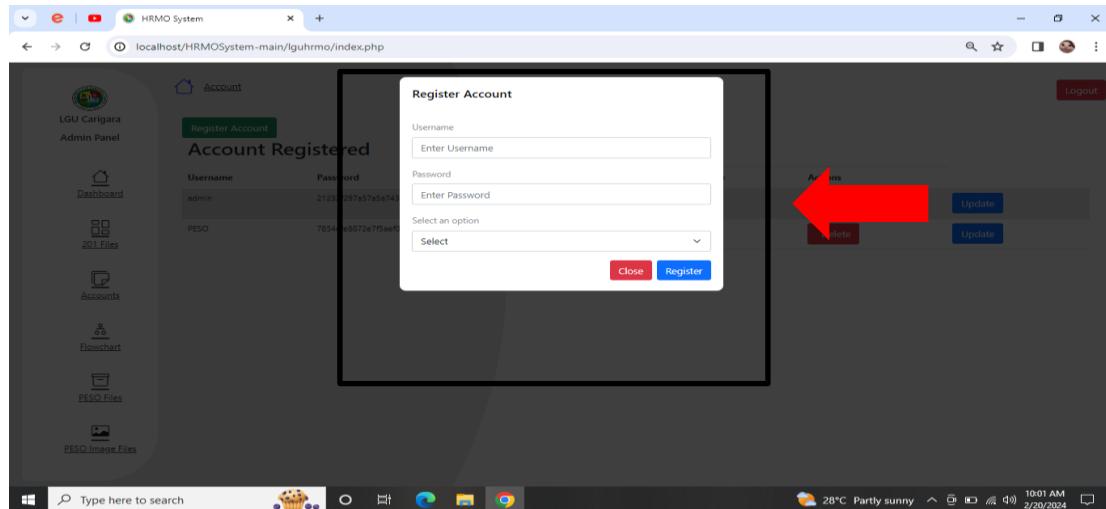
Step 10. Admin can also update the requirements for promotion of the employee



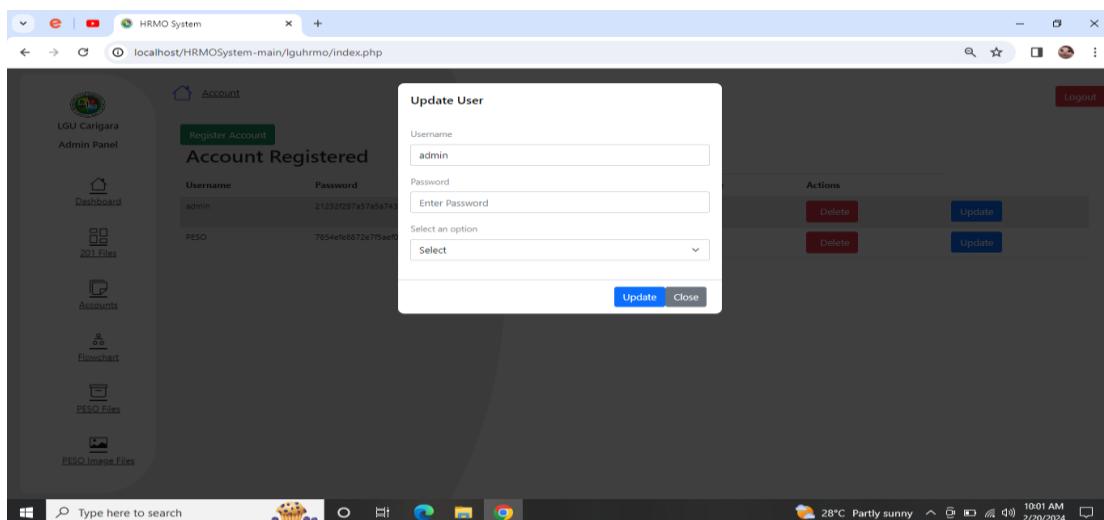
Step 11. Admin can also create new account for the users but the account is only capable to create two users the Admin and PESO.



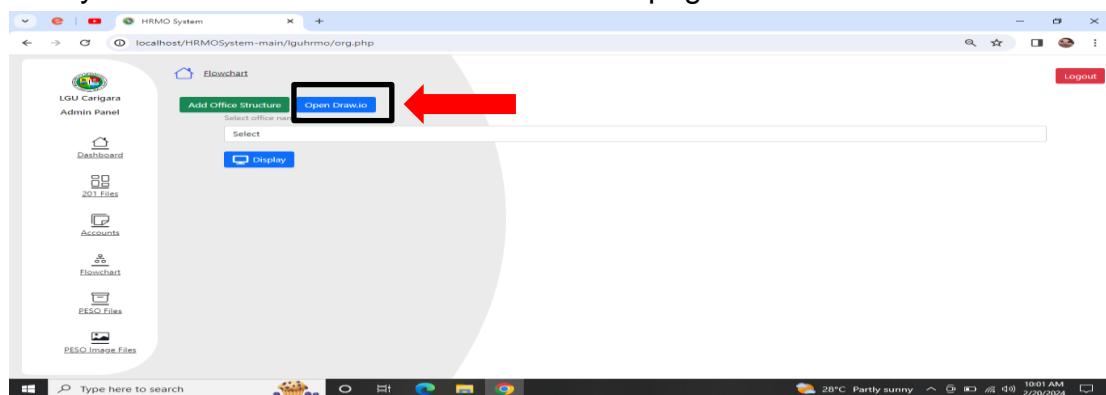
Step 12. Simply input all the data required and click register to register the data.



