



Republic of the Philippines
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Events and Clubs Management System: Zamboanga City Library

In partial fulfillment of the requirements in
CS 137 – Software Engineering 2

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Chapter 1 – Project Overview

1.1 Product Overview

The Zamboanga City library is a public library dedicated to providing free access to a wide array of knowledge resources, including books, magazines, digital media, and educational programs, fostering a lifelong love for learning, and promoting literacy among all age groups. It does not only house an extensive collection of books but also offer a range of services, such as computer access, research assistance, and community events, making them a valuable resource for residents seeking information, entertainment, and opportunities for personal and professional growth.

However, the Zamboanga City Library is not only about books as it also has clubs and events being held to build a connection with the public. The administration wishes to be able to promote the events and clubs in the library. Its main platform to notify the public is through their Facebook page. After every event being held, the administration will collect data as it is included with an attendance record when they submit a monthly report to the National Library of the Philippines.

This proposal aims to develop an events and clubs management system where users can mainly view list of clubs and events, submit registration forms for events, be a volunteer, and apply for club membership. Librarians can create, update, and delete clubs and events, approve forms submitted by the users, approve proposals from organizations who want to hold an event at the library, and generate monthly reports. An attendance tracker can be able to scan generated QR codes from users who will visit the library and those who will attend events. Lastly, organization heads can submit proposal forms to the city library's administration whenever they want to propose an event with the city library as their venue.

Through this event and clubs management system, the city library can have a great opportunity to market and promote the clubs and events that they have in store for the public. This will not only benefit the people who are interested in joining events and clubs in the library but also the city library itself as it can boost its overall image.

1.2 Project Site

Zamboanga City Library is the city's government-run public library located in R.T. Lim Boulevard, Zamboanga City, Zamboanga del Sur, Philippines. Its mission is to render the best service to Zamboanga's community in the area of literature, traditionally or digitally. Also, the library does not only promote the love of reading to all ages but also promotes Chabacano as a dialect, especially to children. The library currently engages with its library users through face-to-face interactions, landline calls, text messages, and online platforms such as Facebook, Messenger, Instagram, and Gmail.

The following are city library's main transactions:

- a. Recording the daily attendance of library users.
- b. Managing events to be held by the city library.
- c. Managing clubs of the city library.
- d. Submitting monthly reports to the National Library of the Philippines.

With the business of the city library being stated, the proposed events and clubs management system for Zamboanga City's library aims to:

- a. Create a user-friendly web-based platform where users can easily access information about library announcements, upcoming events, and available clubs, fostering a sense of community.
- b. Enable users to easily view, register, and participate in library events by providing online registration forms and event details on the website.

- c. Provide a mechanism for users to volunteer for library events and activities, fostering community engagement and support.
- d. Implement an online system for users to apply for and become members of library clubs, enhancing accessibility and participation.
- e. Empower librarians/administrators to create, update, and delete club and event information, streamlining the management process.
- f. Establish a system for librarians to review and approve proposals from external organizations seeking to host events at the library, ensuring a controlled and organized schedule.
- g. Introduce an attendance tracking system that utilizes QR codes, enabling efficient monitoring of user attendance at library events and activities.
- h. Implement a reporting feature that allows administrators to generate monthly reports, including user engagement metrics, event attendance, and other relevant data for submission to the National Library of the Philippines.

1.3 Background of the Client

Mrs. Madelyn F. Candido is the head librarian of the Zamboanga City library. She has been working for five years in the library starting from the year of 2018. At the same time, she is also a teacher in Pilar College of Zamboanga City. Before working in the city library, she was a librarian at Universidad de Zamboanga.

As a head librarian, she is the second-in command of what is happening within the city library. She oversees all aspects of event planning for the library as she is responsible of planning the event, collaborating with other organizations, creating event schedules, and assigning librarians to manage the event. She also ensures that the events align with the library's goals and objectives.

1.4 Proposed Solution

1.4.1 Product Summary

Zamboanga City Library is a user-friendly web-based events and clubs management system that will create announcements, events, and clubs. The user can browse library events, check announcements, view list of clubs, join events by signing up, and apply for club membership on the website. The admin can generate reports for user engagement in events by scanning QR generated codes from the user to serve as their attendance. Also, the admin can create registration/application forms within the system.

Zamboanga City Library offers a powerful yet straightforward solution to modernize the city library, creating a more efficient and enjoyable experience for both staff and users. It has the potential to revitalize the library's role in the community and ensure its continued success, fulfilling its mission effectively.

1.4.2 List of Features

- a. **User-Friendly Web Interface:** The system will provide a user-friendly web-based platform for easy access to library announcements, upcoming events, and available clubs, fostering a sense of community among users.
- b. **Online Event Registration:** Users can conveniently view, register, and participate in library events through the website, utilizing online registration forms and accessing detailed event

information.

- c. **Volunteer Mechanism:** The system will enable users to volunteer for library events and activities, promoting community engagement and support for the library's initiatives.
- d. **Club Membership Application:** Users will have the capability to apply for and become members of library clubs through an online system, enhancing accessibility and participation in various library-affiliated groups.
- e. **Administrative Control:** Librarians/administrators will be empowered to create, update, and delete club and event information, streamlining the overall management process and ensuring real-time updates.
- f. **External Event Proposal Review:** Librarians can efficiently review and approve proposals from external organizations seeking to host events at the library, ensuring a controlled and organized schedule aligned with the library's objectives.
- g. **QR Code Attendance Tracking:** The system will implement an attendance tracking feature using QR codes, providing an efficient and modern way to monitor user attendance at library events and activities.
- h. **Monthly Reporting:** Administrators can generate monthly reports that include user engagement metrics, event attendance, and other relevant data for submission to the National Library of the Philippines, facilitating comprehensive reporting and analysis.
- i. **Announcement Creation:** Librarians can create and disseminate announcements through the platform, keeping users informed about library news, updates, and upcoming events.
- j. **Form Creation:** The system allows administrators to create registration and application forms within the platform, streamlining the process for users to sign up for events or apply for club membership.

