Indang Faith Connect: A Web-Based Online Community Platform for St. Gregory the Great Parish, Indang

[1]Lester Ahr C. Sambile, [2]Jerome S. Crudo, [3]Darryl Ken L. Valencia,
[4]Tom Russel Villarin, [5]Dr. Elmer Matel, [6]Dr. Elizabeth Nsubuga

Lyceum of the Philippines University, Cavite, Republic of the Philippines

Abstract: This capstone project, titled "Indang Faith Connect: A Web-Based Online Community Platform for St. Gregory the Great Parish, Indang", was designed to cater to the changing requirements of St. Gregory the Great Parish in Indang. Through the development of the project, the parish community's environment and relationships, and how technology will be used to improve the delivery of its services, increase community involvement, and assist the development of faith among its members were significant considerations. The web platform was created using HTML5, CSS, JavaScript, jQuery, Bootstrap, PHP, and MySQL for the front-end and interactive UI experience, and Visual Studio Code for the UI and admin side. Functionality and Compatibility testing were conducted by a technical adviser, three IT specialists, and the Ministry of Research and Communication. The results indicated a 100% success rate from all testers. The project also met the ISO-25010 criteria, with positive feedback and adherence to the ISO-25010 being "Highly Acceptable." While focusing on catering services for the parish church, the project will benefit various stakeholders by addressing Internet accessibility and community outreach.

Keywords: Indang Faith Connect, St. Gregory the Great Parish, Community outreach, HTML5, CSS, JavaScript, Visual Studio Code, Functionality testing, Compatibility testing, ISO-25010.

I. INTRODUCTION

St. Gregory the Great Parish Church, also known as Indang Church, is a Roman Catholic church located in the municipality of Indang, Cavite, Philippines. It falls under the Diocese of Imus. Originally established as a chapel (or "visita") of Silang by the Jesuits in 1611, it became a full-fledged parish in 1625 under the advocacy of St. Gregory the Great. The church has a rich history, including its role as a mission station. This parish is not only a place of worship but also a historical and cultural landmark in Indang, reflecting the deep faith and heritage of the local community.

Before the IT era, churches like St. Gregory the Great Parish in Indang, Cavite, relied on traditional and community-focused methods to encourage individuals to join their congregation. Some of these common approaches are; **Personal Invitations** were Priests and church leaders would personally invite individuals and families to attend services, fostering a sense of belonging and connection, **Community Events** were Churches organized events such as fiestas, processions, and outreach programs that brought the community together and showcased the church's role in local life, **Word of Mouth** were Parishioners played a significant role in spreading the word about the church and its activities, encouraging friends and neighbours to participate, **Catechism Classes** were Religious education for children and adults was a key method for engaging the community and deepening their faith, **Printed Materials** were Flyers, newsletters, and posters were used to inform the community about church activities and invite participation and **Charitable Works** were Acts of service, such as feeding programs and assistance to the needy, demonstrated the church's commitment to the community and attracted individuals to its mission.

St. Gregory the Great Parish, with its historical significance and active role in the community, employed similar methods to build and maintain its congregation. These approaches emphasized personal connection and community involvement, creating a solid foundation for faith and fellowship. This capstone project, titled "Indang Faith Connect: A Web-Based Online Community Platform for St. Gregory the Great Parish, Indang", was designed to have a single springboard for all the activities and services that are related to the parish.

Project Context

The researchers created Indang Faith Connect: A Web-Based Online Community Platform, to cater to the changing requirements of St. Gregory the Great Parish in Indang. The project considered the parish community's environment and relationships, to use technology to improve the delivery of its services, increase community involvement, and assist the development of faith among its members. Rapid technological breakthroughs and the widespread usage of the Internet have revolutionized the way people connect and interact with one another. Evangelism (2018). With 3.8 billion people online today, the church may now reach every single one of them without ever having to set foot in their physical environment.

Objectives of the Project

This capstone project, titled "Indang Faith Connect: A Web-Based Online Community Platform for St. Gregory the Great Parish, Indang", was designed to cater to the changing requirements of St. Gregory the Great Parish in Indang.

Specifically, the project aimed to:

1. Design a web-based online community platform that has the following features:

   a. A login system for the content creators and admin that will determine what the accounts can or cannot do with the system.

   b. A database system that will categorize, govern, and retrieve data or information of the church's various activities, member status, events, and resources.

   c. A content manager that will manage the content of the website being edited by the content creator.

   d. A content creator that will submit and edit the content of the church for it to be informative for visitors and users.

   e. Information Display: A web feature for the church, where this section will include the Background History of the Church

   f. A Gregorian Wall section where members can submit their personal experience or thoughts online that can foster a sense of community and support within the parish church community.

   g. Display information about the sacraments or services of the church, Pastoral Board, the Team, and Council, Ministry of Organization, and the staff.

   h. Design announcements and time-sensitive information to members and visitors of the website.

   i. A calendar that shows the events that the parish will host within the month.

   j. Create a platform to schedule services and view the requirements.

2. Create the project using HTML5, CSS, JavaScript, jQuery, and Bootstrap as Front-End tools and MySQL and PHP for the Back end. It will run on Windows and Mac web browsers.

3. Evaluate and improve using Compatibility and Functional testing.

4. Evaluate and assess using ISO 25010 with the following criteria:

   a. Accuracy

   b. Efficiency

   c. Reliability

   d. Security

   e. User-Experience

   f. Flexibility

   g. Validity

Scope and Delimitations of the Project

This capstone project, titled "Indang Faith Connect: A Web-Based Online Community Platform for St. Gregory the Great Parish, Indang", was designed to cater to the changing requirements of St. Gregory the Great Parish in Indang. The online community platform's primary motivation was to foster the church community by distributing their religious content and worship services, reaching out to local and international members and non-members of the church community. The congregation, guests, and everyone else interested in using the church's online resources were all part of the targeted community for the church's online platform.

The project will run on Windows and Mac web browsers, Android, and iOS operating systems. The project will not include the institution in the web application development. The researchers cannot control instances where individuals apply for multiple appointments without attending. Nevertheless, the project will continue to improve the church's online platform by addressing these constraints as resources are provided.

Significance of the Project

This capstone project, titled "Indang Faith Connect: A Web-Based Online Community Platform for St. Gregory the Great Parish, Indang", was designed to cater to the changing requirements of St. Gregory the Great Parish in Indang. The proposed Web-Based Online Community Platform will benefit the following:

St. Gregory the Great Parish. The parish's goal is to propagate the Catholic Faith and adhere to the values and standards set by St. Gregory the Great Parish. By hosting a website, they can cater to those outside Indang, Cavite, and even Indangeños who live abroad.

St. Gregory the Great Parish Office. By implementing the Website, the St. Gregory the Great Parish office will spend less time explaining to clients' requirements about certain services, as such information will be posted on the website.

The residents of Indang will have direct access to all that their St. Gregory the Great Parish has to offer. For instance, they can keep track of the schedules and programs of their church directly through their mobile devices and computers, provided they have Internet access.

Future Researchers. "Indang Faith Connect: A Web-Based Online Community Platform for St. Gregory" can now be used as content for a new literature review for researchers who would like to embark on a similar project.

II. METHODOLOGY

This chapter presents the Church's operations and members' participation. It outlines the concepts and ideas used to develop the system, to fully understand the process and system flow of the proposed system

Design

The design phase is defined as the process of building a system and configuring software and hardware components to make a good system (Wijaya et.al, 2020). The website's design phase was critical in meeting web design standards of being user-friendly, appealing, and flexible for website visitors.

Process Model

The graph of the business workflows is shown in a flow chart to provide a perspective of the activities that are processed within the business environment (Vanner, 2020).

Context Diagram

The Context Diagram provides an overview of the primary and the central process and the interactions with the system and external data storage. (Adams, 2021).
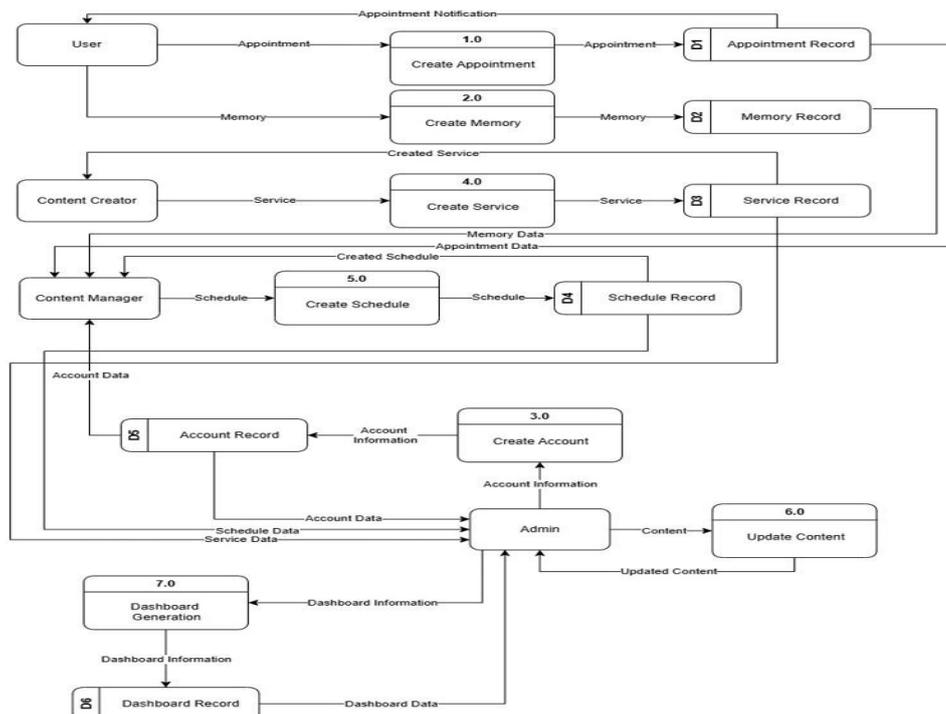
Process Model

Fig. 1 Context Diagram
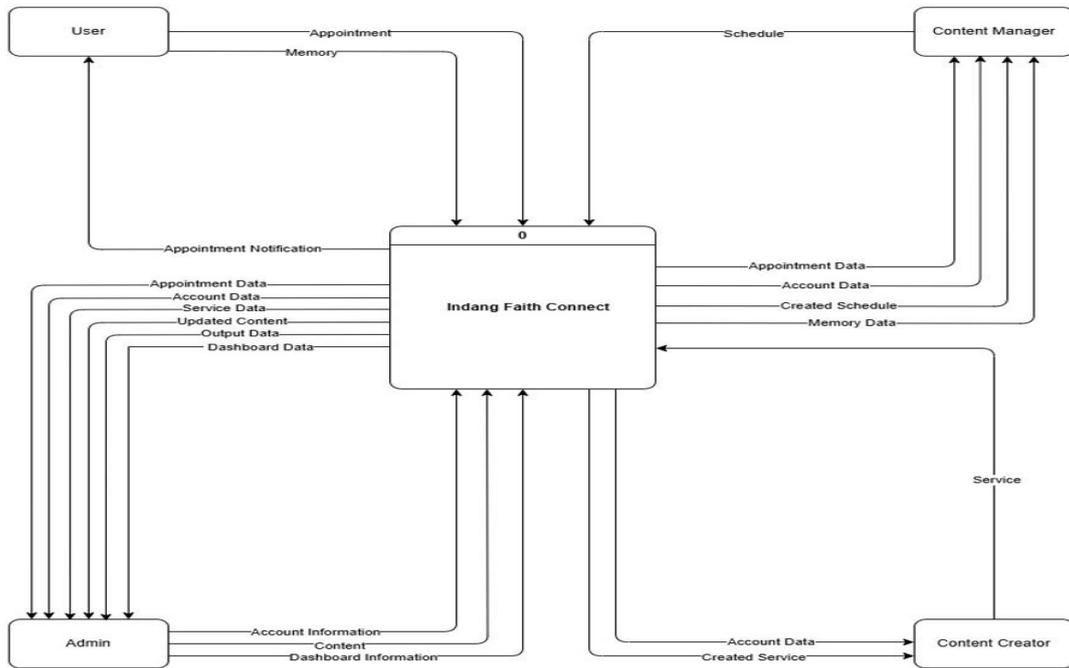
Level 1 Context Diagram of Indang Faith Connect: A Web-Based Online Community Platform for St. Gregory the Great Parish, Indang.

Figure 2 the Context Diagram (Level 1) presents the content manager, the user and the admin, the participants who will interact with the website. The Context Diagram shows the data flow, indicating the information being exchanged between these entities and the system.

Fig. 2 Data Flow Diagram

Level 1 Data Flow Diagram of Indang Faith Connect: A Web-Based Online Community Platform for St. Gregory The Great Parish, Indang portrays the interactions within its system.

Data Flow Diagram of Indang Faith Connect: *Figure 2* illustrates the flow of the data inputs, outputs, storage locations, and the pathways connecting each destination (Lucidchart, n.d.).

Figure 3 Level 1 Data Flow Diagram of Indang Faith Connect: A Web-Based Online Community Platform for St. Gregory The Great Parish, Indang portrays the interactions within its system.

Users represent the church community. They can write posts and view other content on the website. This is the interaction aspect of the system.

The **Administrators** are responsible for the overall management of the system. An administrator has the privilege to activate/deactivate accounts, approve and archive content, edit the website platform, and view the dashboard.

A **Content Manager** is tasked with managing the content of the website. Their main role is to evaluate the validity of the content, whether it meets the permissible community standards to be published.

Content Creators are assigned to create content for the website based on the request of the users and what the administrators want to see publicized regarding the ongoing current state of the church.

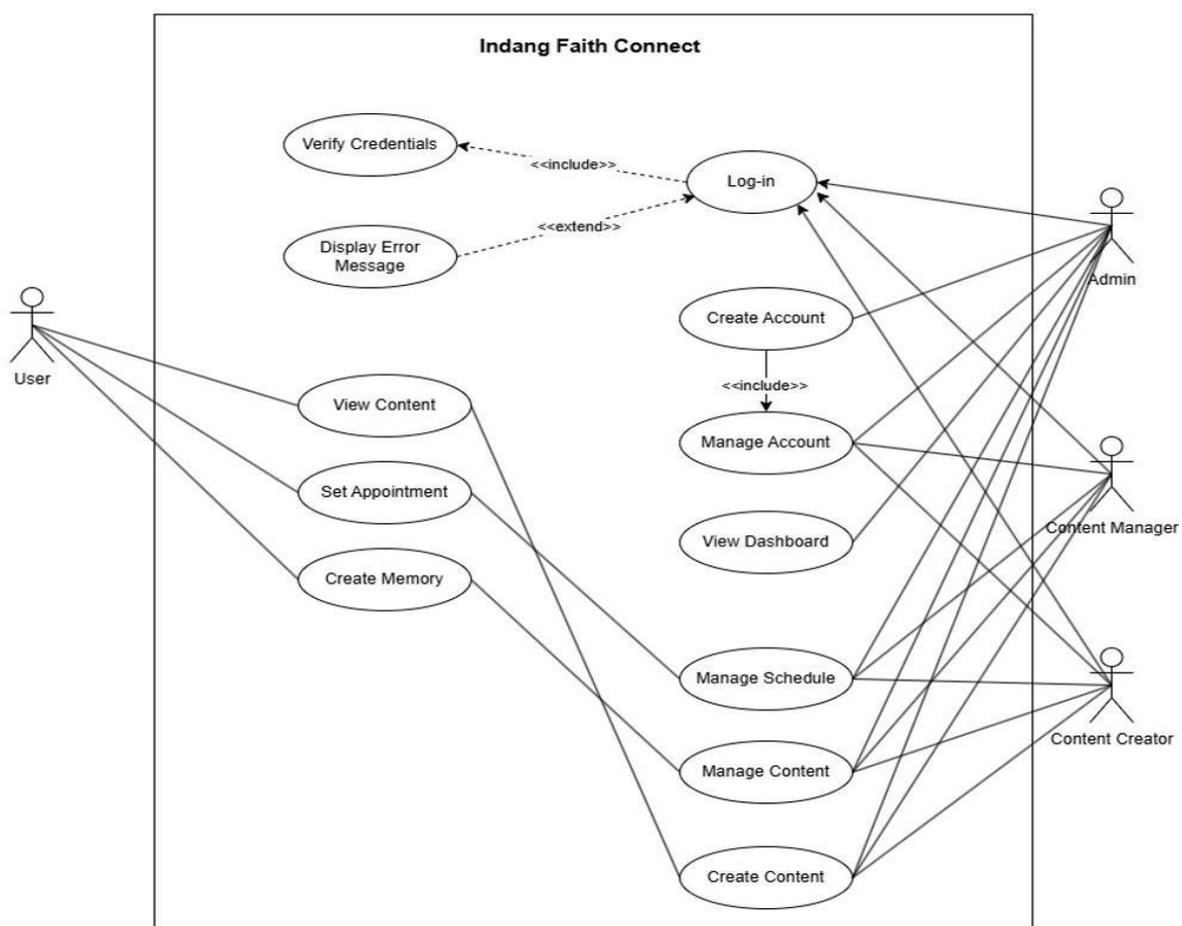**Fig. 4 Use Case Diagram of Indang Faith Connect:**

Figure 4 Use Case Diagram of the Indang Faith Connect: A Web-Based Online Community Platform for St. Gregory The Great Parish, Indang.

From this diagram, one can trace the interaction of the user with the system. The user can write or post content in the system. Upon approval by one of the administrators, other users can now view the content provided by another user. The church also offers appointment services that are processed by the admin who manages the schedules of the church.

The **Administrator** must be logged in first to access their administrative capabilities in the system. If the credentials entered were incorrect and did not match the credentials saved by the system, an error message will pop up stating that the credentials are not correct. The admin can create and manage accounts for the content manager and the content creator. As the administrator of the system, the admin also has the functionalities of a content manager and content creator. A dedicated section called the dashboard is accessible to website administrators. With the help of this dashboard, administrators can monitor several website activities from a single, centralized control panel.

The **Content Manager** has administrative capabilities on the system and therefore goes through the same login procedure as the administrator. The content manager is tasked with managing the content created by the content creator based on user feedback. They are in charge of overseeing and approving all the content submitted to see if it is publishable or not...

The **Content Creator** has minimal authority on the system. They must log into the system to create content. The role of the content creator is to create content based on the posts of the user or by the command of the admin. They can revise the posts of the user if they deem that the post can be further improved based on the content manager's content guidelines. Upon approval by the content manager, the content created by the content creator will then be published.

Development

The researchers started implementing the front-end components using HTML5, CSS, JavaScript, jQuery, and Bootstrap. The researchers also Build the back-end functionalities using PHP and MySQL, upon the request of the St. Gregory The Great Parish. They wanted a system where they could have features such as content management and content approval

Software Development Life Cycle

According to Alexandra (2023), SDLC or the Software Development Life Cycle is a process to help programmers develop a high-quality system that is low in cost, that provides a flow of phases in the shortest time possible.

Rapid Application Development

(RAD) Methodology gives the researchers the ability to be flexible by interacting with the client while building the system. This helps the researchers finish the system faster. RAD typically consists of four main phases:

Fig. 5 Rapid Application Development (RAD) Rapid Application Development
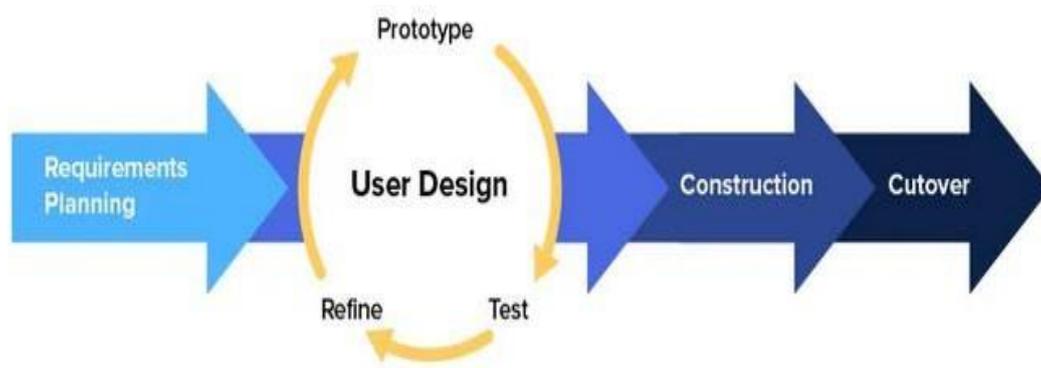
Requirements Planning Phase: The project scope and requirements are defined here in the Requirements Planning Phase. The researchers collaborate with the client to gather details and information about the project goal and then visualize what kind of user interface they will make.

User Design Phase: During this phase, the researchers, in collaboration with their client, discuss the appropriate user interface for the system...

Construction Phase: The third phase is where the researchers start developing the website application. The researchers frequently test the system to find bugs and immediately provide solutions to it.

Cutover Phase: The last phase is where the researchers conduct the final test and focus on the deployment of the system. The final test should show that the researchers achieved the qualities that the clients want. If the system meets all the requirements, it will be deployed and used in a real-world environment.

Software Requirements

The "Indang Faith Connect" web-based online community platform used HTML5, CSS3, JavaScript, Bootstrap, and jQuery to create a great and engaging user interface. HTML5 was used to build the structure of the content and layout, CSS3 was used to make the style and format visual elements, and JavaScript was used to enhance user engagement. Bootstrap ensured responsive design across various devices, while jQuery simplified DOM manipulation. For the back end, the researchers used PHP to handle server-side scripting and logic, and MySQL to manage data. A web server like Apache or Nginx will host and serve the web application, ensuring accessibility and functionality for St. Gregory the Great Parish members and visitors.

Hardware Requirements

The researchers worked on a computer system with the following hardware specifications: a Ryzen 3 processor with 16 GB of RAM and an MSI 1050 TI, a Ryzen 5, Nvidia GeForce 1650 with 16GB of RAM, and 512GB of ROM.

Test Plan

To ensure the compatibility and functionality of the developed web-based application, a comprehensive testing phase was conducted to identify any potential vulnerabilities or systemic issues that might arise. It is important that the system meets the standard to fulfil the intended objectives. To achieve the successful execution of this project, the researchers sought the expertise of IT specialists to evaluate the system's performance. This team included professionals such as Quality Assurance Tester, Technical Support, and CS Graduate office staff. More testing was conducted upon system deployment to assess its performance in a live environment. Compatibility testing was conducted to determine the system's effectiveness across diverse platforms and under various scenarios. This test encompassed the use of different web browsers on Windows operating systems to replicate real-world usage conditions.

Test Procedure

The following are the steps performed during the test activity:

1. The developers created two test sheets, one for functionality testing and one for compatibility testing.

2. The developers contacted the testers via Facebook Messenger to schedule an appointment.

3. The developers conducted an online meeting for testers to conduct test activities.

4. Before the testing, developers provided an overview regarding A Web- Based Online Community Platform for St. Gregory the Great Parish Indang's objectives, capabilities, and functionalities.

5. After preliminary discussions, the test respondents were asked to test the application by its functionalities. Each module and functions were deliberately tested, with 351 test cases. Testers were guided by the developers in case they had questions regarding the application.

6. After filling out the functionality test sheet, the testers were asked to test the Website in terms of compatibility. Two laptops were used: one from the admin side and the other from the content creator.

7. After the test proper, the comments and suggestions were recorded by the developers. Recommendations, bugs or errors found were resolved by the developers before meeting the other test respondents.

Test Instrument

Functionality Test- This part of testing will verify whether the system meets the standard to perform as it is intended and how the client wants it to be. This will test if the researchers achieved the intended functionalities and specifications it should have. This will be implemented to test the system's quality and how the system will perform after the launch.

Compatibility Test- In this part, the web application will be tested to see whether it is compatible across different platforms. It will be tested across different browsers on personal computers and mobile devices.

Evaluation Plan

The researchers conducted the evaluation through experts in information technology and the participants, who were the people of Indang church.

In the evaluation of compatibility, it was tested using web browsers on personal computers, laptops, and mobile phones. to ensure that it is compatible with a wide range of devices. This evaluation will determine the user acceptability level of the web application. The users of the system had a clear understanding of the goals and expected functionality of the web app with the help of this plan. The evaluation process that was used is ISO 25010, to ensure a thorough examination.

Evaluation Procedure

1. The evaluation phase was successfully done with the following steps.

2. After preparing documents, the distribution of pertinent documentation to each tester began, and a meeting was scheduled and coordinated.

3. Upon the approval and readiness of the evaluators, the assessment of the system began.

4. The assessors had discussions regarding the system's significance, its modules, and features.

5. The creation of assessment tools, along with their purpose and objectives, was aligned with the system's intent and resolution.

6. The system was thoroughly examined based on the metrics developed.

7. Assessment forms were completed based on the acquired results.

8. In accordance with the findings, recommendations for the system development and improvement, evaluation input was collected and processed.

9. The mean and standard deviation of the results were computed by analysing the system results.

Evaluation Tool

Using an assessment tool based on ISO 25010, this section examined the effectiveness, reliability, accuracy, performance, and security of the software created.

The evaluators were instructed to verify to ensure that the design specifications had been met. The tools used to assess the web-app.

Table 1: Scoring System of Indang Faith connect:

Numerical Rating	Equivalent
4	Highly Acceptable
3	Acceptable
2	Fairly Acceptable
1	Unacceptable

Statistical Treatment of Data

For this project, there were forty-four (44) assessment respondents. The collected data was subjected to calculation, examination, and validation utilizing the given formula, particularly emphasizing the weighted mean and standard deviation.

Weighted Mean. The concluding mean reflects the overall average of all data elements, considering their combined impact rather than individual contributions. Implementing the weighted mean enabled the interpretation of average scores for each participant across various questions and groups.

$$\overline{X} = \frac{\sum X}{N}$$

Where $\overline{X}$ = mean

$\sum$ = "summation of"

X = Score of proper weight

N = Total number of respondents

This formula shows the weighted mean for Indang Faith Connect: A Web- Based Online Community Platform for St. Gregory The Great Parish, Indang to get the average of the participants response as shown in this graph. Total number of participants (N) is equivalent to the total score sum (X).

Standard Deviation. It is a statistical measure indicating the extent to which data deviate from the mean. This metric assesses the overall variability in the distribution by considering both the evaluations given by assessors for individual items and the frequency of scores.

In this study, the standard deviation was employed to assess the variation in evaluators' measurements for each criterion.

$$SD = \sqrt{\frac{\sum (x - \bar{x})^2}{N - 1}}$$

Where	$\bar{X}$	=	mean
	Σ	=	summation
	X	=	score proper weight
	N	=	total no. of respondents

The first step in the process was to identify each component's weighted mean and standard deviation. Microsoft excel was used to perform the calculations and a standard deviation method has been used to validate these results.

Likert Scale. The researchers used a Likert scale to evaluate the approval levels of evaluators through questionnaires, adhering to the criteria specified in the designated evaluation tool. To measure acceptability, a comparable analysis was conducted using mean and standard deviation computations.

Table 2: Likert Scale

Numerical Range	Equivalent
3.26 – 4.00	Highly Acceptable
2.51 – 3.25	Acceptable
1.76 – 2.50	Fairly Acceptable
1.00 – 1.75	Unacceptable

The table illustrates various levels of analysis concerning the acceptance of the system. The range labeled as "Unacceptable" spans from 1.00 to 1.75, signifying a failure to meet the system's primary tasks. The category of "Fairly acceptable," covering scores from 1.76 to 2.50, suggests that the system has been executed but lacks the consistency necessary for effective functioning. Moving on, the "Acceptable" range, from 2.51 to 3.25, indicates that the system's features have achieved nearly all expected outcomes. Finally, a score falling between 3.26 and 4.0 implies that the system's overall goals and objectives will be efficient and as intended.

III. RESULTS AND DISCUSSION

This chapter discusses the actual output performance of the project. It presents the user interface design, project capabilities and limitations, test results, and the evaluation results that demonstrate the objectives were met.

User Interface Design

The User Interface design focuses on interactivity and styling. It is a visual element with which the user can interact while using the software. This section presents the project's actual output performance.

Fig. 6 Log in form of St. Gregory the Great Parish

Figure 6 Login Form of the Church Web-Based Online Platform "Indang Faith Connect"

The main screen of the church's web-based platform is the initial landing site when a web browser is used, and it includes a login form for content creators and content managers who wish to access the church's services. The platform's design incorporates the icon of Indang Church as the current St. Gregory the Great Parish, Indang backdrop imagery of the platform, while keeping all the colors constant.

Fig. 7 User Interface Dashboard of St. Gregory the Great Parish

Figure 7 shows the personal information of the users. The users also update their personal information and profile pictures also. This also shows the users in which department they are located and their roles. The Department and the roles of the Users will not be able to change.

Fig. 8.0 Index Dashboard of St. Gregory the Great Parish
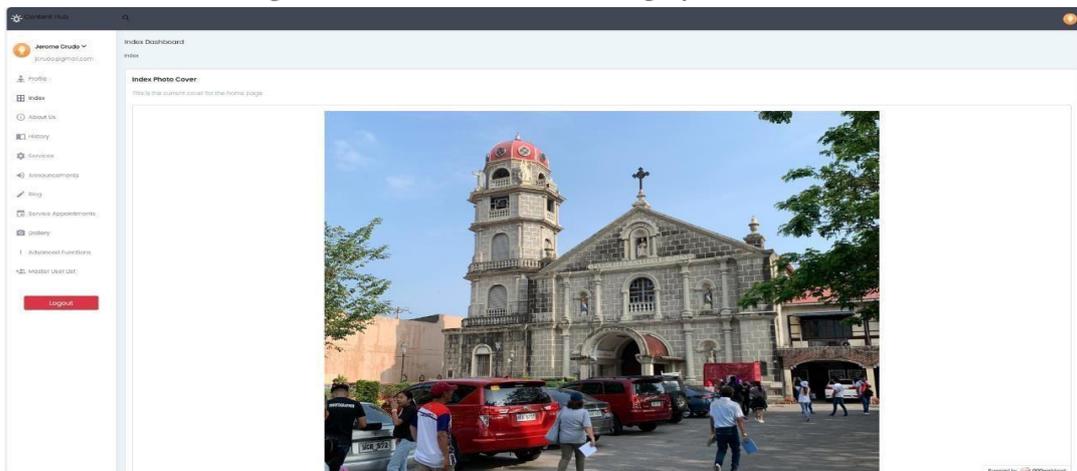
Figure 8.0 shows the Index photo cover of the St. Gregory the Great Parish. This photo can be seen in the header of the website. It can be changed depending on the church or the future decoration of the parish. The content creator may send a request to change the photos, and the admin, or the content manager would review if the photos were appropriate, and then they will be approved.

Fig. 8.1

Figure 8.1 shows where the input photo is located, and where it can be moved to. YouTube Video of the parish can be copied, but only the content creator or admin can edit it.

Figure 8.2

Figure 8.2 shows the event details of the St. Gregory the Great Parish

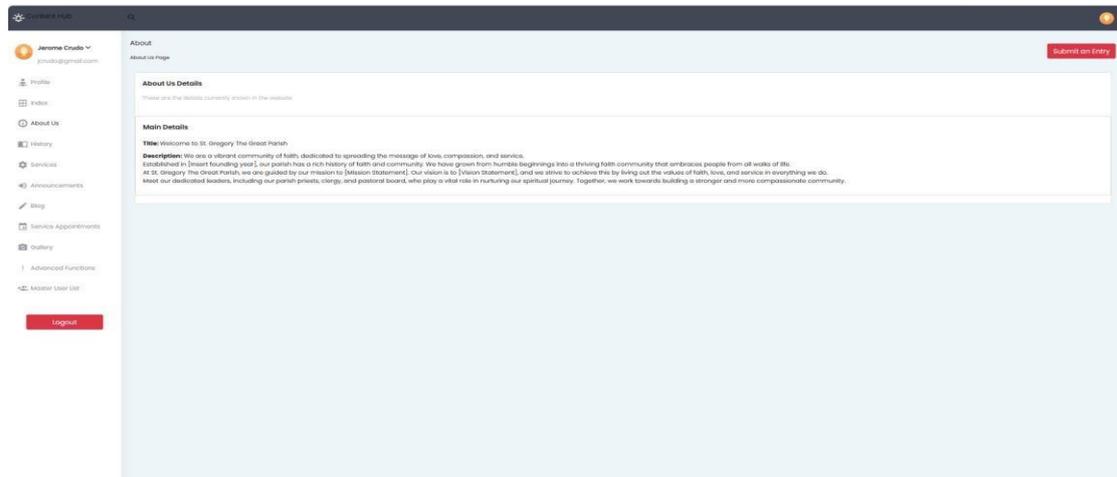**Fig. 9 About Us Page of St. Gregory the Great Parish**

Figure 9 shows the details of the parish. This content will be seen on the About Us section of the website. The admin and content creator can submit an entry if they want to change the title and description of the details of the Parish. This is how the parish welcomes those who see the website.

Fig. 10 History of St. Gregory The Great Parish
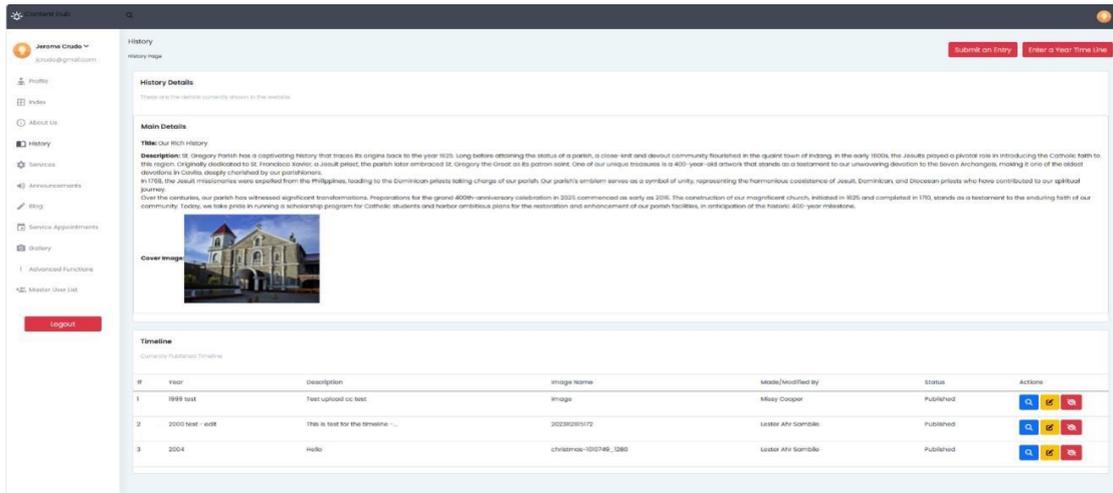
Figure 10.0 shows the rich history of the parish. The content creator can submit a request to edit the description of the history, then the admin will review it before it is approved. The timeline of the church will be updated every year.

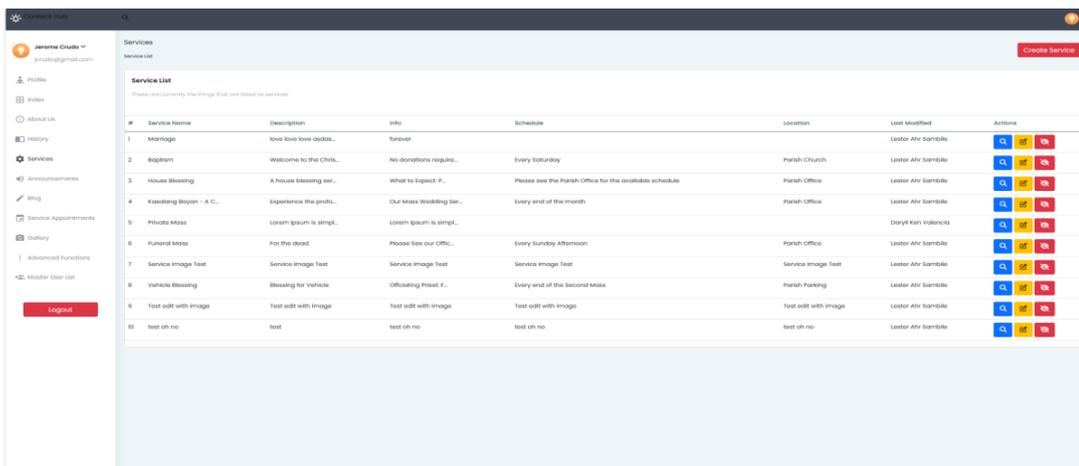**Fig. 11 Services list of the St. Gregory the Great Parish**

Figure 11 shows the Services list of the St. Gregory the Great Parish. The users request services, and then schedules are set for each service

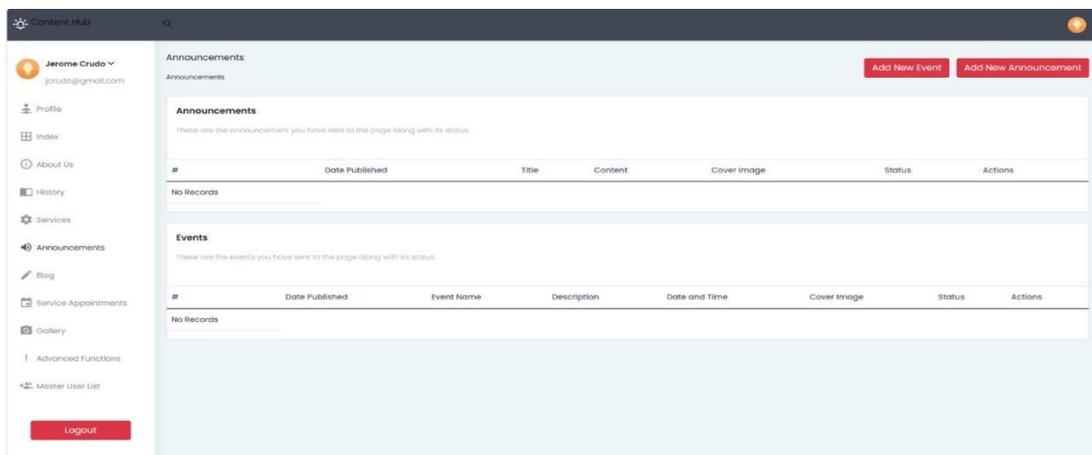**Fig. 12 Announcement and Events of St. Gregory the Great Parish**

Figure 12 shows the announcements and events of St. Gregory the Great Parish. The Content creator can submit events here. Upon approval by Admin., the events can be added, published to be seen by all users

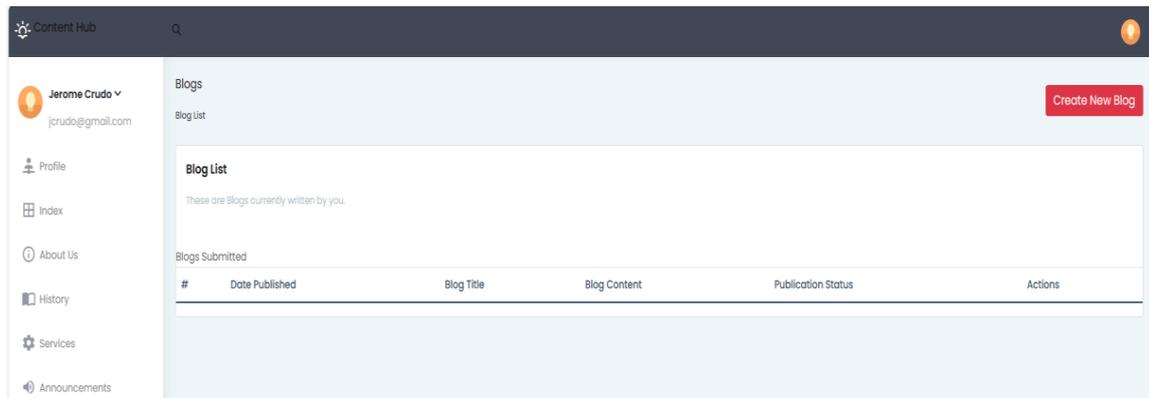**Fig. 13 Blog list of St. Gregory the Great Parish**

Figure 13 shows the blog list of the St. Gregory the Great Parish. The content creator may create and submit to the Admin an original blog for the parish. The admin will review the blog and upon approval, the blog will be published on the Website.

