

CARES: CATHOLIC ARCHIVE and RECORD ENTRY SYSTEM

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Abstract— The CARES: Catholic Archive and Record Entry System was developed to address inefficiencies in the manual record management processes at the San Enrique Mary Help of Christians Parish Church. The system aimed to streamline administrative tasks, such as searching for client records and generating certificates of Baptism, Confirmation, and Wedding. Using Django and Python, the web-based application was created under the Agile methodology. It was evaluated using the System Usability Scale (SUS) and received a high usability score of 93.75, described as "Best Imaginable" and graded A+. CARES significantly improved record management and service efficiency, demonstrating its potential as a valuable tool for church administrators.

Keywords— Catholic Church, Record Management, Web- Based System, Usability, Agile Methodology.

I. INTRODUCTION

1.1 Background of the Study

Technological advancements have led many institutions to transition from manual to digital systems. However, the San Enrique Mary Help of Christians Parish Church still used traditional methods for managing vital documents. The Church Registrar experienced challenges such as time-consuming searches and inefficient certificate generation using typewriters. In response, the CARES system was developed to digitize records, enable easier retrieval, and streamline administrative processes. This system aimed to offer an efficient and user-friendly interface that enhances the delivery of services to parishioners.

1.2 Objectives of the Study

The study aimed to develop the CARES: Catholic Archive and Record Entry System and determine its acceptability. Specifically, this study aimed to:

1. design the CARES: Catholic Archive and Record Entry System; and
2. determined the acceptability of CARES in terms of its usability.

1.3 Conceptual Framework

The conceptual framework shows the relationship between different variables using an Input-Process-Output (IPO) diagram, as shown in Figure 1.

The input stage includes user, software, and

hardware requirements. User requirements involve clients' details, baptism certificates, and confirmation certificates. Software requirements include Django and Python. The input stage includes user, software, and hardware requirements. User requirements involve clients' details, baptism certificates, and confirmation certificates.

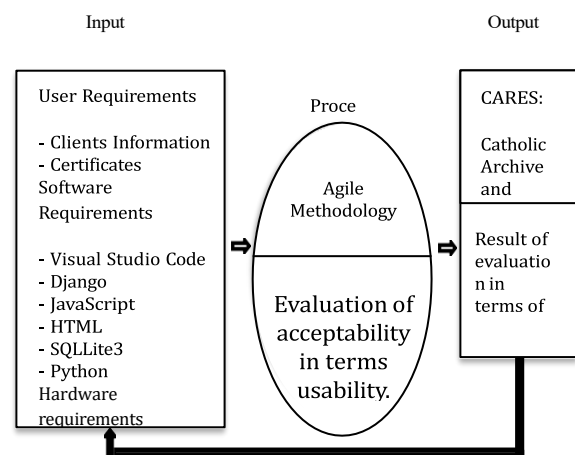


Figure 1. Input-Process-Output Diagram

II. METHODOLOGY

2.1 Research Design

The researchers utilized a descriptive-developmental research design. The descriptive aspect of the study involved evaluating the system in terms of its usability. The developmental aspect focused on designing and developing a user interface for the admin, implementing a database capable of creating, reading, editing, and viewing records, and incorporating functionality for generating certificates and reports.

The researchers adopted Agile Methodology, which included iterative stages such as requirement gathering, analysis, design, coding, testing, delivery of partially incremented software, and customer feedback. The researchers used Visual Studio Code (version 1.95.3) as their primary development environment and primarily employed the Django framework and Python for the project.

2.2 Agile Methodology

The researchers used the System Development

Life Cycle, specifically the Agile Method, in developing the CARES. The activities that the researchers performed in each stage are discussed in the following:

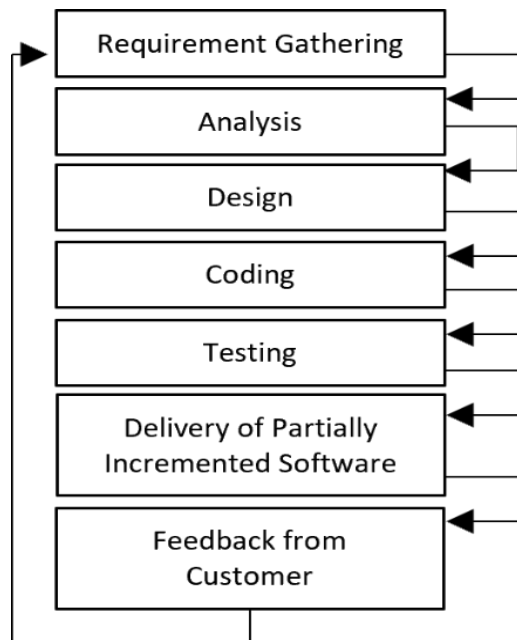


Figure 2. Agile Methodology

2.3 Requirement Gathering. In the requirement gathering phase, the researchers collected initial information, including an overview of the current situation in the locale where the system would be implemented and an assessment of the system’s necessity. The researchers obtained approval letters from the CCS Dean, Capstone Adviser, and Campus Administrator. Additionally, the researchers secured a letter from the San Enrique Catholic Church granting permission to conduct the Capstone Project titled “CARES: Catholic Archive and Record Entry System.” The researchers also interviewed the Church Registrar to identify the problems and challenges faced in administrative tasks and to determine the necessary features for the Capstone Project to address these challenges. To enhance productivity and organization, the researchers held regular weekly meetings to strategize and plan the development of the web-based application. The researchers outlined the specific phases of the project and created a Gantt chart to manage the timeline effectively. Additionally, the researchers developed a Work Breakdown Structure to clearly define and organize the tasks and activities required for the project.

2.4 Analysis. Following the interview, the researchers carefully examined the information gathered from discussions with the Church Registrars. This examination focused on understanding the challenges encountered by the Registrars and pinpointing the essential features needed for the capstone project to

tackle these challenges effectively. This analysis guided the development process by ensuring a clear understanding of user requirements, ultimately a creating customized solution that optimized usability and functionality.

2.5 Design. During this phase, the researcher worked with the respondents to create and develop a prototype, a use case, and a class diagram that covered the outlined system requirements.

2.6 Locale of the Study

This study was conducted at the San Enrique Mary Help of Christian Parish Church. The Church is located at Brgy. Poblacion Ilaya, San Enrique, Iloilo.

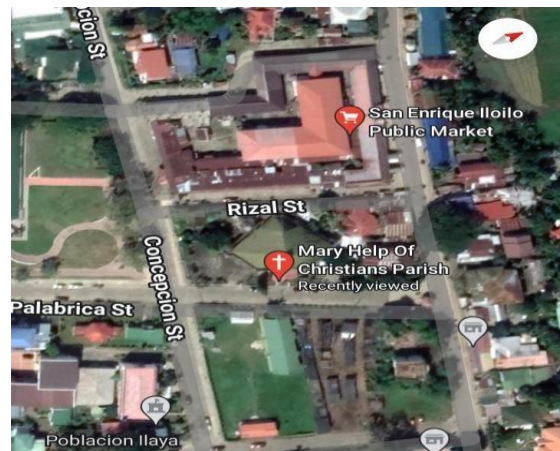


Figure 19. San Enrique Mary Help of Christians Parish Church Site Map

2.7 Respondents of the Study

This research aimed to evaluate the usability of the CARES by assessing its functionality with one Church Registrar and one Assistant Church Registrar.

2.8 Sampling Technique

The researchers used purposive sampling to select the Church Registrar and the Assistant Church Registrar. It aims to ensure that the primary users responsible for record management at Mary Help of Christians Parish Church provide valuable insights into the system’s usability and functionality.

2.9 Research Instrument

The researchers used Brooke’s (1986) standardized questionnaire checklist to evaluate the CARES, which included ten statements. The System Usability Scale was applied to assess the system’s usability, providing ratings

from "strongly agree" to "strongly disagree."

For scoring, items 1, 3, 5, 7, and 9 were scored by subtracting one from the given scale position. Conversely, for items 2, 4, 6, 8, and 10, as shown in Table 2, the scores were calculated by subtracting the scale position from 5.

Table 1. System’s Usability Rating Scale

Scale	Description	Numerical Rating
5	Strongly Agree	5 points
4	Agree	4 points
3	Neutral	3 points
2	Disagree	2 points
1	Strongly Agree	1 point

2.10 Data Gathering Procedure

Before developing the system, the researchers collected preliminary information from the San Enrique Mary Help of Christians Parish Church Registrar. This information included methods for keeping, filing, and searching for parishioners’ data and procedures for issuing services such as generating certificates. This initial data informed the development of the system. Next, the researchers developed a flowchart to map out the design of the CARES.

The researchers drafted a letter asking permission to conduct the study and sent it to the Campus Administrator to request authorization to conduct the study. After receiving approval, the researchers developed the prototype of the CARES. Subsequently, the researchers prepared another letter and sent it to the San Enrique Mary Help of Christians Parish Church, seeking permission to perform an initial evaluation of the system. Based on the feedback from this evaluation, the system underwent changes, revisions, and updates.

2.11 Data Analysis Procedure

Appropriate descriptive statistical tools would be employed to analyze the collected data. The System Usability Score would be utilized to tabulate and evaluate the gathered points regarding the application’s usability. The formula for computing the SUS is $SUS = (X + Y) \times 2.5$

Where:

X= the points for odd-numbered questions minus 5 Y= 25 minus the points for even-numbered questions.

The researchers determined the average score in interpreting the results of the data gathered and evaluating the system’s usability. Table 2 will be used to analyze the SUS score.

Table 2. System Usability Scale

Grade	SUS	Percentile Range	Adjective	Acceptable	NPS
A+	84.1-100	96-100	Best Imaginable Excellent	Acceptable	Promoter
A	80.8-84.0	90-95		Acceptable	Promoter
A-	78.9-80.9	85-89		Acceptable	Promoter
B+	77.2-77.8	80-84		Acceptable	Promoter
B	74.1-77.1	70-79		Acceptable	Passive
B-	72.6-74.0	65-69		Acceptable	Passive
C+	71.1-72.5	60-64	Good	Acceptable	Passive
C	65.0-71.0	41-59		Marginal	Passive
C-	62.7-64.9	34-40		Marginal	Passive
D	51.7-62.6	15-34	OK	Marginal	Detractor

III. RESULTS AND DISCUSSION

3.1 The Developed CARES: Catholic Archive and Record Entry System

The CARES: Catholic Archive and Record Entry System was created to streamline and modernize the administrative operations of the San Enrique Mary Help of Christians Parish Church. It replaces manual record-keeping and certificate-generation methods with an efficient and user- friendly digital system. The system's primary aims are to reduce the Church Registrar's workload, decrease client wait times, and enhance the accessibility of vital church records such as baptism, confirmation, wedding, and death certificates.

3.1.1 The System Icon. The *System Icon*, designed by the developers, features the abbreviation "CARES," which stands for Catholic Archive and Record Entry System. It also includes a cross symbolizing the Catholic Church and other design elements to enhance its visual appeal. Double- clicking the system icon on the desktop initiated the launch of CARES, as shown in Figure 20.



Figure 20. The System Icon

4.1.1 The Admin Log-In Form. The Admin Login Form, as illustrated in Figure 21, consists of fields for the username and password, which the admin must fill in to access the system. Below these fields is the login button. The system will grant admin access if provided with the correct username and password.

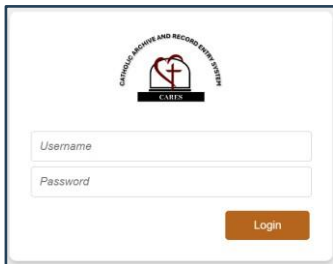


Figure 21. The Admin Log-in Form

3.1.2 The Homepage. The Homepage consists of a search bar that can be used to search records in different sections, including *Baptism*, *Confirmation*, *Wedding*, and *Death*. It also features a record section displaying each category's total number of records. Additionally, a chart visually represents the number of records in each section. A *Sidebar* is also available, which appears whenever the admin clicks the logo next to the search bar, as illustrated in Figure 22.