Chapter 2 – The Company

2.1 Company Profile

YABBE Innovation is derived from the initials of the company members' last names: Yu, Annuarie, Badilles, Bagotao, and Elorde, respectively. As it also sounds like the Spanish word 'llave', which means key, the company shall aim to be the key to finding solutions for modern problems in the digital world.

2.2 Company Logo



Figure 1. Company Logo

The company logo is based on the initial letter of the company name, YABBE. It symbolizes both simplicity and modernity. As for its color selection, blue, green, and purple are chosen. Blue stands for trust, which the company would like to gain from its clients. As the company would also like to feel that the clients are secure with the company they are with, thus, green is used as a representative color. Purple, moreover, is chosen to symbolize ambition. As a startup company, we strive to become the best version that we aim for as a software development company.

2.3 Company Vision

To be a prominent software development company in making technology innovations, providing the best solutions, and pioneering ideas for this fast-paced digital world.

2.4 Company Mission

YABBE Innovation is created to develop exceptional software systems that will allow businesses to prosper in the digital era. We are dedicated to building a connection or long-lasting relationship and trust with our clients by actively listening to their unique needs, and ideas, fostering innovation, and ensuring the seamless implementation of solutions to their problems. We oath to give satisfaction to our clients by fulfilling their demands.

2.5 Company Goals

- To develop high-quality software and systems
- Ensure client satisfaction and build long-term relationships with referrals.
- Provide employees with a healthy work environment, career growth, and good benefits.

2.6 Company Organizational Structure

2.6.1 Overall Team Structure

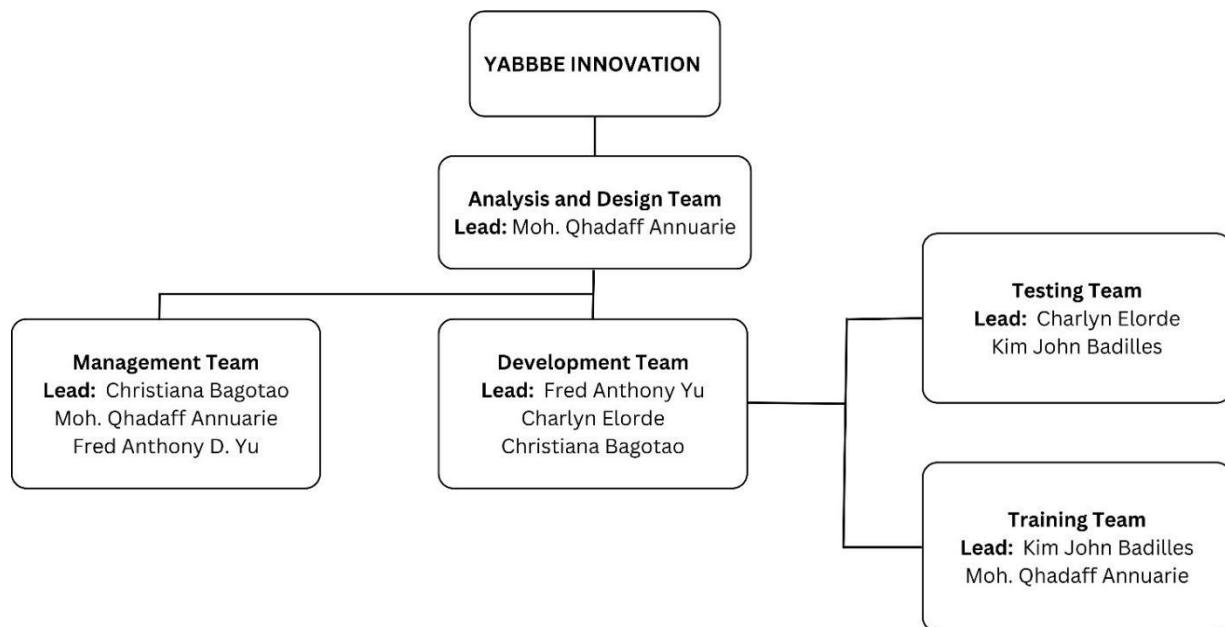


Figure 2. Organizational Structure

2.6.2 Management Team

- a. LEAD: Christiana Bagotao
- b. Moh. Qhadaff Annuarie
- c. Fred Anthony Yu

2.6.3 Analysis and Design Team

- a. LEAD: Moh. Qhadaff Annuarie
- b. Christiana Bagotao
- c. Fred Anthony Yu
- d. Charlyn Elorde

2.6.4 Development Team

- a. LEAD: Fred Anthony Yu

- b. Charlyn Elorde
- c. Christiana Bagotao

2.6.5 Testing Team

- a. LEAD: Charlyn Elorde
- b. Kim John Badilles

2.6.6 Training Team

- a. LEAD: Kim John Badilles
- b. Moh. Qhadaff Annuarie

2.7 Company Policy

A. Meetings

Meetings shall be held at least once to thrice a week to know the progress each team has made and to ensure alignment of tasks. Meetings shall be conducted through the following:

- a. In-person Meetings
- b. Virtual Meetings (Google Meet)
- c. Messaging Apps (Group Chats on Messenger)

B. Funding

Every member must pay 20 pesos per week for the company's funds. Aside from that, the fine from the penalties shall also be included.