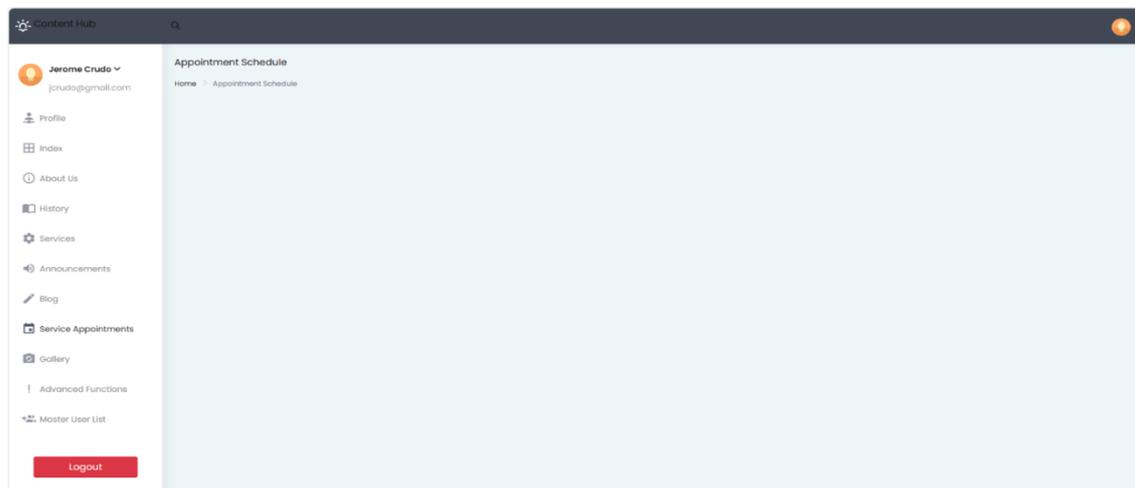**Fig. 14 Appointment Schedule of The St. Gregory The Great Parish**

Figure 14 shows appointment scheduling. The users can request appointments, and the admin will review and set a schedule.

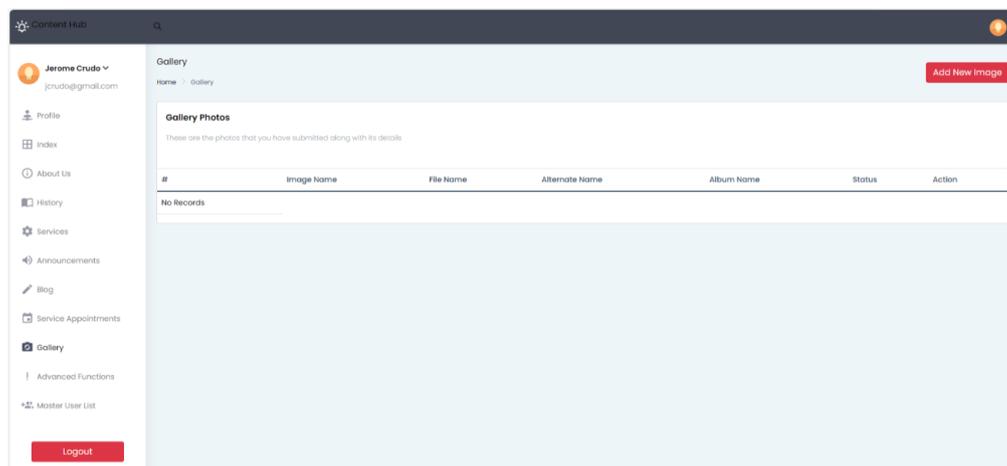**Fig. 15 Gallery of The St. Gregory the Great Parish**

Figure 15 shows the photo gallery of the St. Gregory the Great Parish. The content creator can add photos of the church but must wait for the review and approval from the admin for his content to be published.

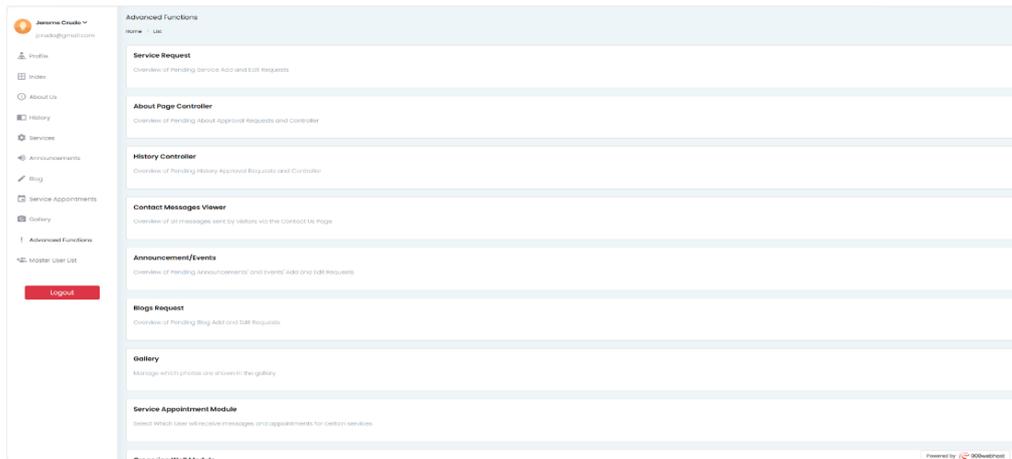**Fig. 16 Advance Function of The St. Gregory the Great Parish**

Figure 16 shows the overall function of the website. Only the Admin can access content here.

Fig. 17 Master User Lists of St. Gregory the Great Parish
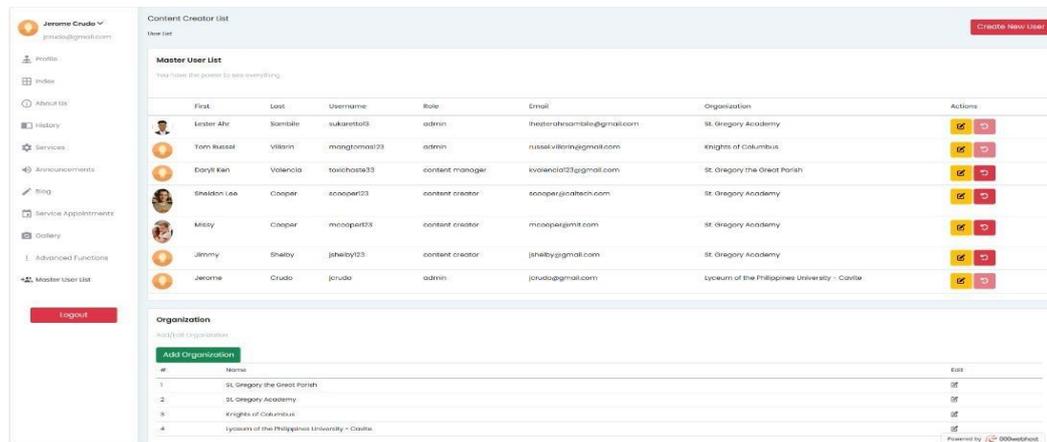

Figure 17 shows the Master User List of St. Gregory the Great Parish. Here, you can see the profile of the users and the departments in which they are located. The admin can create an account and assign roles.

Fig. 18 Home page of the website of St. Gregory the Great Parish

Figure 18 shows the home page of St. Gregory Parish, where the user will land upon opening the browser.

Figure 19 About Us page of the website of St. Gregory the Great Parish

Figure 19 shows the About section of the St. Gregory the Great Parish, where the information about the church is located.

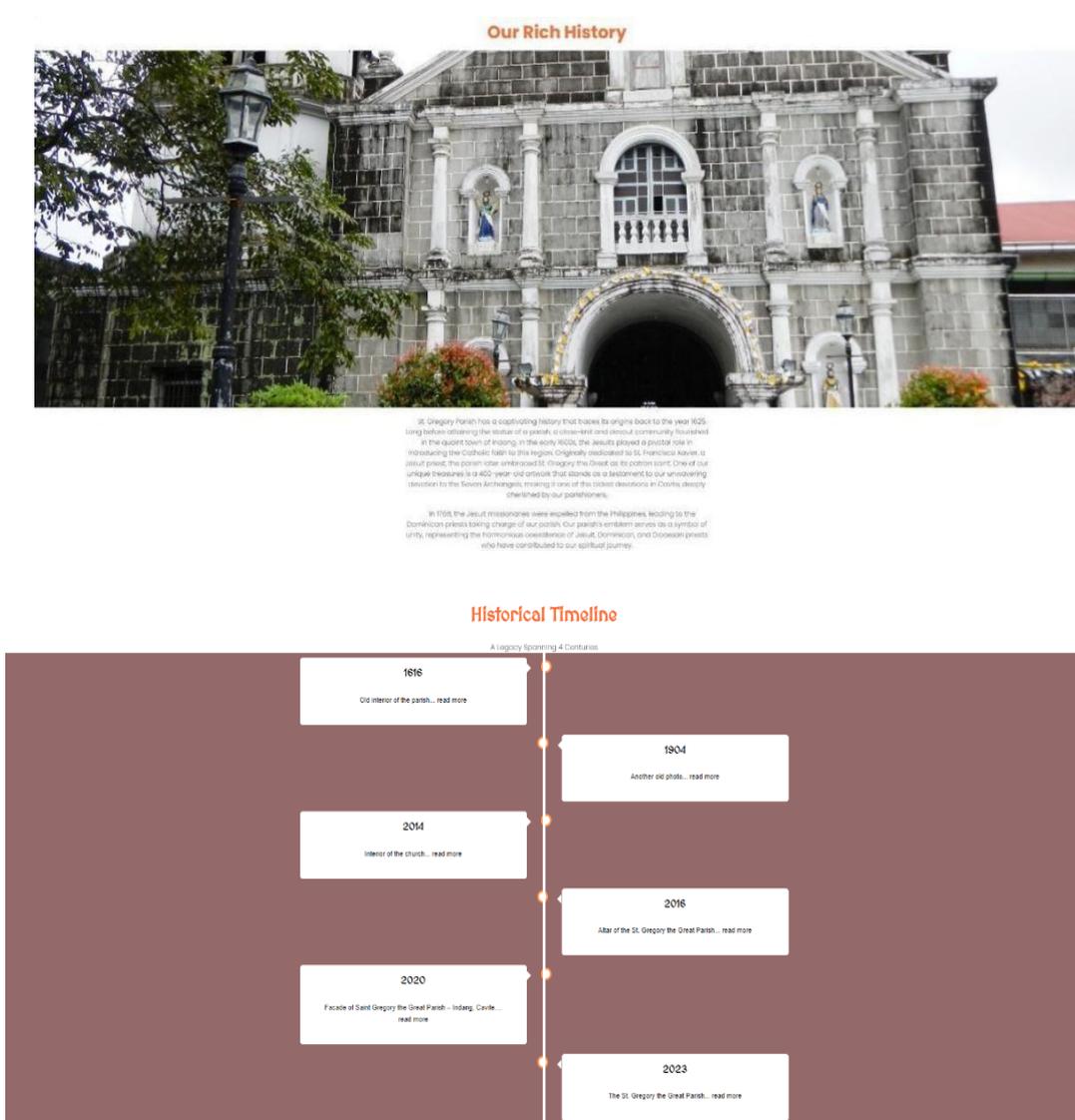**Fig. 20 History page of the website of St. Gregory the Great Parish**

Figure 20 shows the rich history of the parish. The user can read about how the church has evolved.

Fig. 21 Services page of the Website of St. Gregory the Great Parish
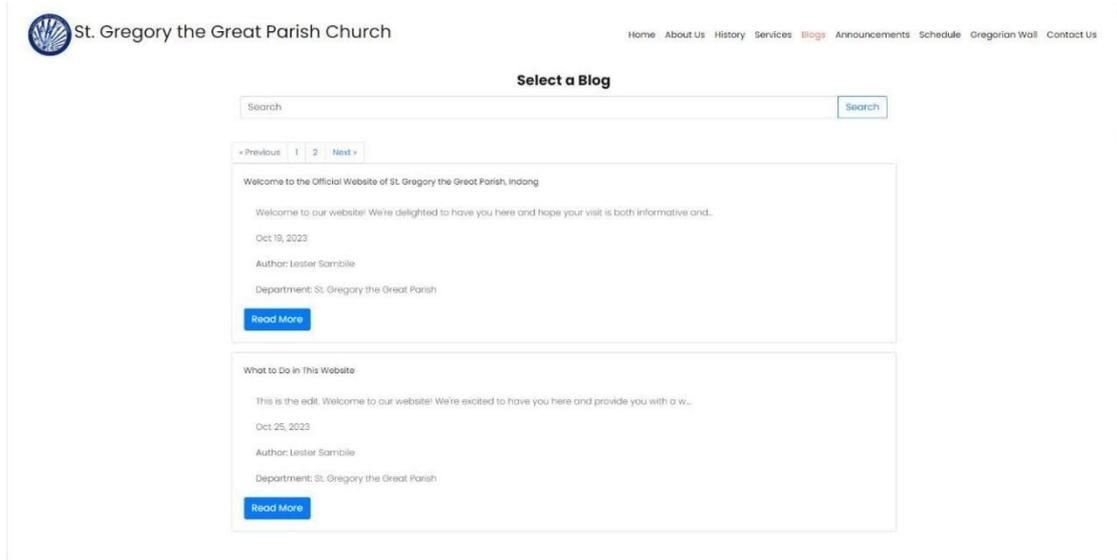
Figure 21 shows the Services provided by the Parish.

Fig. 22 Blogs page of the Website of St. Gregory the Great Parish
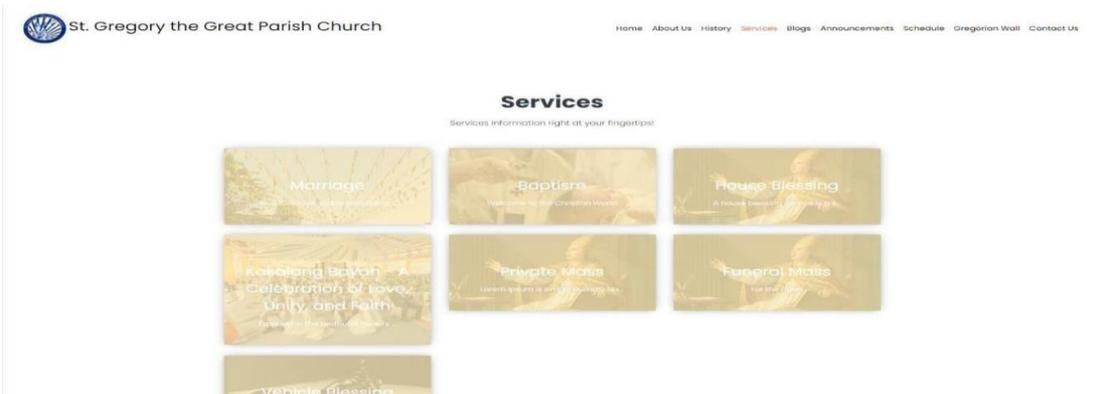
Figure 22 shows the Parish blogs. When the content creator creates a blog for the parish, the user will see it in this section.

Fig. 23 Announcement page of the Website of St. Gregory the Great Parish

Figure 23 shows the announcement page of the Parish website. In this section, the user will see the latest announcement of the parish.

Figure 24 Schedule page of the website of St. Gregory the Great Parish

Figure 24.0 shows the Parish schedule page where users can view the schedule of the services.

Fig. 25 Gregorian Wall page of the Website of The St. Gregory the Great Parish

Figure 25 shows the Gregorian Wall. This section allows the user to share their memories and upload pictures of their experience of going to the parish.

Fig. 26 Contact us page of the Website of St. Gregory the Great Parish

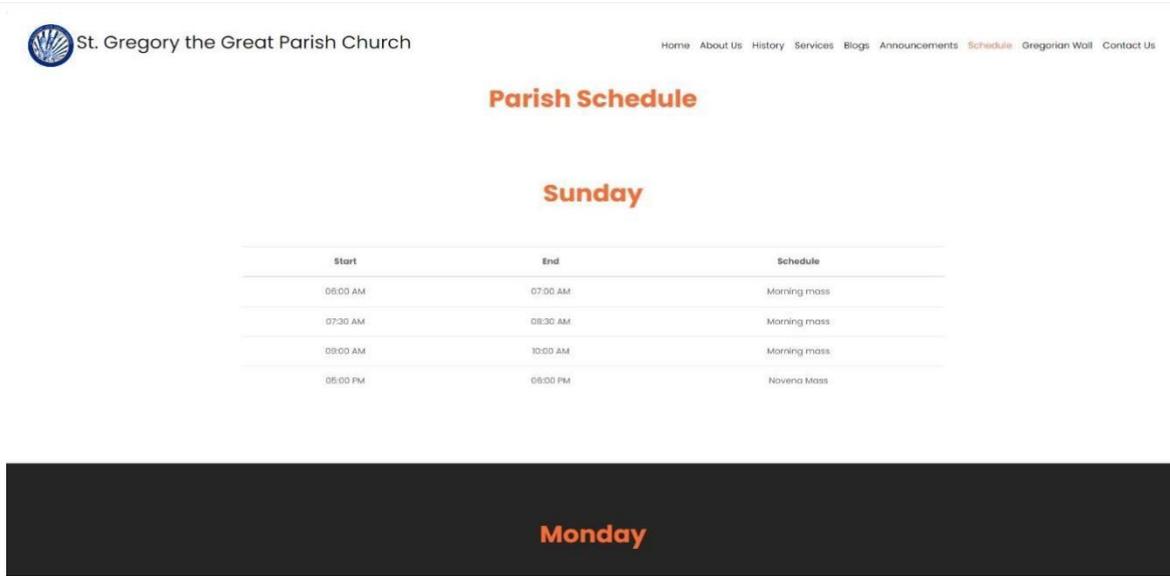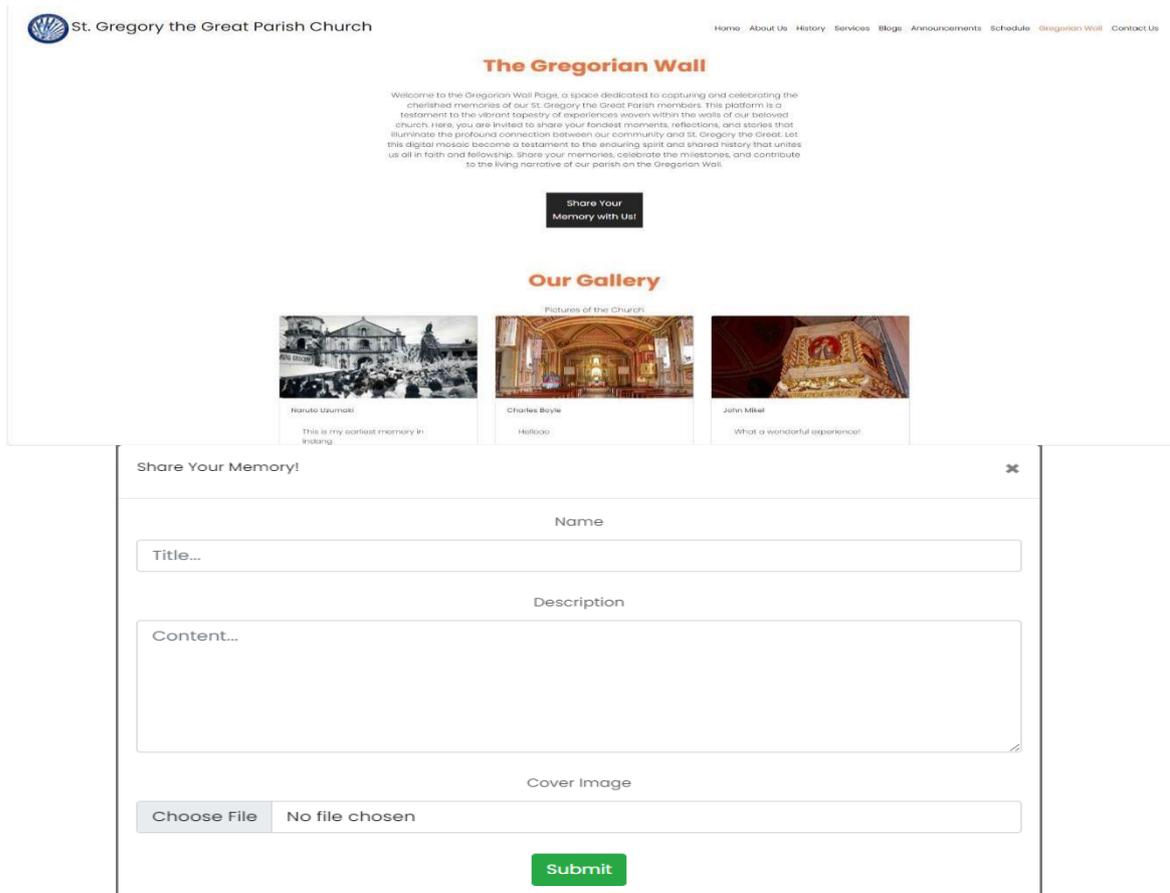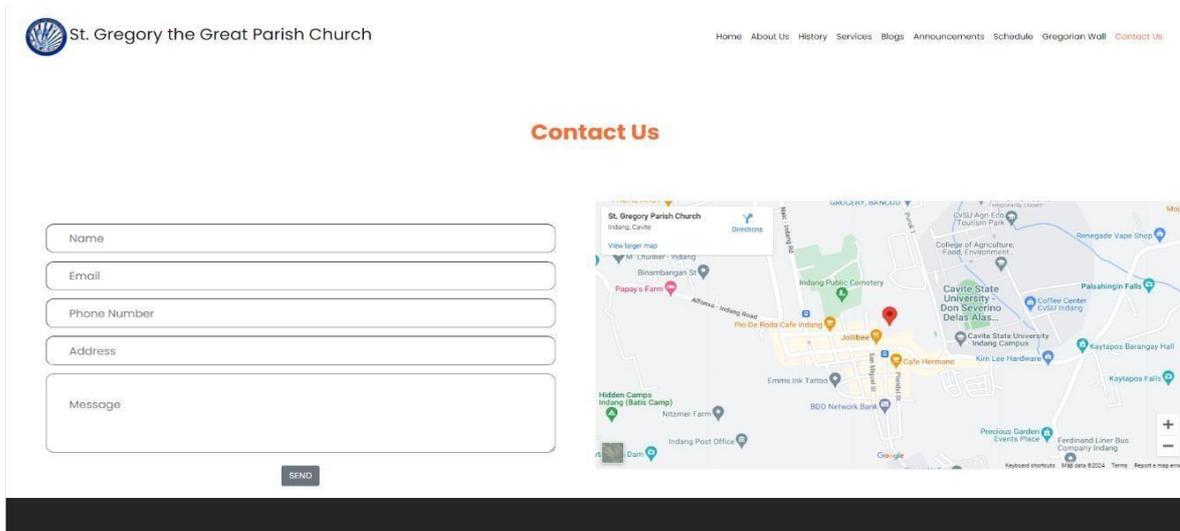*Figure 26.0* shows the contact us page of the website where the user will fill up the form and send the request to the admin.

Project Capabilities and Limitations

The Indang Faith Connect platform provides numerous features to the St. Gregory the Great Parish community in Indang. These capabilities include:

1. The web-based platform is a center for parishioners to connect, communicate, and work with one another.

2. The website allows the congregation to communicate with the wider public by sharing the latest information and vital announcements. Parishioners may remain up-to-date on future happenings, Mass schedules, baptismal preparations, and other services by visiting the parish website.

3. The platform allows the congregation to efficiently arrange and manage events. To stay updated with impending events, the website also has an event calendar view.

4. This platform can run on diverse types of web browsers such as Google Chrome, Mozilla Firefox, and Microsoft Edge.

While Indang Faith Connect provides many benefits to the St. Gregory the Great Parish community, it additionally comes with certain limits. These constraints are as follows:

1. Indang Faith Connect, like any other web-based platform, may have technical challenges or interruptions, which may prevent users from using its amenities and services. To avoid such disruptions, regular maintenance and timely repair of technical difficulties are required.

2. While the platform fosters communication and cooperation, it cannot entirely substitute in-person encounters and the feeling of community that physical meetings provide. When interacting exclusively through an online platform, some members may experience a lack of human connection.

3. Some of the issues facing parishioners may have little or no expertise with technology, making it difficult for these individuals to understand and completely appreciate the platform. It may be required to provide training or help to guarantee widespread acceptance and utilization.

4. The project is not available to other organizations, and only the St. Gregory the Great Parish Church, Indang admin has complete access to the entire system.

Test Results

The system testing was done to ensure the software was functional and working as intended. Testing was completed using test cases. Functionality criteria tested the performance and functions according to design specifications. The test phase passed all the requirements and standards that had been defined.

Table 3: Test Results Using the Functionality Testing

Test Respondents	Pass	Fail	Test Criteria	Percentage
Technical Adviser	351	0	351	100%
IT-Expert 1	351	0	351	100%
IT-Expert 2	351	0	351	100%
IT-Expert 3	351	0	351	100%
Administrator	351	0	351	100%

Participating in Functional Testing were the technical adviser, three (3) IT specialists, and one (1) Ministry on Research and Communication - Coordination. The instrument was evaluated on three hundred fifty-one (351) criteria. Upon tallying all the responses, the researchers received one hundred percent (100%) from all the testers. Consequently, the system was not found to have any significant flaws. Despite this, the researchers continued to receive proposals and opinions from participants on where further improvements in the system were needed.

Table 4: Test Results Using the Compatibility Testing

Test Respondents	Pass	Fail	Test Criteria	Percentage
Technical adviser	8	0	8	100%
IT-Expert 1	8	0	8	100%
IT-Expert 2	8	0	8	100%
IT-Expert 3	8	0	8	100%
Administrator	8	0	8	100%

The technical advisor, three (3) IT professionals, and one (1) Administrator from the Ministry of Research and Communication - Coordinator engaged in compatibility testing. The instrument tests five (5) distinct criteria. All the testers examined and satisfied every criterion. In addition, there was a slight difference in some elements of the Web App that differed between laptop and personal computer display sizes.

However, since it worked smoothly with all versions of the Android operating system and each feature was working as intended, this was considered a minor issue.

Evaluation Results

Researcher's technical adviser, thirty (30) end-users, one (1) ISO administrator, and thirteen (13) IT experts evaluated the user acceptability of the project during the evaluation phase. Utilizing the Web Evaluation Tool, the web-based system was evaluated.

Table 5: Evaluation Result from Thirty (30) End-Users

Criteria	Mean	SD	Interpretation	Rank
Content	3.71	0.05	Highly Acceptable	1
Navigation	3.70	0.07	Highly Acceptable	3
Structure and Design	3.70	0.10	Highly Acceptable	2
Appearance And Multimedia	3.69	0.15	Highly Acceptable	4
Uniqueness	3.65	0.02	Highly Acceptable	5
Average Mean and SD	3.69	0.08	Highly Acceptable	

The assessment findings of thirty (30) end-users who participated in the evaluation are as follows:

In Table 5. "Content" comes first in the assessment of criteria, with a mean score of "3.71" and a standard deviation of "0.5," which is considered "Highly Acceptable."

It indicates that the assessors judged the web application to operate well on a platform other than the one for which it was designed, with little or no modification. The "Content" criterion with a mean score of "3.70" and a standard deviation of "0.7;".

It is also deemed as "Highly Acceptable." According to the evaluators, it shows that the web application assures that the system may effectively execute its essential function while sharing a common environment and/or resources with other modules/functions. "Navigation" with a mean score of "3.70" and a standard deviation of "0.07," respectively.

It is understood to mean that it is deemed as "Highly Acceptable." The evaluators determined that the system has a unique identifier for each function; this includes the system's demonstrated capacity to use plugins designed for the system that perform appropriately. The criteria "Structure and Design" with a mean score of "3.70" and standard deviation of "0.10" "Highly Acceptable." "Appearance and Multimedia" criterion with a mean score of "3.69" and a standard deviation of "0.15." "Uniqueness" with a mean score of "3.65" and a standard deviation of "0.02" and is evaluated as "Highly Acceptable.". Lastly the "Average Mean and SD" criterion with mean score of "3.69" and standard deviation of "0.08."

The overall mean for the thirty (30) End-users is "3.71", with a standard deviation of "0.15", indicating "Highly Acceptable" as interpreted.

Table 6: Evaluation Result from One (1) Admin End-User

Criteria	Mean	SD	Interpretation	Rank
Content	3.8	0.44	Highly Acceptable	4
Navigation	3.66	0.51	Highly Acceptable	5
Structure and Design	4	0	Highly Acceptable	1
Appearance And Multimedia	4	0	Highly Acceptable	1
Uniqueness	4	0	Highly Acceptable	1
Average Mean and SD	3.89	0.19	Highly Acceptable	Highly

Table 6. In this table, the web criteria for one (1) admin end user are presented, focusing on different aspects such as content, navigation, structure and design, appearance and multimedia, and uniqueness. The mean and standard deviation are provided for each criterion, indicating the central tendency and variability of end-user ratings. The acceptability level is described as "Highly Acceptable" for all criteria. Additionally, the criteria are ranked based on their mean scores, providing insights into the relative importance of each aspect. The total average mean and standard deviation for all criteria are also calculated, and the overall acceptability is labeled as "Highly Acceptable".

Table 7: Evaluation Result from Thirteen (13) IT Experts

Criteria	Mean	SD	Interpretation	Rank
Content	3.91	0.03	Highly Acceptable	1
Navigation	3.82	0.09	Highly Acceptable	3
Structure and Design	3.80	0.05	Highly Acceptable	4
Appearance And Multimedia	3.85	0	Highly Acceptable	2
Uniqueness	3.80	0.04	Highly Acceptable	5
Average Mean and SD	3.84	0.04	Highly Acceptable	

Table 7. The table presents the evaluation of a Content Management System (CMS) based on the feedback from 13 IT experts. Each criterion, including Content, Navigation, Structure and Design, Appearance and Multimedia, and Uniqueness, has been rated with mean values and standard deviations.

Content, Navigation, and Navigation criteria received the highest mean scores of 3.91, 3.85, and 3.82, respectively. These criteria are considered highly acceptable, and they share the top rank, signifying their importance to the experts.

Structure and Design, with a mean of 3.80, is also rated as highly acceptable but holds a slightly lower rank (4th) compared to the top three criteria. This indicates that while it is satisfactory, there may be room for improvement in this aspect. Uniqueness has a mean of 3.80, which is also highly recommendable, the last criterion that we have. The total average mean is 3.84, while the total SD is 0.04, which indicates that the total mean is also highly acceptable.

Table 8: Overall Evaluation Result thirty (30) End-Users and One (1) Administrator and Thirteen (13) IT experts

Criteria	Mean	SD	Interpretation
Content	3.75	0.48	Highly Acceptable
Navigation	3.72	0.50	Highly Acceptable
Structure and Design	3.73	0.50	Highly Acceptable
Appearance And Multimedia	3.73	0.46	Highly Acceptable
Uniqueness	3.69	0.50	Highly Acceptable
Average Mean and SD	3.72	0.48	Highly Acceptable

Table 8. Shows the table of overall evaluation which is thirty (30) End-user one (1) Administrator and thirteen (13) IT experts. Content was Rank number 1 which has a mean of 3.75 and SD of 0.48 which is "Highly Acceptable". Meaning that the content of the system is reliable and up to date.

Rank number 2 is given to Structure and Design having a mean of 3.73 and SD of 0.50 showing that the user interface is "Highly Acceptable". Then Rank number 3 was given to Appearance and Multimedia which has a mean of 3.73 and SD of 0.46 which is also "Highly Acceptable".

Rank number 4 was given to Navigation that has a mean of 3.72 and SD of 0.50 which indicate that using search engine in blog is "Highly Acceptable". Lastly, Rank number 5 was given to Uniqueness which has a mean of 3.69 and SD of 0.50 that indicates that it is also "Highly Acceptable", but it has room for improvement.

IV. SUMMARY, CONCLUSION, AND RECOMMENDATIONS

This chapter presents a summary of the findings, which clearly shows the importance of the project's objectives and scope in relation to the actual output and the results of testing and evaluation.

Summary of Findings

The researcher evaluated the system by assessing its functionality and compatibility. After collecting all the functional testing replies, the researchers earned a perfect score (100%) from all the testers. As a result, no serious problems were detected in the system. Considering the aforementioned, the researchers continued to receive recommendations and feedback from people on where more system enhancements are required. Furthermore, through compatibility testing, we get insights by carrying out tests on the Web and mobile devices. Although all the individuals examined and met all the criteria, there is a small distinction in certain aspects of the Web App that vary between laptop and personal computer display sizes. However, because it operates efficiently with all versions of the Android operating system and every function works as intended, we managed to overcome the problem.

Finally, to evaluate the system, the researchers employed the ISO 25010 standard. The system received highly acceptable evaluations from IT specialists, administrators, and website users, demonstrating the researchers' dedication to providing accurate, responsive, and user-friendly interfaces.

REFERENCES

[1] Adams, H., & Kizhakkacharuvil, V. (2020). Impact of Perceived Usefulness on Attitude of members for having Christian Church's website in Thailand -A Moderated Mediation Model. 22, 51–67. https://doi.org/10.9790/487X-2205065167

[2] Amojamoja. (2020, April 4). Visita Iglesia 2019: Churches of Cavite. Amoj in Wanderland. https://amojinwanderland. wordpress.com/2019/04/19/visita-iglesia-2019-   churches-of-cavite/

[3] Asiedu, S. T., & Boateng, R. (2018b). Development of strategies and transformation paths for structured and targeted digital change: the case of the Presbyterian Church of Ghana Trinity Congregation. In Management for professionals (pp. 205–224). https://doi.org/10.1007/978-3-319-95273-4_11

[4] Asih, Y., Priyanto, A., & Puryono, D. (2022). Sistem Informasi Pelayanan Jemaat Gereja Berbasis Website Menggunakan Analisis PIECES. Jurnal Teknik Informatika dan Sistem Informasi. https://doi.org/10.28932/jutisi.v 8i1.4406.

[5] A Project Report On Church Management System Master of Computer Application.(2020).https://srmus.ac.in/view/governance/naac/1.3.4/Supporting%20Documents/MCA/Tshering%20Namgyal%20Sherpa%20%5B20IT103010%5D.pdf

[6] Boaheng, I., & Abubekr, D. (2022). Online Church "Community" and The Great Commission in a COVID-19-Defined Society: An Anthropological and Missiological Analysis. Online Church "Community" and the Great Commission in a COVID-19- Defined Society: An Anthropological and Missiological Analysis, 5(1), 26–38. https://doi.org/10.52589/ajchrt-rbmtuysd

[7] Caro, Carisma. (2021). Web-based virtual tour for Tarlac's Pilgrimage Churches. International Journal of Research Studies in Education. 10. 10.5861/ijrse.2021.609.

[8] Campbell, H., Sheldon, Z., Gibson, J., & Guzman, G. (2020). Technological and Mediated Identity in American Multisite Churches., 7, 11-31. https://doi.org/10.1163/22144417-bja10002.

[9] Cseke, A., Király, I., Simon, K., Mátis, S., & Tüzes-Bölöni, K. (2020). SoulMind: Interactive Platform for Domain-Specific Data Analysis and Visualization. 2020 IEEE 18th International Symposium on Intelligent Systems and Informatics (SISY), 77-82. https://doi.org/10.1109/SISY50555.2020.9217072.

[10] Del Rosario Joanna E De Torres, R. a. D. C. . M. J. N. (2022, September 8). The Development Of The Laguna State Polytechnic University – San Pablo City Campus' Profile Management System. https://journalppw.com/index.php/jpsp/article/view/11555

[11] Del Rosario, M. J. N., & Cruz, R. a. D. (2022). Internship Program Management Information System with Lean Management. International Journal of Information and Education Technology, 12(1), 7–14. https://doi.org/10.18178/ijiet.2022.12.1.1580

[12] Dutonde, P. D., Mamidwar, S. S., Korvate, M. S., Bafna, S., & Prof. Shirbhate, D. (2022, January). Website Development Technologies: A Review. web development technologies. https://www.ijraset.com/best-journal/web-development-technologies-a- review

[13] Gauxachs, A. S., Aiguabella, J. M. A., & Bosch, M. D. (2021). Coronavirus-Driven Digitalization of In-Person Communities. Analysis of the Catholic Church Online Response in Spain during the Pandemic. Religions, 12(5), 311. https://doi.org/10.3390/rel12050311

[14] Gomez, Riel & Dumlao, Menchita. (2018). A PROJECT MANAGEMENT FRAMEWORK FOR IMPLEMENTING A KNOWLEDGE-BASED SOFTWARE DEVELOPMENT PROJECT FOR SMALL SCALE SOFTWARE BUSINESS. 2 2018. 1- 16.

[15] Kristoper Purba, A.O., Supardi, Dewi, E., Porrie, M.A., & Syafrullah, M. (2019). Design and Implementation of Web-based Church Information Systems (Case Study: HKBP Kebon Jeruk). 2019 6th International Conference on Electrical Engineering, Computer Science and Informatics (EECSI), 264-269.

[16] Leszczynski, M. (2023) Facebook Page vs. Website: Which One Should You Pick? https://www.getresponse.com/blog/facebook-page-vs-website

[17] Lisina, S., & Kerenovych, L. (2020). Information resources for communication of priests with parishioners. Grani. https://doi.org/10.15421/172064.

[18] Nylén, D., & Holmström, J. (2019). Digital innovation in context. Inf. Technol. People, 32, 696-714. https://doi.org/10.1108/ITP-05-2017-0148.

[19] Noble, B. &. (n.d.). Malaysian Christians Online: Faith, Experience, and Social Engagement on the Internet Paperback. Barnes & Noble. https://www.barnesandnoble.com/w/malaysian-christians-online-meng-yoe-tan/1135553159

[20] Oentoro, J., & Idayanti, E. (2022). The Smart Church, a New Normal Church in Digital Era. The Smart Church, a New Normal Church in Digital Era. https://doi.org/10.2991/assehr.k.220702.046

[21] Qudus Khan, F., Rasheed, S., Alsheshtawi, M., Mohamed Ahmed, T., & Jan, S. (2020). A Comparative nalysis of RAD and Agile Technique for Management of Computing GraduationProjects. Computers, Materials & Continua, 64(2), 777–796.

[22] Raro, E. R. (2018). Web-Based Strategic Performance Management System for State Universities and Colleges (SUCS). JPAIR Institutional Research Journal, 11(1), 74–91. https://doi.org/10.7719/irj.v11i1.593

[23] Salurante, T., & Kristanto, D. (2022). Church as an Eschatological Community and Worship Service in the Post-Covid-19 Era. https://doi.org/10.4108/eai.15-9-2021.2315583

[24] Shaibu, M. (2018). Online church information system for saint peters catholic church, FIAPRE.

[25] Sitorus, L., & Purba, V. Y. L. B. (2021). Sistem Informasi Paroki Santa Maria Ratu Rosari Tanjung Selamat Medan. Kumpulan Artikel Karya Ilmiah Fakultas Ilmu Komputer, 57– 62. https://doi.org/10.54367/kakifikom.v3i2.1492

[26] Stiller, M. (2020). Church 2.0: How the Church online platform shapes religious ceremonies and practices surrounding online religion. https://dspace.library.uu.nl/handle/1874/399793

[27] Tan, M. (2020). Conclusion: Locating the Offline in the Online and Vice-Versa in Malaysian Christianity. https://doi. org/10.1007/978-981-15-2833-0_8.

[28] Tanuan, L. A., Rojero, R. M. F., & Magnaye, N. A. (2023). E- Retention: Web-Based Applying Deterministic Approach of HEI Board Programs. International Journal of Metaverse, 1(1), 5–10. https://doi.org/10.54536/ijm.v 1i1.1465

[29] Vanner, C. (2020). What is Process Modeling? 6 Essential Questions Answered. https://www.bizagi.com/en/ blog/process-modeling-and-mapping/what-is-process- modeling-6-essential-questions-answered

[30] Wiratama, J., & Desanti, R. I. (2022). Analysis and design of Web-Based Information System for Church Congregations Case study: Church BNKP Pewarta. UltimaInfoSys: Jurnal Ilmu Sistem Informasi, 12(2), 115–120. https://doi.org/10.31937/si.v12i2.2403

[31] Wijaya, A., Umam, A., Hakim, A., & Nabila, M. (2022). Web Based Sales Information System at Greenvest Source. Jurnal Multidisiplin Madani. https://doi.org/10.55927/mudima.v2i11.1744.

[32] Woods, J G. (2023). The Role of Church Websites in Effective Marketing https://www.linkedin.com/ pulse/role-church-websites-effective-marketing-jeremy-g- woods/?fbclid=IwAR19h6NkDVlrgKEJZvio6hxOWIsq0sk2 DWWt4t6KjBmrI5lGXQ KD9OivrQQ