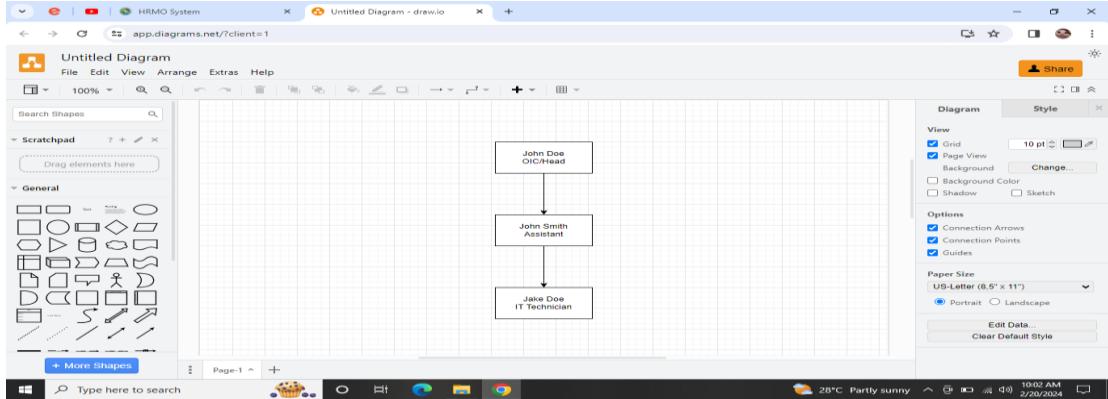
Step 13. Admin can also update the data of the account.



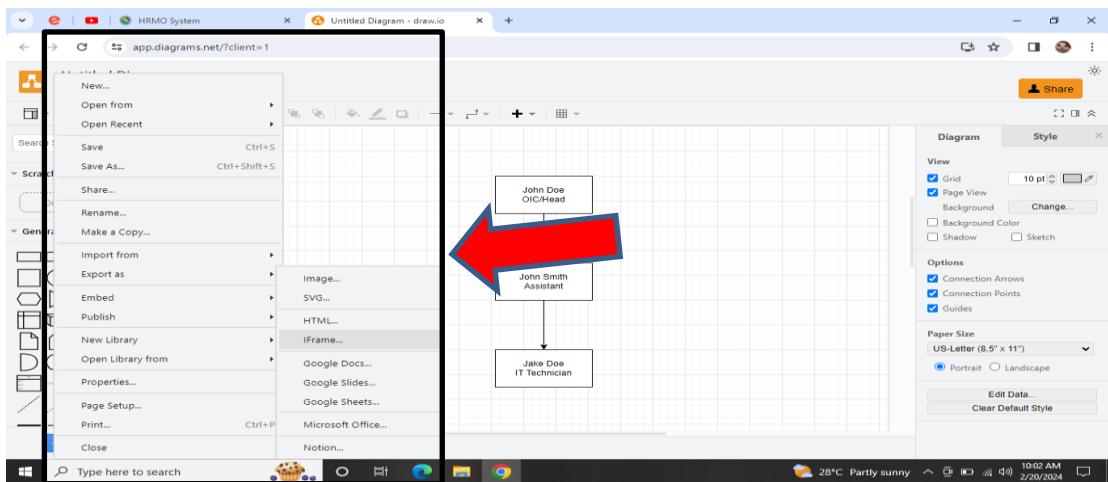
Step 14. This part is for the organizational flow chart of the offices in LGU Carigara, for the admin to add flow chart they have to click button Open Draw.io then you will be redirected to the draw.io webpage