C. Penalties

- a. **Tardiness** - If a member is late for a meeting or inactive during group discussion, he/she will be fined 50 pesos (increasing by 20% every occurrence).
- b. **Absences** - If a member misses a meeting (either in-person or virtual), he/she will be fined 65 pesos (increasing by 25% every occurrence).
- c. **Poor Quality of Work** - If a member is consistently submitting works that are far from the group's standard idea which results in other members requiring to do major revisions on that, he/she will be fined 60 pesos (increasing by 30% every occurrence).
- d. **Failure to Meet Deadlines/Task Abandonment** - If a member isn't able to complete and submit his/her given task/part, he/she will be fined:
 - i. **First Attempt** - 70 pesos plus additional task on next activity.
 - ii. **Second Attempt** - 120 pesos plus additional task on next activity.
 - iii. **Third Attempt** - Removal / Expulsion

- e. **Academic Dishonesty** - If a member just copied his/her task on the internet or in other AI websites such as ChatGPT, he/she will be fined with:
 - i. **First Attempt** - 140 pesos plus additional task on next activity.
 - ii. **Second Attempt** - 200 pesos plus additional task on next activity.
 - iii. **Third Attempt** - Removal / Expulsion

Chapter 3 – Project Plan and Schedule

3.1 Action Plan

YABBE Innovation

Events and Clubs Management System: Zamboanga City Library Action Plan

Activity		Time Estimates			Required Resources	Dependencies	Person-in-Charge
#		Duration	Start	End			
Phase 1 – Planning							
1.1	Create a company	1 Day	08-31-2023	08-31-2023	-	-	Sir Salimar Tahil
1.2	Establish a company name	2 Days	09-01-2023	09-02-2023	Internet, Laptop, Paper, Printer	1.1	Christiana
1.3	Design a company logo	1 Day	09-01-2023	09-01-2023	Internet, Laptop, Paper, Printer	1.2	Qhadaff
1.4	Define company mission, vision, and goals	1 Day	09-01-2023	09-01-2023	Internet, Laptop, Paper, Printer	1.3	Fred, Kim
1.5	Define company organizational structure	1 Day	09-01-2023	09-01-2023	Internet, Laptop, Paper, Printer	1.4	Charlyn
1.6	Define company policies and penalties	1 Day	09-01-2023	09-01-2023	Internet, Laptop, Paper, Printer	1.5	Fred
1.7	Establish and promote company	5 Days	08-31-2023	09-05-2023	Internet, Laptop, Paper, Printer	1.6	All Members
1.8	Presentation of potential clients	1 Day	09-16-2023	09-16-2023	Internet, Laptop, Projector	1.7	All Members
1.9	Consultation of S.E. projects	1 Day	09-23-2023	09-23-2023	Internet, Mobile Phone	1.8	Fred, Christiana, Charlyn
1.10	Close a deal with a client	14 Days	09-18-2023	10-02-2023	Paper, Pen, Printer	1.9	All Members
1.11	Create project action plan	2 Days	10-03-2023	10-04-2023	Internet, Laptop	1.10	All Members
1.12	Determine project milestones and deliverables	2 Days	10-03-2023	10-04-2023	Internet, Laptop	1.11	All Members

1.13	Create Work Breakdown Structure	5 Days	10-16-2023	10-20-2023	Internet, Laptop	1.11	Charlyn
1.14	Create an online project board	5 Days	10-16-2023	10-20-2023	Internet, Laptop	1.11	Fred
1.15	Create an online Gantt Chart	5 Days	10-16-2023	10-20-2023	Internet, Laptop	1.14	Christiana
1.16	Create Activity Network Diagram	5 Days	10-16-2023	10-20-2023	Internet, Laptop	1.11	Kim
1.17	Determine project critical path and slack time	5 Days	10-16-2023	10-20-2023	Internet, Laptop	1.16	Qhadaff
1.18	Collate project documentation for Phase 1	2 Days	10-20-2023	10-21-2023	Internet, Laptop	1.17	All Members

Phase 2 – Analysis

2.1	Identify data collection method	2 Days	10-02-2023	10-03-2023	Internet, Laptop, Mobile Phone	1.10	Christiana
2.2	Conduct initial data gathering	2 Days	10-02-2023	10-03-2023	Internet, Laptop, Mobile Phone	2.1	All Members
2.3	Transcribe and analyze collected data	1 Day	10-03-2023	10-03-2023	Internet, Laptop, Mobile Phone	2.2	Charlyn
2.4	Propose initial solution for the project	1 Day	10-04-2023	10-04-2023	Internet, Laptop	2.3	All Members
2.5	Determine project cost	2 Days	10-16-2023	10-17-2023	Internet, Laptop	2.4	All Members
2.6	Conduct feasibility study	4 Days	10-18-2023	10-21-2023	Internet, Laptop	2.5	All Members
2.7	List initial project requirements	4 Days	10-18-2023	10-21-2023	Internet, Laptop	2.6	All Members
2.8	Determine hardware requirements	4 Days	10-18-2023	10-21-2023	Internet, Laptop	2.7	All Members
2.9	Determine software requirements	4 Days	10-18-2023	10-21-2023	Internet, Laptop	2.7	All Members
2.10	Determine network requirements	4 Days	10-18-2023	10-21-2023	Internet, Laptop	2.7	All Members
2.11	Determine database requirements	4 Days	10-18-2023	10-21-2023	Internet, Laptop	2.7	Charlyn, Qhadaff
2.12	Identify software specifications	4 Days	10-18-2023	10-21-2023	Internet, Laptop	2.11	Fred, Qhadaff
2.13	List product features	4 Days	10-18-2023	10-21-2023	Internet, Laptop	2.12	Fred, Qhadaff
2.14	List product attributes	4 Days	10-18-2023	10-21-2023	Internet, Laptop	2.13	Fred, Qhadaff
2.15	Create product mock-ups	12 Days	10-16-2023	10-27-2023	Internet, Laptop	2.13	Fred, Qhadaff
2.16	Finalize documentation for Phase II	2 Days	10-27-2023	10-28-2023	Internet, Laptop	2.15	All Members

