



COLLEGE OF COMMUNICATION AND INFORMATION TECHNOLOGY

EFFICIENT SYSTEM FOR MONITORING MEMBERSHIP IN YONTOZA  
(GAYON-GAYON, BAYTO, SALAZA) IRRIGATORS ASSOCIATION  
UNDER NAYOM-BAYTO RIS IN BIAY, STA. CRUZ,  
ZAMBALES, PHILIPPINES

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PRMSU - STA. CRUZ CAMPUS  
COLLEGE OF COMMUNICATION AND INFORMATION TECHNOLOGY

**RECEIVED**  
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A Thesis

In partial Fulfillment of the Requirements

for the Degree of Bachelor of Science in Computer Science

College of Communication and Information Technology

President Ramon Magsaysay State University

Sta. Cruz, Zambales

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Republic of the Philippines  
**PRESIDENT RAMON MAGSAYSAY STATE UNIVERSITY**  
College of Communication and Information Technology  
Sta. Cruz, Zambales

**APPROVAL SHEET**

This, study entitled **EFFICIENT SYSTEM FOR MONITORING MEMBERSHIP IN YONTOZA (Gayon-gayon, Bayto, Salaza) IRRIGATORS ASSOCIATION UNDER NAYOM-BAYTO RIS IN BIAY, STA. CRUZ, ZAMBALES, PHILIPPINES** A.Y. 2023-2024 prepared and submitted by **MENDIO REXMOND P., MENORCA MARBEN E., MANGROBANG DEO, MIA ANGELO A., and MOJENO MARY ROSE** in partial fulfillment of the requirements for the degree of **BACHELOR OF SCIENCE IN COMPUTER SCIENCE** are hereby recommended for oral examination.

  
**JANNIE M. ESCOBAR**  
Adviser

Approved by the Panel of the Oral Examiners on \_\_\_\_\_ with a grade of \_\_\_\_\_.

  
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Chairman

  
**JING JING GONGORA**  
Member

  
**CHARLIE Z. RANCE**  
Member

  
**ANALYN H. EDAÑOL**  
Member

Accepted and approved in partial fulfillment of the requirements for the degree of **BACHELOR OF SCIENCE IN COMPUTER SCIENCE**.

\_\_\_\_\_  
Date Signed

  
**NOEL B. MERIN MA.Ed**  
Campus Director





### EXECUTIVE SUMMARY

The "Efficient System for Monitoring Membership in YONTOZA Irrigators Association under Nayom-Bayto RIS in Biay, Sta. Cruz, Zambales, Philippines" is a comprehensive solution developed to streamline membership management processes within the YONTOZA Irrigators Association. This system aims to enhance efficiency, accuracy, and accessibility in managing association members' information.

Quantitative analysis was employed as the primary research design methodology to assess the software quality, level of acceptability, and readiness of the system. The research design, based on Dulock (1993) blueprint concept, focused on answering pertinent research questions and controlling variance.

Evaluation of Software Quality Efficient System for Monitoring Membership in Yontoza (Gayon-gayon, Bayto, Salaza) Irrigators Association under Nayom-Bayto RIS in Biay, Sta. Cruz, Zambales, Philippines in terms of ISO/IEC 25010 Metrics (a) functional suitability, obtained an average weighted mean of 3.95 and interpreted as "Excellent"; (b) performance efficiency, obtained an average weighted mean 3.88 and interpreted as "Excellent"; (c) compatibility, obtained an average weighted mean of 3.72 and interpreted as "Excellent"; (d) usability, obtained an average weighted mean of 3.91 and interpreted as "Excellent"; (e) reliability, obtained an average weighted mean of 3.89 and interpreted as "Excellent"; (f) security, obtained an average weighted mean of 3.90 and interpreted as "Excellent"; (g) maintainability, obtained an average weighted mean of 3.83 and interpreted as "Excellent"; and (h) portability, obtained an average weighted mean of 3.95 and interpreted as "Excellent".

Evaluation in the Level of Acceptability of the Respondents on Efficient System for





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Monitoring Membership in Yontoza Irrigators Association under Nayom-Bayto RIS in Biay, Sta. Cruz, Zambales, Philippines in terms of ISO/IEC 25010 Metrics in terms of (a) functionality, obtained an average weighted mean of 3.91 and interpreted as Highly Acceptable; (b) performance, obtained an average weighted mean of 3.93 and interpreted as Highly Acceptable.

Evaluation in the Level of Readiness of National Irrigation Administration (NIA) in the Implementation of Efficient System for Monitoring Membership in Yontoza Irrigators Association under Nayom-Bayto RIS in Biay, Sta. Cruz, Zambales, Philippines in terms of ISO/IEC 25010 Metrics in terms of (a) facility, obtained an average weighted mean of 3.91 and interpreted as Very Ready; (b) technical personnel, obtained an average weighted mean of 3.97 and interpreted as Very Ready.

The following key recommendations are proposed for the Efficient System for Monitoring Membership in YONTOZA (Gayon-gayon, Bayto, Salaza) Irrigators Association under Nayom-Bayto RIS in Biay, Sta. Cruz, Zambales, Philippines: (1) The researcher recommends the future researcher to develop and implement an effectiveness of monitoring systems. The system should be user-friendly, accurate and reliable while also addressing privacy and security concerns and providing adequate training and support to users. (2) To enhance maintainability, the researcher recommends to future researchers focusing on maintaining this web-based usage for its long-term execution. (3) To enhance the security of the system, the researchers recommend regularly updating software to address weaknesses. Additionally, implementing strong encryption protocols is essential to safeguard sensitive data from unauthorized access. The researchers also recommend continuing the study to keep pace with the changing trends of web-based usage, ensuring user-friendliness, and making it applicable to various devices. (4) To enhance the system's





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portability, it's recommended to optimize the code for compatibility across multiple platforms, including desktop, mobile, and web browsers. Considering implementing responsive design principles will ensure the platform seamlessly adapts to various screen sizes and resolutions. (5) To enhance the facility aspect of the system, the researcher recommends prioritizing improvements in both physical and technological resources, including hardware, software, and network infrastructure. These enhancements will support the platform's operations efficiently and reliably. Additionally, ensure that users receive adequate training and support to maximize utilization of available facilities.