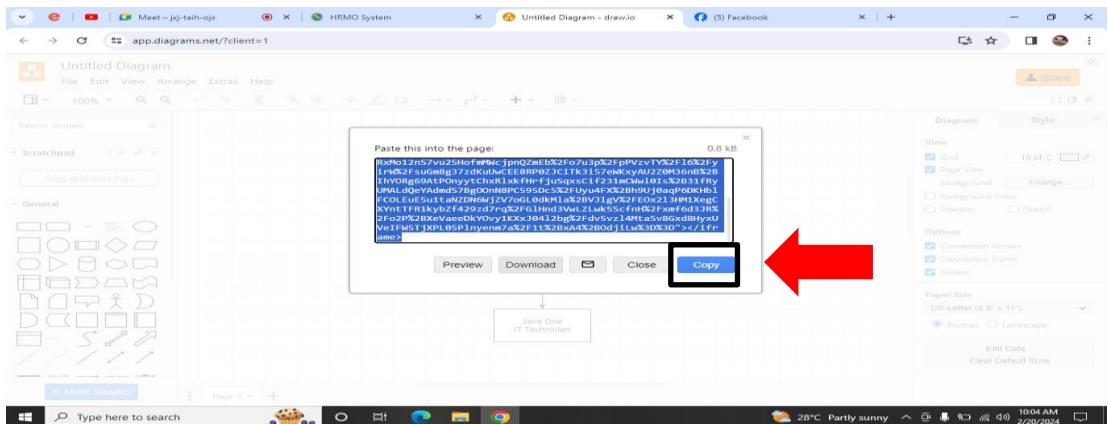
Step 15. After accessing the web page now you can create now the organizational structure of the office



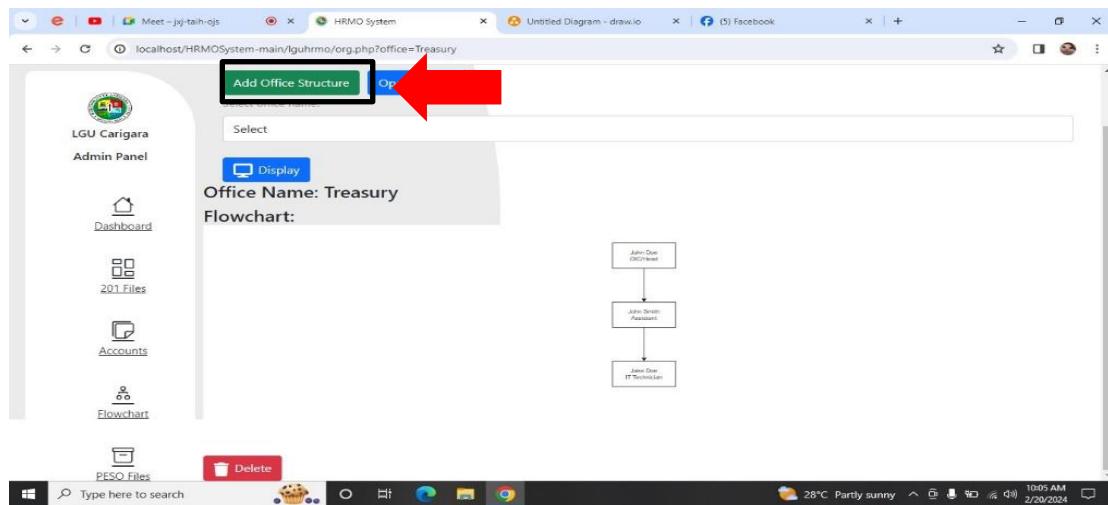
Step 16. After you plot the organizational structure click File and hover to Embed and click iFrame.



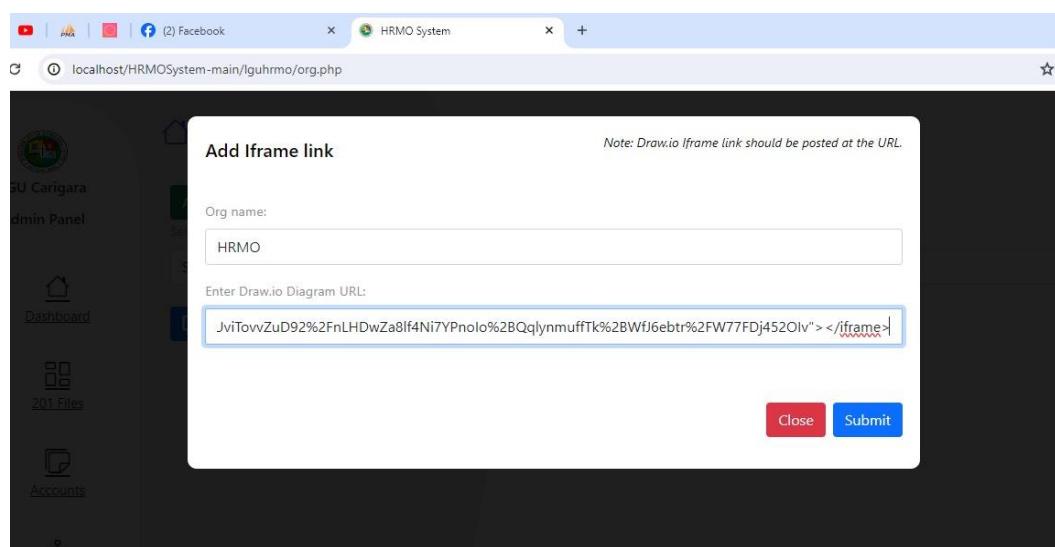
Step 17. Now copy the address or the iFrame URL by pressing Copy.