Phase 3 – Design

3.1	Determine system architecture	5 Days	11-06-2023	11-10-2023	Internet, Laptop	2.16	Charlyn
3.2	Create business use case	5 Days	11-13-2023	11-17-2023	Internet, Laptop	3.1	Christiana
3.3	Create context and data flow diagram	5 Days	11-13-2023	11-17-2023	Internet, Laptop	3.1	Qhadaff, Kim
3.4	Design system models	5 Days	11-20-2023	11-24-2023	Internet, Laptop	3.3	Fred
3.5	Design user interface	5 Days	11-20-2023	11-24-2023	Internet, Laptop	3.4	Qhadaff
3.6	Create product prototype	14 Days	11-25-2023	12-08-2023	Internet, Laptop	3.5	Fred, Qhadaff

Phase 4 – Coding

4.1	Write System Module 1 – Events Management Module	15 Days	01-08-2024	01-22-2024	Internet, Laptop	3.7	Fred, Christiana, Charlyn
4.2	Write System Module 2 – Clubs Management Module	15 Days	01-24-2024	02-07-2024	Internet, Laptop	4.1	Fred, Qhadaff, Kim
4.3	Get feedback from a consultant 1	1 Day	02-08-2024	02-08-2024	Internet, Laptop	4.2	All Members
4.4	Debug, fix bugs, and update modules	8 Days	02-09-2024	02-16-2024	Internet, Laptop	4.3	All Members
4.5	Write System Module 3 – User Management Module	10 Days	02-17-2024	02-26-2024	Internet, Laptop	4.4	Fred, Qhadaff, Charlyn
4.6	Write System Module 4 – Proposal Submission Module	10 Days	02-28-2024	03-08-2024	Internet, Laptop	4.5	Fred, Charlyn, Kim
4.7	Write System Module 5 – Reporting & Analytics Module	10 Days	03-10-2024	03-19-2024	Internet, Laptop	4.6	Fred, Christiana, Qhadaff
4.8	Integrate System Modules	3 Days	03-20-2024	03-22-2024	Internet, Laptop	4.1 - 4.2, 4.5 - 4.7	All Members
4.9	Get feedback from a consultant 2	1 Day	03-23-2024	03-23-2024	Internet, Laptop	4.8	All Members
4.10	Debug, fix bugs, and update modules	8 days	03-24-2024	03-31-2024	Internet, Laptop	4.9	All Members
4.11	Conduct unit testing	3 Days	04-01-2024	04-03-2024	Internet, Laptop	4.10	All Members
4.12	Finalize product design and coding	2 Days	04-05-2024	04-06-2024	Internet, Laptop	4.11	All Members
Phase 5 – Testing							
5.1	Create testing plan	2 Days	04-09-2024	04-10-2024	Internet, Laptop	4.12	Charlyn, Kim
5.2	Create test cases	2 Days	04-11-2024	04-12-2024	Internet, Laptop	5.1	Charlyn, Kim
5.3	Conduct alpha testing	4 Days	04-13-2024	04-17-2024	Internet, Laptop	5.2	Charlyn, Kim
5.4	Conduct beta testing	4 Days	04-18-2024	04-21-2024	Internet, Laptop	5.3	Charlyn, Kim
5.5	Fix system errors	6 Days	04-22-2024	04-27-2024	Internet, Laptop	5.4	Fred, Christiana, Qhadaff
5.6	Conduct software/product attributes testing	5 Days	04-28-2024	05-02-2024	Internet, Laptop	5.5	Charlyn, Kim
5.7	Conduct user acceptance testing	5 Days	05-03-2024	05-07-2024	Internet, Laptop	5.6	Charlyn, Kim
5.8	Create migration plan	2 Days	05-08-2024	05-09-2024	Internet, Laptop	5.7	Fred, Christiana, Qhadaff
5.9	Deploy system/product to client's site	2 Days	05-09-2024	05-10-2024	Internet, Laptop	5.8	All Members
Phase 6 - Maintenance							
6.1	Create product manual	3 Days	05-14-2024	05-16-2024	Internet, Laptop	5.9	Fred, Christiana
6.2	Gather and analyze customer feedback	2 Days	05-20-2024	05-21-2024	Internet, Laptop	6.1	All Members

6.3	Perform corrective maintenance	10 Days	05-22-2024	05-31-2024	Internet, Laptop	6.2	Fred, Christiana, Qhadaff
6.4	Perform perfective maintenance	10 Days	05-22-2024	05-31-2024	Internet, Laptop	6.3	Fred, Christiana, Qhadaff
6.5	Perform adaptive maintenance	10 Days	05-22-2024	05-31-2024	Internet, Laptop	6.4	Fred, Christiana, Qhadaff
6.6	Finalize project documentation	6 Days	06-01-2024	06-06-2024	Internet, Laptop, Paper, Printer	6.5	All Members
6.7	Turn-over project to client and close the project	2 Days	06-07-2024	06-08-2024	Internet, Laptop, Flashdrive	6.6	All Members

Table 1. Action Plan

3.2 Work Breakdown Structure



Figure 3. Work Breakdown Structure

3.3 Network Diagram

ACTIVITY	DEPENDENCIES	DURATION (days)
1.1	-	1
1.2	1.1	2
1.3	1.2	1
1.4	1.3	1
1.5	1.4	1
1.6	1.5	1
1.7	1.6	5
1.8	1.7	1
1.9	1.8	1
1.10	1.9	14
1.11	1.10	2
1.12	1.11	2
1.13	1.11	5
1.14	1.11	5
1.15	1.14	5
1.16	1.11	5
1.17	1.16	5
1.18	1.17	2
2.1	1.10	2
2.2	2.1	2
2.3	2.2	1
2.4	2.3	1
2.5	2.4	2
2.6	2.5	4
2.7	2.6	4
2.8	2.7	4
2.9	2.7	4
2.10	2.7	4
2.11	2.7	4
2.12	2.11	4
2.13	2.12	4
2.14	2.13	4
2.15	2.13	12
2.16	2.15	2
3.1	2.16	5

3.2	3.1	5
3.3	3.1	5
3.4	3.3	5
3.5	3.4	5
3.6	3.5	14
3.7	3.6	2
4.1	3.7	15
4.2	4.1	15
4.3	4.2	1
4.4	4.3	8
4.5	4.4	10
4.6	4.5	10
4.7	4.6	10
4.8	4.1 - 4.2, 4.5 - 4.7	3
4.9	4.8	1
4.10	4.9	8
4.11	4.10	3
4.12	4.11	2
5.1	4.12	2
5.2	5.1	2
5.3	5.2	4
5.4	5.3	4
5.5	5.4	6
5.6	5.5	5
5.7	5.6	5
5.8	5.7	2
5.9	5.8	2
6.1	5.9	3
6.2	6.1	2
6.3	6.2	10
6.4	6.3	10
6.5	6.4	10
6.6	6.5	6
6.7	6.6	2

Table 2. Network Diagram

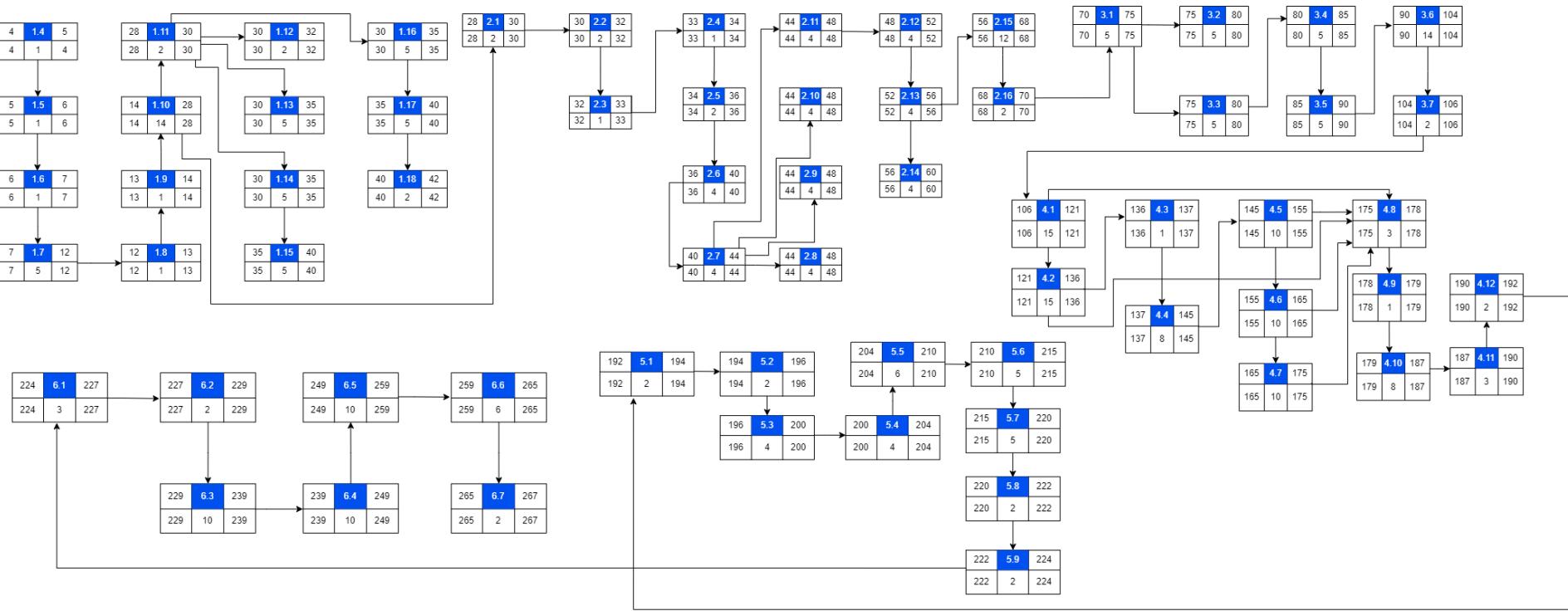


Figure 4. Network Diagram

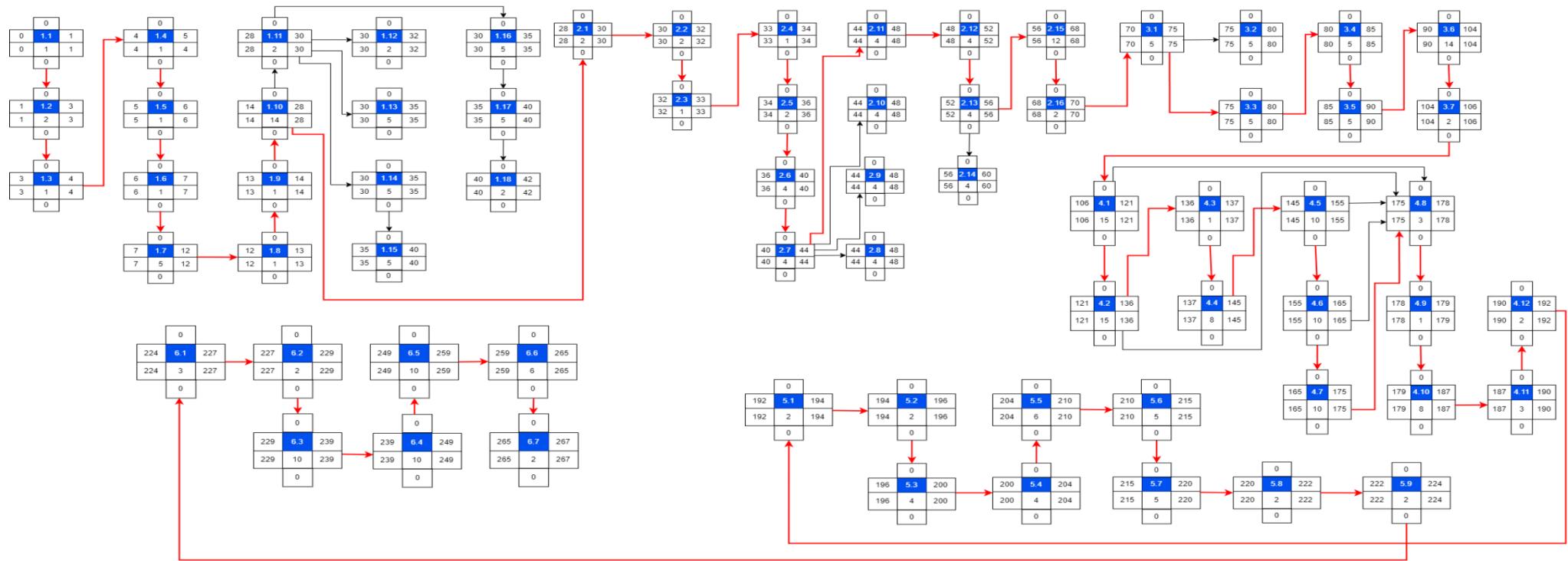


Figure 5. Critical Path

CRITICAL PATH: 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9, 1.10, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.11, 2.12, 2.13, 2.15, 2.16, 3.1, 3.3, 3.4, 3.5, 3.6, 3.7, 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9, 4.10, 4.11, 4.12, 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 5.8, 5.9, 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.7

ACTIVITY SLACK: 1.11, 1.12, 1.13, 1.14, 1.15, 1.16, 1.17, 1.18, 2.8, 2.9, 2.10, 2.14, 3.2

3.4 Milestones and Deliverables

Milestones	Deliverables
1. Company Establishment	<ul style="list-style-type: none">• Document of Company Profile
2. Requirements and Data Gathering	<ul style="list-style-type: none">• Interview Questionnaire• Client Interview• Client Agreement Form
3. Conceptual Design	<ul style="list-style-type: none">• Design Specifications• User Interface• Database• Mock-up
4. Feature Implementation	<ul style="list-style-type: none">• Design Documentation• Code Documentation
5. System Deployment	<ul style="list-style-type: none">• Beta Testing• Test Reports• Fix System Errors• User Acceptance Testing
6. Turn-over the System to the Client	<ul style="list-style-type: none">• Product Manual• Customer Feedback• Perform Perfective Maintenance• Perform Adaptive Maintenance• Final Project Documentation

Table 3. Milestones and Deliverables

Chapter 4 – Project Cost

4.1 Cost of Project Resources

4.1.1 Effort Cost

Guide:

- Estimate the appropriate rate/hour of the main roles in the company.
- Hours/Day can be from 8am to 4pm.
- Total working days are based on the network diagram's total duration.

EFFORT COST				
Member	Hours/Day	Rate/Hour	Total Working Days	Total Cost
Annuarie, Moh. Qhadaff A.	8	PHP 120	319	PHP 306,240
Badilles, Kim John L.	8	PHP 100	319	PHP 255,200
Bagotao, Christiana O.	8	PHP 110	319	PHP 280,720
Elorde, Charlyn L.	8	PHP 100	319	PHP 255,200
Yu, Fred Anthony D.	8	PHP 130	319	PHP 331,760
Total Effort Cost				PHP 1,429,120

Table 4. Effort Cost

4.1.2 Hardware Cost

Guide:

- Any materials or equipment needed for the project.

HARDWARE COST				
Item	Unit	Price/Unit	Quantity	Total
Laptop	Infinix	PHP 24,000	1	PHP 60,000
	Lenovo	PHP 36,000	1	
PC	Set	PHP 45,000	1	PHP 45,000
Hard drive	1TB/pc	PHP 2,000	1	PHP 2,000
Flash drive	128GB/pc	PHP 475	2	PHP 950
Mobile phone	OPPO	PHP 10,000	1	PHP 10,000
Total Hardware Cost				PHP 117,950

Table 5. Hardware Cost

4.1.3 Software Cost

Guide:

- Any software needed for the project.

SOFTWARE COST				
Item	Unit	Price/Unit	Quantity	Total
Software for Mockups (Figma)	License	FREE	2	FREE
Software for Development (HTML, CSS, JS, PHP, MySQL)	License	FREE	5	FREE

Software for Management (Monday and Draw.io)	License	FREE	5	FREE
Total Software Cost				PHP 0

Table 6. Software Cost

4.1.4 Miscellaneous Cost

Guide:

- Any other cost needed for the project.

MISCELLANEOUS COST	
Item	Total
Documentation	PHP 3,000
Food Allowance (6-8 Months)	PHP 25,000
Transportation	PHP 10,000
Utilities	PHP 20,000
Hosting Domain Subscription For a Year	PHP 3,000
Total Miscellaneous Cost	PHP 63,000

Table 7. Miscellaneous Cost

4.1.5 Overall Cost

OVERALL COST	
Expenses	Total
Effort Cost	PHP 1,429,120
Hardware Cost	PHP 117,950
Software Cost	PHP 0
Miscellaneous	PHP 63,000
Total Overall Cost	PHP 1,610,070

Table 8. Overall Cost

4.2 Return-On-Investment

Development Cost					
Type of Cost	Year				Total
	2023	2024	2025	2026	
Effort	PHP 1,429,120	0	0	0	PHP 1,429,120
Hardware	PHP 117,950	0	0	0	PHP 117,950
Software	PHP 0	0	0	0	PHP 0
Miscellaneous	PHP 63,000	0	0	0	PHP 63,000
Total	PHP 1,610,070	0	0	0	PHP 1,610,070

Table 9. Development Cost

Operational Cost					
Type of Cost	Year				Total
	2023	2024	2025	2026	
Maintenance	0	PHP 10,000	PHP 20,000	PHP 30,000	PHP 60,000
Repairs	0	PHP 10,000	PHP 20,000	PHP 30,000	PHP 60,000
Upgrades	0	PHP 15,000	PHP 30,000	PHP 45,000	PHP 90,000

Utility	0	PHP 15,000	PHP 15,000	PHP 15,000	PHP 30,000
Total	0	PHP 30,000	PHP 85,000	PHP 120,000	PHP 240,000

Table 10. Operational Cost

Type of Benefits	Benefits				Total	
	Year					
	2023	2024	2025	2026		
Reduced Office Supplies	0	PHP 300,000	PHP 400,000	PHP 500,000	PHP 1,200,000	
Increased Profit	0	PHP 150,000	PHP 230,000	PHP 310,000	PHP 690,000	
Total	0	PHP 450,000	PHP 630,000	PHP 810,000	PHP 1,890,000	

Table 11. Benefits

$$\text{ROI} = (\text{benefits} - (\text{total cost})) / \text{total cost} \times 100$$

$$\text{ROI} = (\text{benefits} - (\text{development} + \text{operational})) / \text{total cost} \times 100$$

$$\text{ROI} = (1,890,000 - (1,610,070 + 240,000)) / 1,850,070 \times 100$$

$$\text{ROI} = (1,890,000 - 1,850,070) / 1,850,070 \times 100$$

$$\text{ROI} = 39,930 / 1,850,070 \times 100$$

$$\text{ROI} = 0.0215 \times 100$$

ROI = 2.15% in 3 years after the development

- Project resulted to positive return of investment.

4.3 Intangible Benefits

- Streamlined Operations
- Enhanced Data Security
- Improved Library Transaction
- Boost User's Engagement
- Information Literacy
- Automated Monthly Reporting
- Optimized Resource Allocation
- Efficient Resource Retrieval
- Reduced Wait Times
- Optimized User Registration

Chapter 5 – Requirements Engineering

5.1 Methodology

The software process model for the Event and Clubs Management System is based on the Agile methodology, which emphasizes ongoing collaboration and enhancement. To ensure the project's overall success, we plan each phase together with its milestones and deliverables.

In the final testing phase, the team refined the system through a user-friendly product manual, customer feedback analysis, and maintenance activities. They finalized comprehensive project documentation and successfully handed over all deliverables, marking the project's completion. The collaborative effort ensured the successful delivery of a refined and well-tested system to the client.

In the planning phase, a new company is formed, defining its identity, goals, and structure. The team actively promotes the company, closing the first deal. Challenges include logo design and policy formulation, managed amidst market uncertainties. The phase concludes with a concise company profile, summarizing its identity, values, structure, policies, and initial project plans.

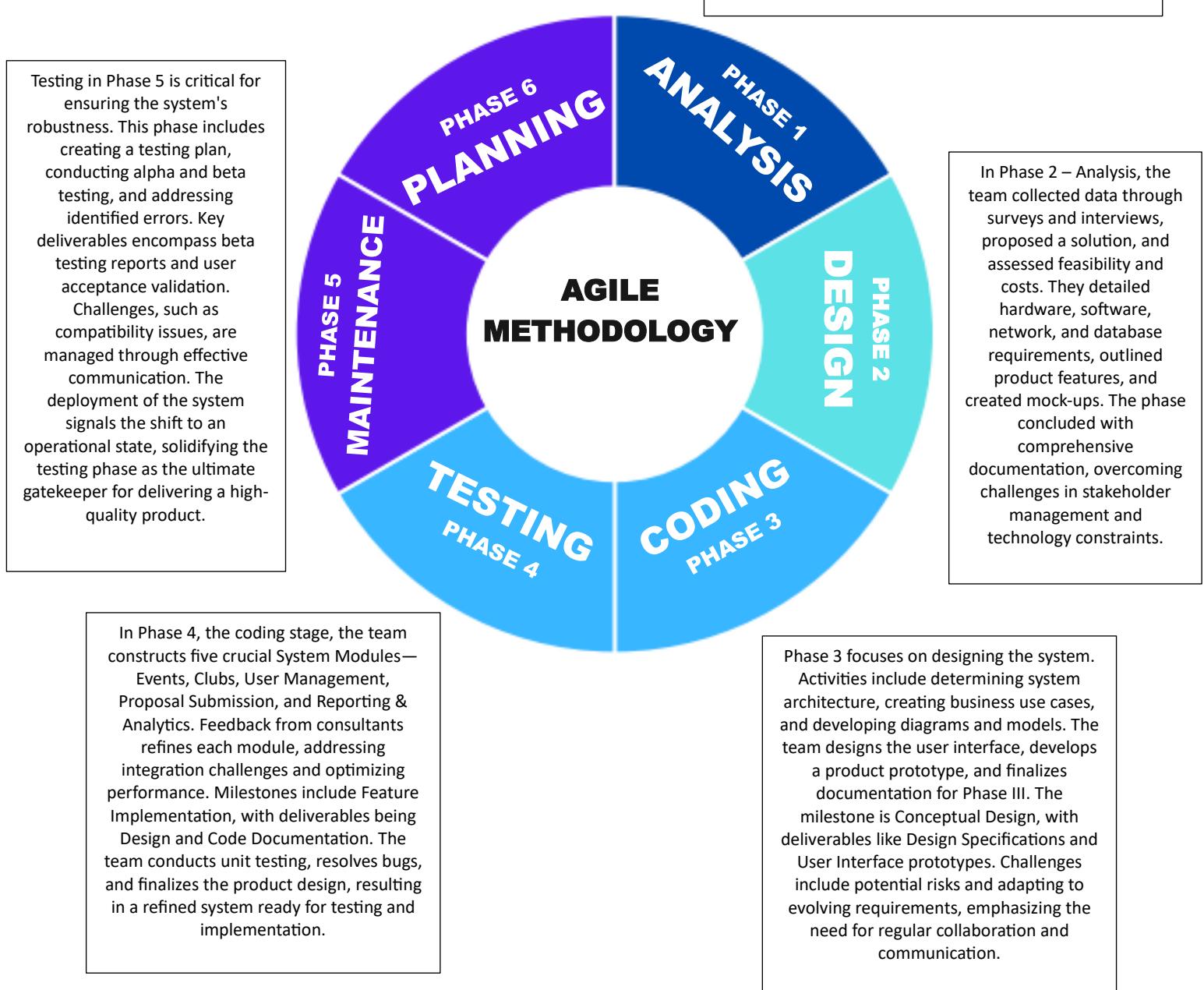


Figure 6. Methodology

5.2 Client, Customers, and other Stakeholders

a. The Client and Customer

Client Name: Madelyn Candido

Interest in the System: Primary user responsible of planning and assigning people for the library's events.

Influence on the Project: High - as the Library's Head Librarian/Administrator, Madelyn's requirements are critical for the success of the system.

Background and Responsibilities: Madelyn's is the Zamboanga City Library's head librarian/Administrator who oversees all aspects of event planning for the library. Madelyn is responsible of planning the event, collaborating to other organization, creating event schedules, and assigning librarians to manage the event. She ensures that the events align with the library's goals and objectives.

Expectations: Madelyn expects the Events and Clubs Management System to assist her to make here job easier like provide real-time updates and monitor the events.

b. Other Stakeholder

Client Name: Carmelita T. Agustin

Interest in the System: Secondary user responsible of facilitating, managing, and documenting the events.

Influence on the Project: High - as the Library's Librarian and Event Facilitator, Carmelita's requirements are critical for the success of the system.

Background and Responsibilities: Carmelita's is the Zamboanga City Library's librarian/Event Facilitator who oversees her assigned events for the library. Carmelita is responsible of managing/facilitating the event, manage the event's volunteers, check the participant's attendance, and checking the other people's roles that needed in the event. She ensures that the events will succeed.

Expectations: Carmelita expects the Events and Clubs Management System to assist her to make here job easier like check the list of participants, checking the attendance by just scanning the participant's QR Code, automate the certificate, and monitoring the event.

5.3 Project Constraints

5.3.1 Development Environment

5.3.1.1 Software Requirements

- Apache - Local Web Server
- MySQL 8.1.0 or higher - Latest version of SQL for database
- PHP 8.2 - Web development and server scripting.
- PHP Extensions - Extension needed in install script to complete.
- CSS and JavaScript - For custom code.
- monday.com - For task management, tracking, planning, visualization, and collaboration with team members.
- draw.io – For managing of diagrams and models.
- Github - Code Review, Collaborative Development, and Issue Tracking.
- Git - