

RESEARCH ARTICLE

Liturgical Content Management System with Online Reservation for Immaculate Conception Parish Cathedral and Minor Basilica

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Abstract

The study assessed the development of liturgical management system with Online Reservation for Immaculate Conception Parish Cathedral and Minor Basilica that aims to assist the administration of Malolos Cathedral in promoting religious practices of the church. The study utilized the descriptive research method using the quantitative approach through conducting survey questionnaire as a primary instrument to evaluate system capability and lapses of the following criteria: content, accuracy, ease of use, presentation and security. The findings revealed that more members of the website have greater satisfaction in the presentation and security of the system. Results of the evaluation also revealed that a greater number of members have lesser satisfaction in convenience process of accessing the system. The researcher therefore conclude that developing a website serves as an important role in improving the institution, establishment, church or other public or private entity in the community. Also, the researcher also concludes that utilizing the internet enables the website to uplift effective and quality service.

Keywords: *Online Reservation, liturgical management system, Minor Basilica.*

Introduction

Liturgical Content Management System with Online Reservation for Immaculate Conception Parish Cathedral and Minor Basilica aims to make every website visitors updated about the Malolos Cathedral's liturgical services, news, events, announcements and meetings to fulfill the mission of the church which is to extend and improve Godly services and worship as well as to inform website visitors about the Malolos Cathedral's profile which includes history, photo gallery, Parish and Sub-Parish pastoral council, mission and vision, catholic directory, organizational chart and church location.

A modern mode of payment was integrated in this website through the use of PayPal for online reservation for different events like Weddings, Christenings and Interment for faster reservation process.

This website also aims to develop spiritual muscles of every person who will read the content through the presentation of daily prayers, weekly reflections about the bible readings and prayer requests where the website visitor can request personal prayers online to be included in the prayers of the Parish Priests. The website also have an online donation feature which asks support in kind – hearted persons who are willing to donate money for the church expenses for the betterment of the church offices and facilities.

Framework

The kind of model that the researcher used in developing the system was the System Development Life Cycle (SDLC) Prototyping Model. This model is especially popular for the development of the user-interface part of the projects. Satzinger, Jackson and Burd [1] defined prototyping as the process of building a partially or fully functioning system that looks as much as possible like a real system. Like a prototype of an architectural design of an institution that shows a prototype to evaluate whether the customer likes the prototype or not. After evaluation, changes and further enhancements was implemented. The planning stage aims to define the problem briefly to be able to know the possible solutions. At the analysis stage brainstorming was performed to study, interpret and apply all the information that the researcher has. During the design and implementation phase, the researcher planned the remaining design and implementation activities by defining a series of prototypes of modification with the software then specific design and implementation proceed in an iterative process. When the researcher determined the requirements and design of the prototype, the researcher developed, tested and evaluated the system. Testing and evaluation determine if the prototype meets the objectives for the current cycle and whether any additional

cycles are required. The diagram of prototyping model is graphically illustrated in the conceptual framework. Shelly and Rosenblatt [2] stated that Gantt chart offers a rapid overview that graphically displays the timing, duration and progress of each task. The researcher Gantt chart includes three critical phases: the planning, analysis and development. Under planning stage is the problem definition, interview with the company management and gathering of facts.

During interview and gathering of facts, the researcher became knowledgeable regarding the rules, regulations and day to day operation of the church. The analysis stage includes investigation with the church's everyday process, performing analysis activities, determining user requirements to know what are the features that the system must have depending on the user's needs. Recommending solution was done and then the thesis proposal followed. In this stage, the

researcher found out that the project was feasible and valid. In the design phase, acquiring suitable hardware and software was performed to select proper programming language and other computer peripherals that the researcher can use. The researcher developed screen design, report design and database design that turns out to be a good system structure. The development phase includes the programming which is when the researcher actually make the system working.

Documentation followed containing all the facts and information about the development of the system. The documentation was the only non-critical activity in the research study. Then testing was done to detect errors and make further enhancements. And the final step is the Installation and Implementation of the developed software to make the system ready to use

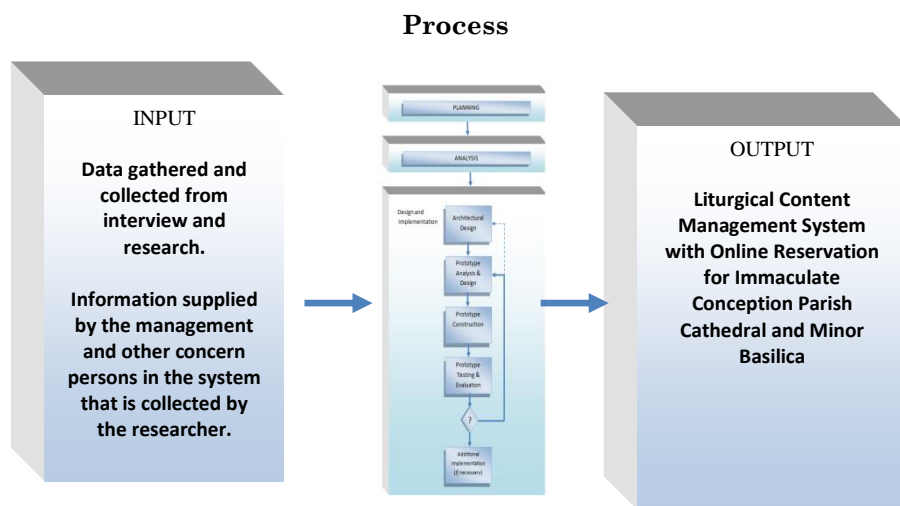


Fig.1: Conceptual paradigm of the study

Statement of the Problem

- To develop a system that will promote Malolos Cathedral globally and provide online event reservation system for effective management of church's operations.
- To develop a dynamic website that will feature the Malolos Cathedral's profile, liturgical services, news, calendar of events, announcements and photo gallery.
- To provide content management system for the system's administrator that will be necessary for the update and maintenance of the website's contents.
- To integrate event reservation system that will be accessible any time via World Wide Web.
- To include online donation that will allow possible donors to donate money for the betterment of the church's offices and facilities.

- To provide online payment for reservation fees and donations by means of PayPal, a global e-commerce business allowing payments and money transfers to be made through the internet to minimize transaction time.
- To allow the possible users to post religious thoughts and read reflections about bible readings or weekly homily as well as to make the church reachable in everyone's prayer requests online.
- To develop a system that can generate reports indispensable for record keeping and monitoring of church's operations.

Materials and Methods

Design

The study utilized the descriptive research method using the quantitative approach through conducting survey questionnaire as a primary instrument to evaluate system capability and

lapses of the following criteria: content, accuracy, ease of use, presentation and security. This section discusses the hardware and software resources needed to implement and to execute the system. It also contains type of user who will be able to access the site. One of the most important considerations in system's implementation is the technical concept. Having the appropriate

technical requirements to support the system was very essential to ensure usability and efficiency. The researcher makes use of the method testing in knowing the specifications of a computer and the sufficient bandwidth needed for the system to run. The system was developed with the use of computer hardware and software.

Table 1: Hardware specification requirements for the website

Hardware Resources	Minimum Requirements	Suggested Requirements
Monitor	1152 x 864 pixels screen resolution	1152 x 864 pixels screen resolution
Hard Disk Drive	512 MB free available disk capacity	512 MB free available disk capacity
RAM	512 MB	1 GB
Motherboard	Any	Any
Processor	Intel Dual Core	Intel Pentium IV 1.4 GHz
Video Card	32-bit	64-bit

Table 2: Software specification requirements for the website

Software Resources	Minimum Requirements	Suggested Requirements
Operating System	Windows XP Service Pack 2	Windows XP Service Pack 3 or higher
Application	Internet Browsers: Google Chrome Internet Explorer 9 Firefox 5 Opera Safari	Internet Browsers: Google Chrome Internet Explorer 9 Firefox 5 Opera Safari
Database	MySQL 5.1.30	MySQL 5.1.30

The tables 1 & 2 above shows the hardware and software requirements for Liturgical Content Management System with Online Reservation for Immaculate Conception Parish Cathedral and Minor Basilica that has been developed to help the church in disseminating information. The researcher used Adobe Dreamweaver CS5 and

PHP for the programming of the system, which is responsible for the front end of the system and scripting, Adobe Photoshop CS3 for the layout and design of the interface and MySQL for the database of the developed website. Also, the researcher used CSS for the designing of the front end and JQUERY to add effects and animations.

Results and Discussion

Table 3: Summary of evaluation

Criterion	Mean	Interpretation
Content	4.45	Very Good
Accuracy	4.32	Very Good
Ease of Use	4.19	Very Good
Presentation	4.58	Excellent
Security	4.58	Excellent
General Mean	4.42	Very Good

Table 3 represents the overall result of the evaluation conducted by the researcher to test the system capability and determine lapses in terms of different criteria. The general mean was 4.43 which is equivalent to Very Good. However, there are some suggestions from the respondents to

improve the website and prevent system malfunctions.

System Function

Fig. 2 displays the default page of the website with a slider showcasing the images of the Parish and tabbed pane containing the history,

some information to confirm the ownership of account to reset the forgotten password that can be used to access the account again and a sign-up link was included for the users who are not yet registered.



 This image displays the "Sign-up" form on the website. The form includes several input fields: "My First Name is *" (with a dropdown for "Your First Name"), "My Last Name is *" (with a dropdown for "Your Last Name"), "My Gender is *" (a dropdown menu set to "Male"), "I was born on *" (a date picker), "I live in the Town/City of *" (with a dropdown for "City of Malolos" and a sub-dropdown for "in Malolos"), "and Province/City of *" (with a dropdown for "Bulacan" and a sub-dropdown for "in Malolos"), "in the Country of *" (a dropdown menu set to "Philippines"), "I have my Email Address *" (with a dropdown for "jpa@gmail.com" and a sub-dropdown for "in jpa@gmail.com"), "I want my Username to be *" (with a dropdown for "jpaandfcauz" and a sub-dropdown for "Your Username"), "and my Password to be *" (with a dropdown for "Your Password"), "Retype my Password *" (with a dropdown for "Confirm Password"), and "Word Verification *" (with a CAPTCHA image). At the bottom right, there are "Create Account" and "Reset" buttons, and a "CLOSE X" link.

Fig.4 Sign-up form



Fig 2: Home page

 This image displays the "Log-in" form on the website. It features two input fields: "Username :" and "Password :". Below the password field, there is a checked checkbox labeled "Remember me" and a "Log-in" button. There are also links for "Forgot your password?" and "Not yet registered? Sign Up for Free." at the bottom right, along with a "CLOSE X" link.

Fig 3: Log-in form

upcoming events, latest news, reflections and announcements. The featured announcement, daily prayer, liturgical services, featured event, donation button and total number of visitors are displayed in the right side of the website. Fig. 3 image shows the log-in form of the system where the registered members can access accounts using username and password obtained during registration. The user can check the Remember Me check box to allow the system to remember the username of the last member who logged-in, the Forgot Password allows the user to input



Fig. 5: Archives

Fig.4 presents the registration form where the possible users can input necessary information to be able to have an account on the system which will allow individuals to have access on different features of the website. Fig. 5 shows the archives of the Malolos Cathedral including the news, reflections announcement and meetings that will help the church to promote religious practices, inform parishioners or non-parishioners regarding the latest news as well as to invite numerous Catholics to attend liturgical services through the use of announcement and meetings page.



Fig. 6 Calendar of events



Fig. 7: Photo gallery

Fig. 6 shows the events in the Malolos Cathedral in a form of a calendar to showcase all the previous and upcoming events in the whole year. Fig. 7 showcases the images of the Parish uploaded by the administrator.



Fig. 8: Reservation calendar

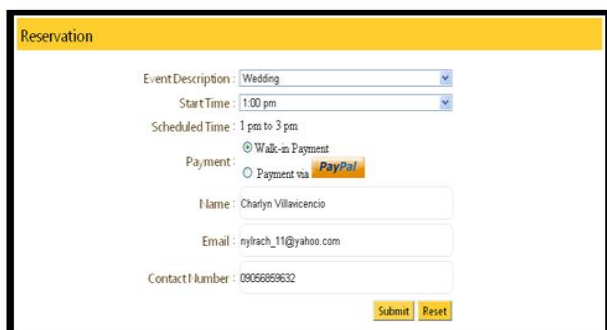


Fig. 9: Reservation form

Fig. 8 shows a calendar where you can view reserved events for a certain date. The Reservation Procedure and Reservation Rules are already displayed on the page for a quick tutorial. Fig. 9 showcases the form where a registered member can reserve events to be held at Malolos Cathedral given the rules governing the reservation process.

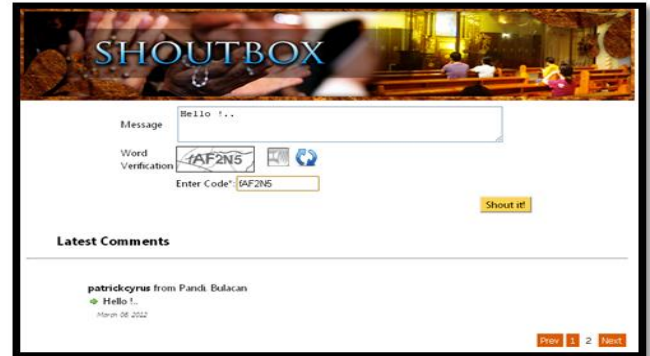


Fig. 10: Shout box

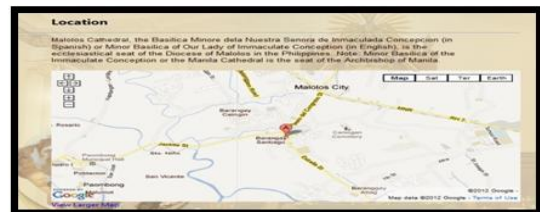
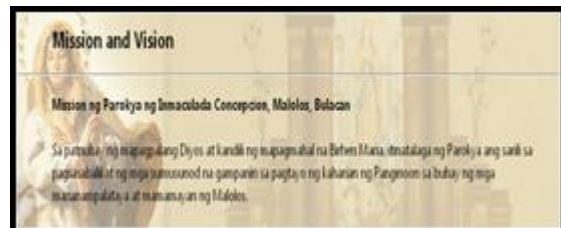


Fig. 11: About us

Fig. 10 shows the form of shout box which can only be used by the registered members, this feature allows the member to post ideas and religious thoughts about the Parish. The member can view all of the shouted posts of other members of the website. Fig. 11 shows the About Us section of the website which provides possible users to have vital

information regarding the church such as mission and vision, brief history, location, parish pastoral council including executive committee, commissions, organizations and sub-parish pastoral council, and organizational chart.

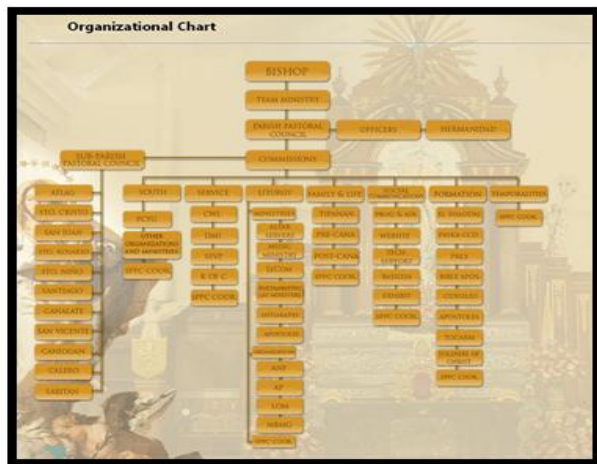


Fig. 12: Organizational chart

Canaate

OFFICERS:
In-Charge: Petronila dela Cruz
Chairman: Laih dela Cruz
Vice Chairman: Raffy de Jeus
Secretary: Elsa Paguerigan
Treasurer: Vits de Jesus
P.R.O.: Onie Galang
Auditor: Tess Payuran

Titular: San Ildefonso de Toledo
Feast Day: January 23

Mass Schedule:
 Santo Niffo de Malolos, Every Saturday, 6:00 pm (Anticipated Mass)
 Every 13th of the Month

Fig. 13: Sub parish pastoral council

Organization

Adoracion Nocturna Filipina

In Charge: Eusebio Ramos

Functions: Is an organization of Catholic men committed to living out an authentic Christian spirituality. It's members seek to glorify God through a personal dedication to the Lord Jesus in the Most Holy Sacrament of the Altar.

Executive Committee

Moderator: Most Rev. Fr. Jose Francisco Olvera
Rector: Rev. Fr. Pablo S. Lagaspit
Members Team Ministry: Rev. R. Conrado T. Santos Jr.
 Rev. Fr. Renato D. Alonzo Jr.
Resident Guest Friends: Fr. Conrad Zabran
 Fr. Arnold Bungay
 Fr. Jonathan Lopez
Co-Chairman: Jaime Palumbarit
Vice Co-Chairman: Elizabeth Caranah
Secretary: Gerty de Castro
Treasurer: Cynthia Cruz
Auditor: Lucy Bernabeo
P.R.O.: Larry Gaman

Fig. 14: Organizations, commissions and executive committee

Contact Us

Help Desk:
 Parish Secretary : Hanz Buenaventura
 Phone Number: 09175332200
 Email: maloloscathedral@gmail.com

Wedding Coordinator:
 Contact Person: Gina delos Santos
 Schedule: Saturday and Sunday

Malolos City, Bulacan 3000 Philippines
 Telefax: (63) (44) 791- 9352
 Phone Number: 63917-533-2200
 www.malolospastoralcenter.com

Fig. 15: Contact us

comments, suggestions and inquiries coming from website visitors or members. Fig. 16 image displays the summary of reservations made by the account owner. Fig. 17 is where the registered users can view profile picture and can be changed by clicking the choosefile button and upload button. Fig. 18 images shows the form that allows users to update account settings such as changing of name, username, e-mail [3-9].

My Reservations

Event	Event Date	Time	Amount(\$)	Reservation Status	Mode of Payment	Payment Status	Date Paid	Cancel	Pay
wedding	Feb 20, 2012	4pm - 6pm	31	approved	Payment Via Paypal	paid	Feb 22, 2012		
christening	Feb 20, 2012	1pm - 3pm	5	approved	Payment Via Paypal	paid	Feb 20, 2012		
wedding	Mar 11, 2012	10am - 12am	31	pending	Walk-in	unpaid			
wedding	Mar 11, 2012	4pm - 6pm	31	pending	Walk-in	unpaid			
seminar	Feb 20, 2012	5pm - 7pm	5	cancelled	Payment Via Paypal	unpaid			
wedding	Mar 9, 2012	5pm - 7pm	31	approved	Payment Via Paypal	paid	Feb 28, 2012		

Fig. 16: My reservations

File: No file chosen

Fig. 17: Change profile picture

Fig. 18: Account settings form

Conclusions

After the development of the system and its implementation, the result went quite well and with satisfaction on the part of the client. Requirements were all implemented and the system was ready for further enhancements and maintenance. The researcher therefore conclude that developing a website is very essential today for the betterment of any institution or establishment, be it a church or other public or private entity that plays an important role in the community. With the aid of the internet, a website offers convenience and comfort for every user, at the same time having effective and quality service.

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