Step 18. After copying the iFrame URL, go back to the flowchart page. Click the add office structure.

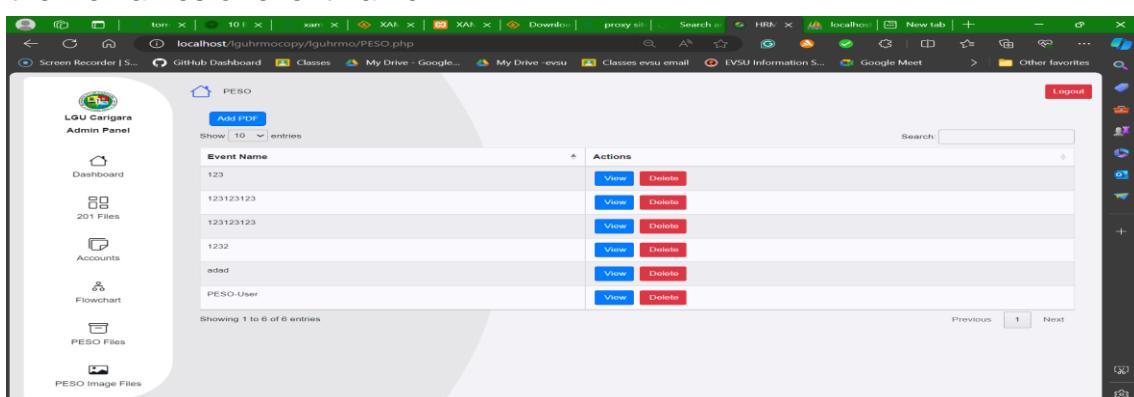


Step 19. create the organizational name and paste the iFrame URL at the designated box. Then submit to save.



PESO FILE

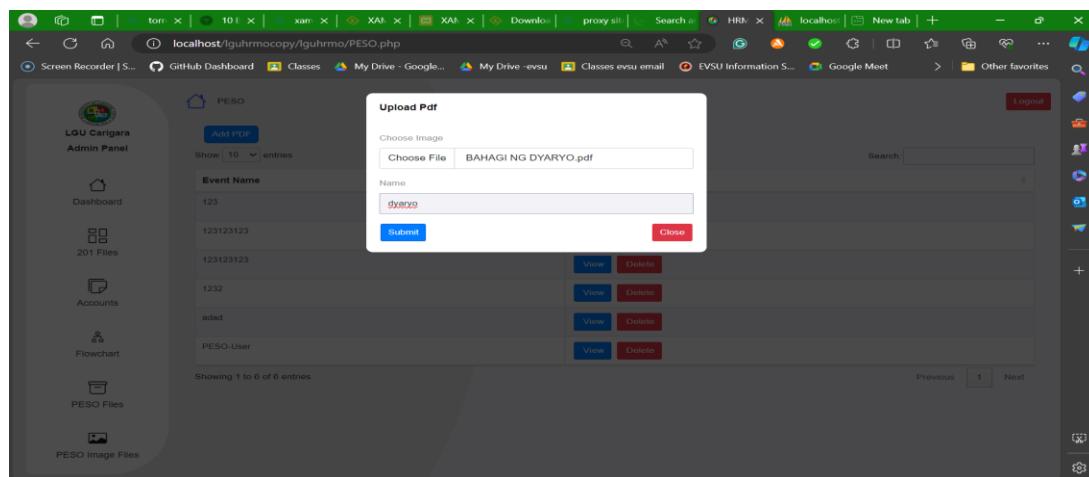
Step 20. In the peso page the user can add, view and delete files. It also display the file names or event name.



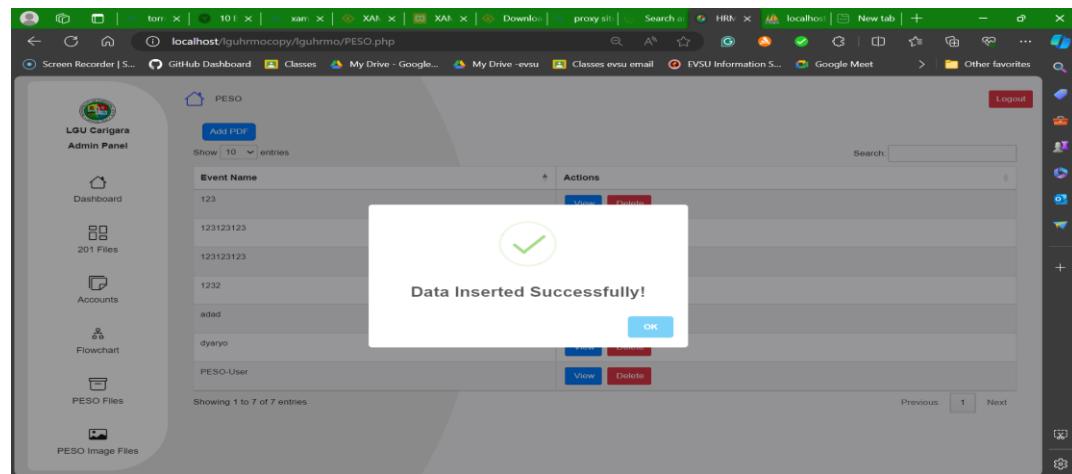
Step 21. In adding a file, Click the “Add PDF” button at the upper left of the page.



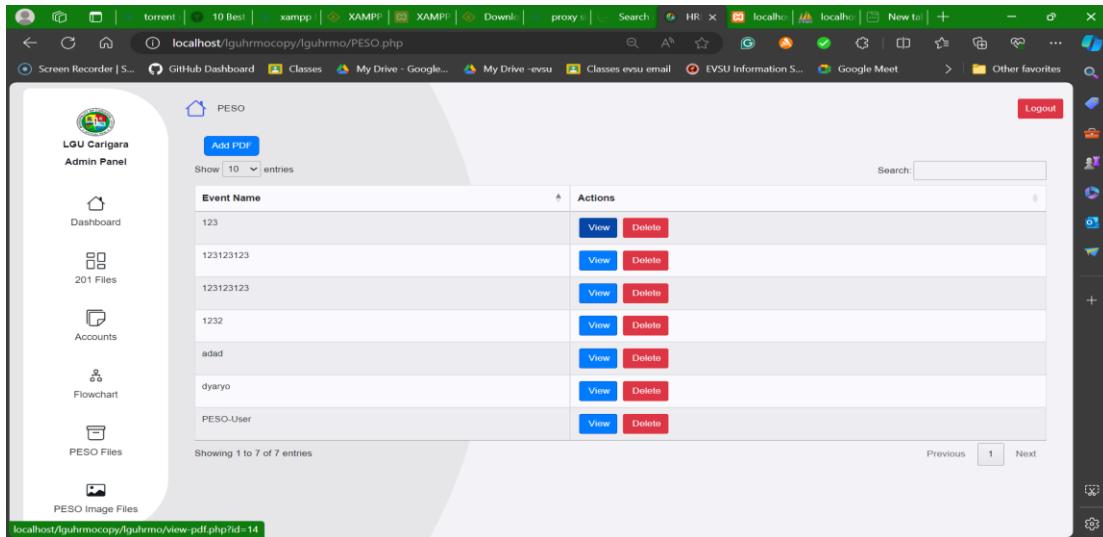
Step 22. Then choose the file that you want to add from your local storage and create the file or event name and



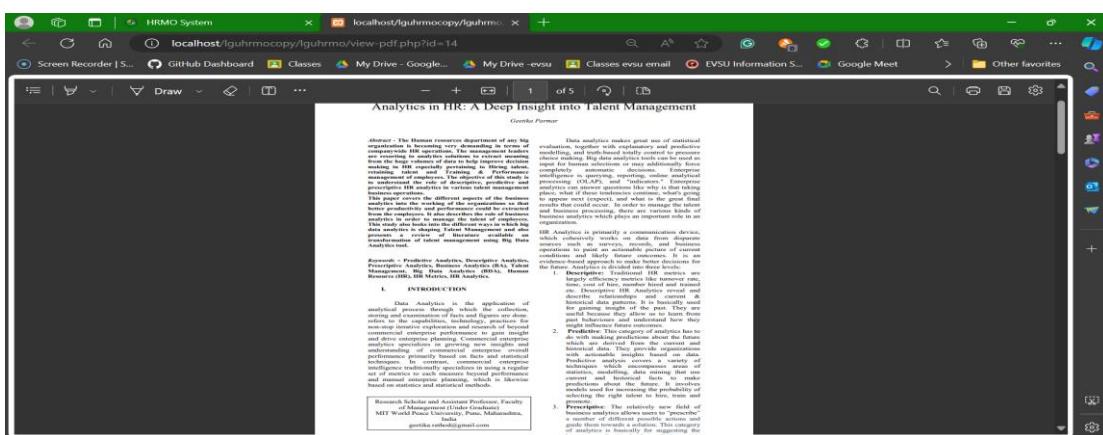
Step 23. After clicking the submit button, a notification prompt will appear confirming that the file has been uploaded successfully.



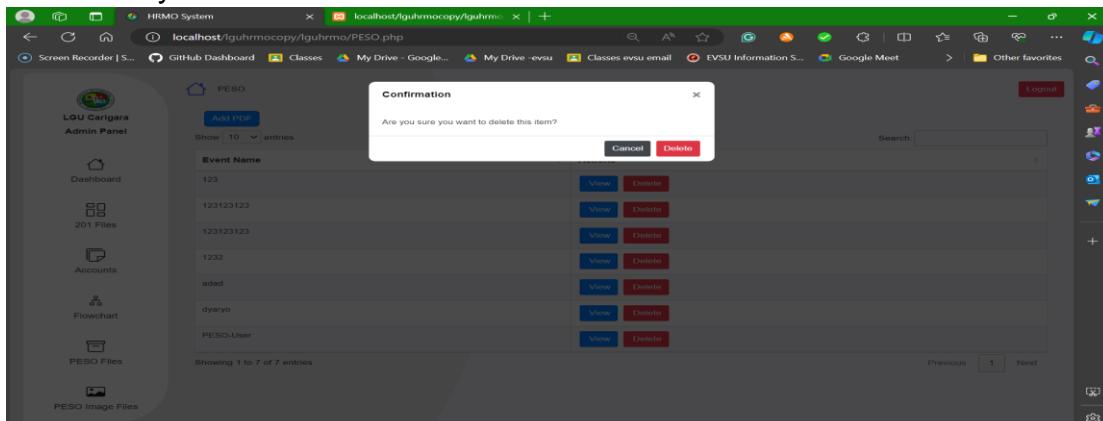
Step 24. In viewing the file, click the view button and the system will automatically display the file in another tab.



Once the file is open, it is also printable and can do other function like in a normal PDF file.

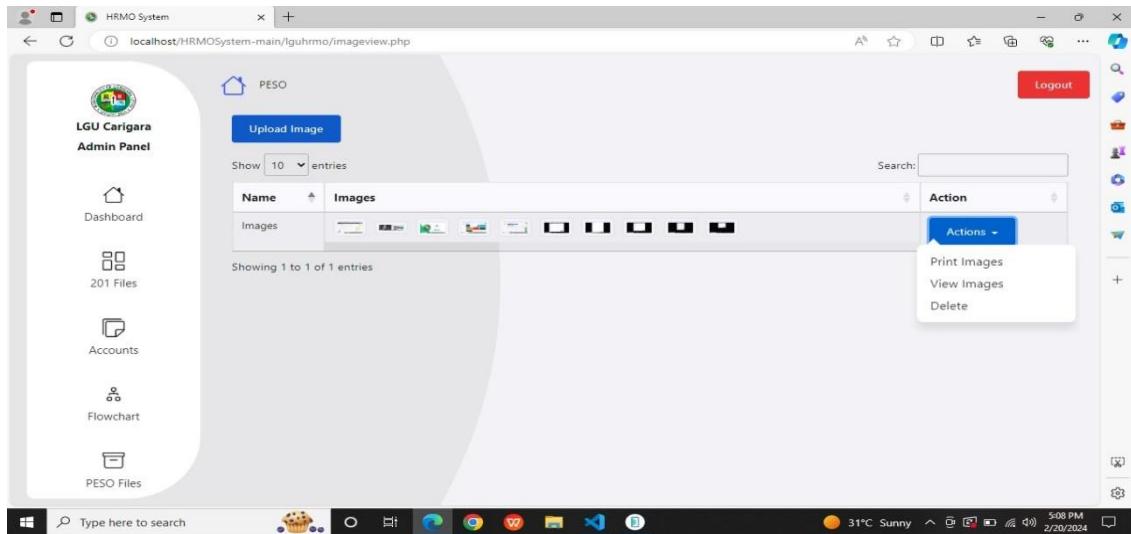


Step 25. In deleting a file, a notification prompt will appear to confirm whether you will delete the file or not. This is a preventive measure if in case the user accidentally clicked the delete button.

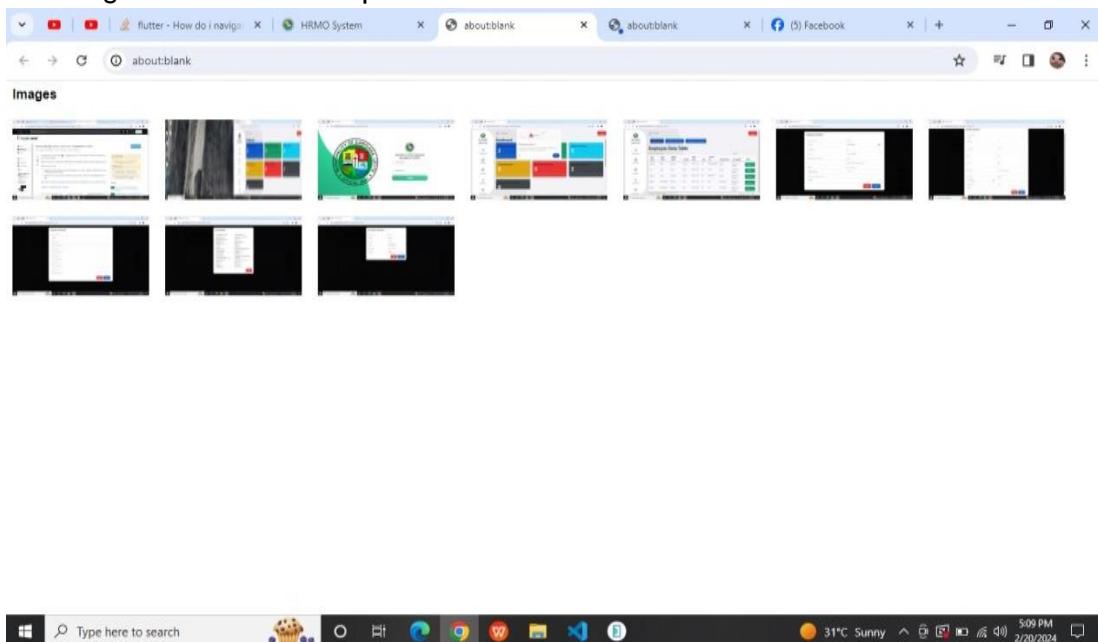


PESO IMAGE FILES

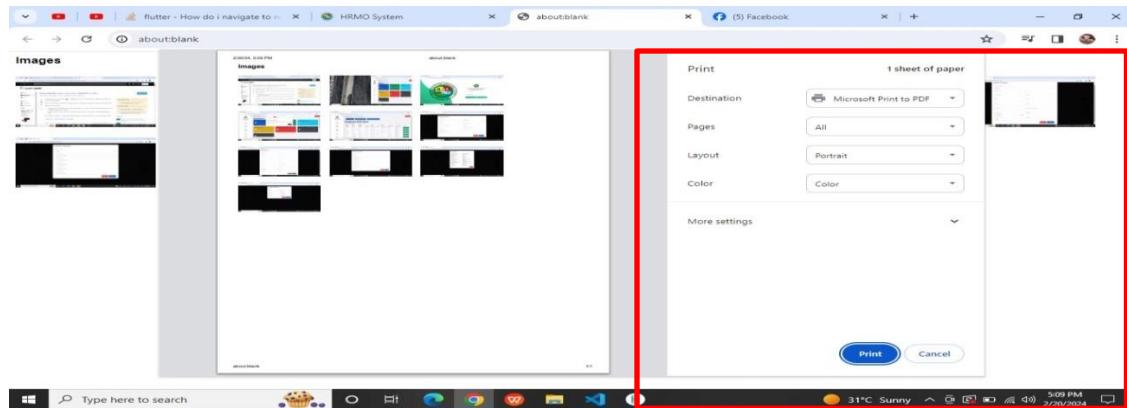
Step 26. The image file page is only specified for uploading images only. The page will allow the user to upload, print



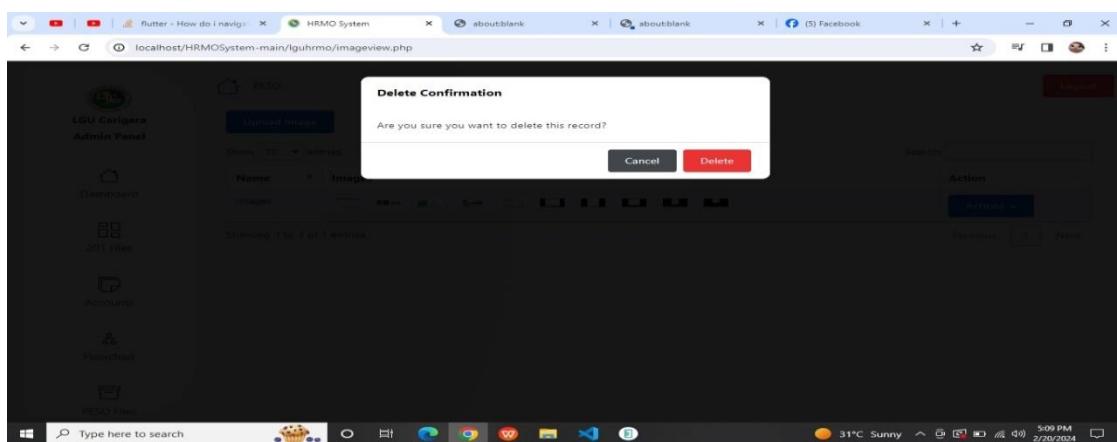
Step 27. If the user clicked the view button. The system will automatically display the images. Similar to the picture below.



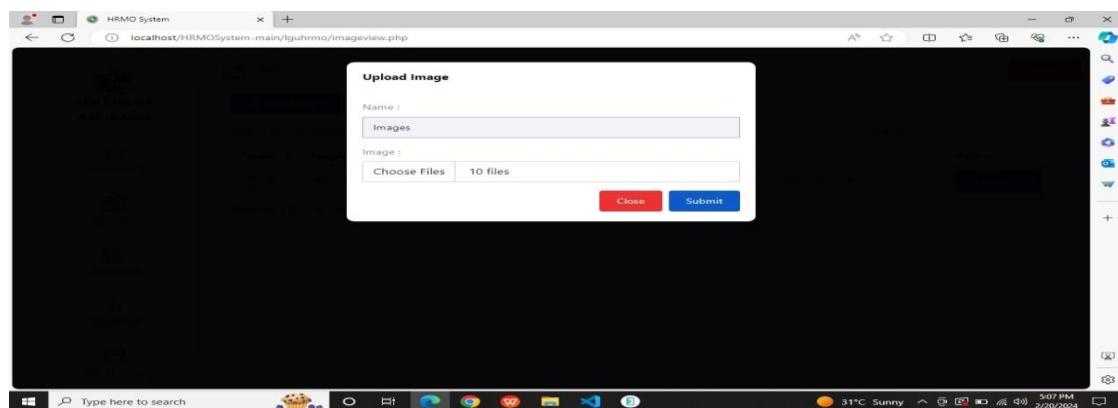
Step 28. In printing the image, the system has a fixed arrangement if image. the system will display the print interface to select or adjust the parameters like page layout, printer destination and other printer settings



Step 29. In deleting images, a notification prompt will appear to confirm whether you will delete the file or not. This a preventive measure if in case



Step 30. In uploading images the system will display a form where you will put a name or event name then click the “Choose file” button and add the images to be uploaded. Clicking the “submit” button will automatically upload the file.



Note: the system can only upload up to 10 images at once.

CURRICULUM VITAE

CURRICULUM VITAE

PERSONAL INFORMATION

Name: Maris Adrales
Age: 22
Date of Birth: July 4, 2001
Place of Birth: Barugo, Leyte
Citizenship: Filipino
Civil Status: Single
Sex: Female



CONTACT INFORMATION

Address: Brgy. Pikas Barugo, Leyte
Mobile Number: 09463653355
Email: jmarisadrales@gmail.com

EDUCATION

Elementary: Amahit Elementary School
Brgy. Amahit Barugo, Leyte
Secondary: Calingcaguing National High School (CNHS)
Brgy. Calingcaguing Barugo, Leyte
Tertiary: Eastern Visayas State University
Barugohay Norte Carigara, Leyte

CURRICULUM VITAE

PERSONAL INFORMATION

Name: Jasmin C. Ragrag
Age: 21
Date of Birth: March 22, 2002
Place of Birth: Brgy. Tinambacan Jaro, Leyte
Citizenship: Filipino
Civil Status: Single
Sex: Female



CONTACT INFORMATION

Address: Brgy. Tinambacan Jaro, Leyte
Mobile Number: 09501638060
Email: ragrajasmin37@gmail.com

EDUCATION

Elementary: Tinambacan Elementary School
Brgy. Tinambacan Jaro, Leyte
Secondary: Granja Kalinawan National High School
Brgy. Kalinawan Jaro, Leyte
Tertiary: Eastern Visayas State University
Barugohay Norte Carigara, Leyte

CURRICULUM VITAE



PERSONAL INFORMATION

Name: Arwin O. Rocha
Age: 24
Date of Birth: February 02, 1999
Place of Birth: Barugo, Leyte
Citizenship: Filipino
Civil Status: Single
Sex: Male

CONTACT INFORMATION

Address: Brgy. Abango Barugo, Leyte
Mobile Number: 09480953580
Email: Arwinspiker@gmail.com

EDUCATION

Elementary: Cassidy Elementary School
Baybay Carigara, Leyte
Secondary: Carigara National High School
Brgy. Ponong Carigara, Leyte
Tertiary: Eastern Visayas State University
Barugohay Norte Carigara, Leyte

CURRICULUM VITAE



PERSONAL INFORMATION

Name: Christian Kit V. Rotairo

Age: 22

Date of Birth: April 24, 2001

Place of Birth: Carigara, Leyte

Citizenship: Filipino

Civil Status: Single

Sex: Male

CONTACT INFORMATION

Address: Brgy. Parag-Um Carigara, Leyte

Mobile Number: 09692588637

Email: ckit.rotairo@gmail.com

EDUCATION

Elementary: Cong. Alberto T. Aguja Memorial Central School

Brgy. Sawang Carigara, Leyte

Secondary: Jugaban National High School

Brgy. Jugaban Carigara, Leyte

Tertiary: Eastern Visayas State University

Barugohay Norte Carigara, Leyte