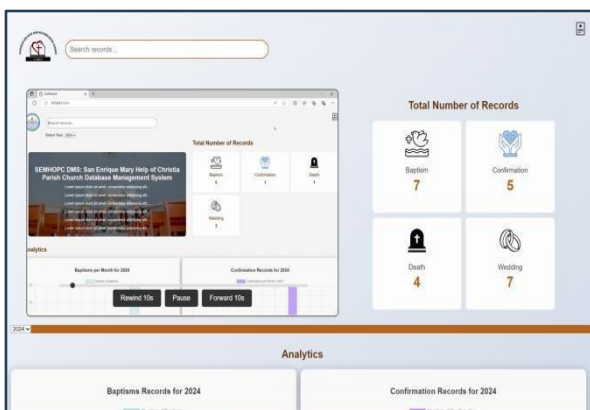


Figure 22. The Home Page

3.1.3 The Baptism Section. The *Baptism Section* consists of a table where the baptism records of individuals are stored. This section also includes an *Add Button*, an *Edit Button*, a *Generate Report Button*, and a *Generate Certificate Button*. Additionally, a Search Bar allows the admin to search for baptism dates and individual names. Next to the *Search Bar* is a *System Icon*; when clicked, the *Sidebar* appears. The total number of records stored in the Baptism Table is also displayed, as illustrated in Figure 22.

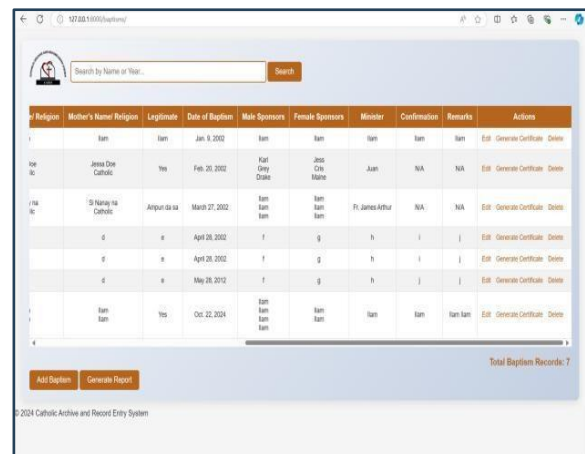


Figure 22. The Baptism Section

3.1.4 The Add Button in the Baptism Section.

The Add Button in the Baptism Section, illustrated in Figure 23, directs the Admin to the Add Baptism Form upon clicking.

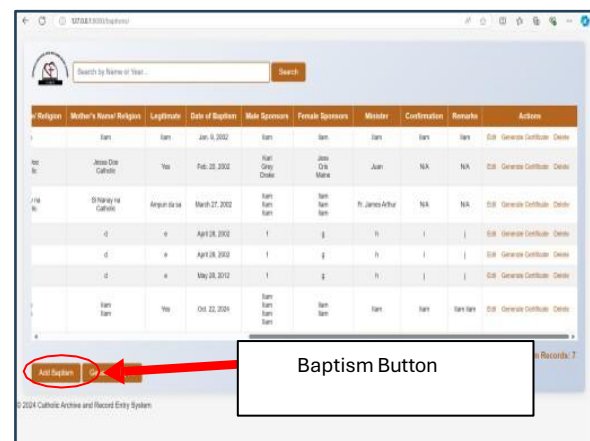


Figure 23. The Add Button in the Baptism Section.

3.1.5 The Add Baptism Form.

The Add Baptism Form, as illustrated in Figure 24, contains fields such as Page No., Record Number, Date of Birth, Place of Birth, Address, Father's Name & Religion, Mother's Name & Religion, Legitimacy, Date of Baptism, Male Sponsor, Female Sponsor, Minister, Confirmation, and Remarks. The admin must complete these fields to enter a new record. Once the form is filled out, the admin clicks the Save button to store the new record. Additionally, a suggestion box displays potential matching records based on the name entered in the 'Name' field of the Baptism Form. Suppose a matching record exists in the Baptism Table. In that case, it will appear in the suggestion box, and by clicking the record, the form fields will automatically populate with that record's details. However, that record will not be saved because it already exists in the Baptism Table. If the Admin enters a new record, they must manually complete all the fields. If the Admin cannot fill a field, they should provide 'N/A'.

Figure 24. The Add Baptism Form

3.1.6 The Generate Baptism Certificate Button.

As illustrated in Figure 25, the Generate Baptism Certificate Button allows the admin to generate a baptism certificate when clicked. The certificate includes data from the record selected to create the baptism certificate.

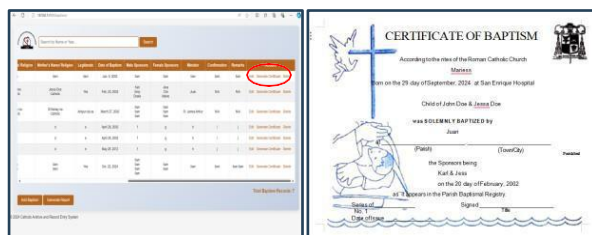


Figure 25. The Generate Baptism Certificate Button

3.1.7 The Baptism Edit Button.

The Baptism Edit Button, as illustrated in Figure 26, directs the admin to the baptism edit form when clicked.

Religion	Mother's Name Religion	Legitimacy	Date of Baptism	Male Sponsors	Female Sponsors	Minister	Confirmation	Birth Date	Actions
Sam	Sam	Yes	Jan 8, 2002	Sam Sam	Sam Sam	Sam	Sam	Sam	Generate Certificate
Sam	Anna Doe Catholic	Yes	Feb 25, 2002	Sam Sam	Anna Doe Sam	Juan	N/A	N/A	Edit Generate Certificate
Sam	St. Mary's Catholic	Amputa da sa	March 27, 2002	Sam Sam Sam	Sam Sam Sam	Fr. James Arthur	N/A	N/A	Edit Generate Certificate
Sam	Sam	Sam	April 28, 2002	Sam Sam	Sam Sam	Sam	Sam	Sam	Edit Generate Certificate
Sam	Sam	Sam	April 28, 2002	Sam Sam	Sam Sam	Sam	Sam	Sam	Edit Generate Certificate
Sam	Sam	Sam	May 28, 2012	Sam Sam	Sam Sam	Sam	Sam	Sam	Edit Generate Certificate
Sam	Sam	Yes	Oct 22, 2024	Sam Sam Sam	Sam Sam Sam	Sam	Sam	Sam Sam	Edit Generate Certificate

Figure 26. The Baptism Edit Button

3.1.8 The Settings Section.

The Settings Section, as illustrated in Figure 27, has a Change Password and Username, About Us, User Manual, and Log Out Buttons.

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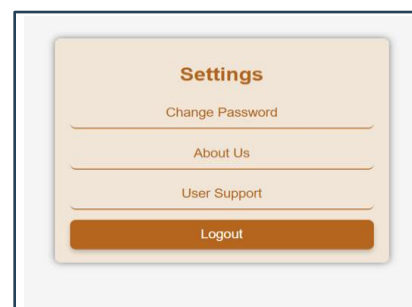


Figure 27. The Settings Section

3.1.10 Evaluation of the Usability of CARES: Catholic Archive and Record System

The CARES: Catholic Archive and Record System was evaluated by two individuals: the Church Registrar and the Assistant Church Registrar. The system received a mean System Usability Score of 93.75, indicating an A+ rating, falling within the 96-100 percentile range. It was described as "Best Imaginable" in terms of usability and was considered

acceptable in terms of overall acceptability. Additionally, the system received a Net Promoter Score classified as "Promoter," showing that the respondents endorsed the system. The results of the system usability evaluation are shown in Table 3.

Table 3. Result of System Usability Evaluation

Respondents	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q1	Total
1	5	1	5	3	5	1	5	1	5	3		90
2	5	1	5	1	5	1	5	1	5	2		

SUS	93.7
Grade	A+
Percentile	96-
Adjectivit	Best
Acceptabilit	Acceptabl
NPS	Promote

CONCLUSION

Based on the results of the study, the following conclusions were made:

The CARES: Catholic Archive and Record Entry System, developed using the Agile Methodology, can effectively store, retrieve, update, and generate reports, as well as produce certificates of baptism, confirmation, and marriage. This system meets the Church Registrar's needs for digitizing and streamlining tasks, as reflected in the SUS score of 93.75, graded A+, described as "Best Imaginable" and "Acceptable" in terms of usability.

Additionally, the system received a Promoter status, indicating that respondents will likely recommend the system.

RECOMMENDATIONS

Based on the results and findings of the study, the following recommendations have been formulated:

1. The CARES: Catholic Archive and Record Entry System can be used for storing, retrieving, editing records, generating reports, and producing certificates.
2. The CARES: Catholic Archive and Record Entry System may be adopted by other Catholic churches, as its format and functions are well-suited to the processes commonly used in Catholic parishes.
3. It is recommended to transition the database to XAMPP for improved scalability.

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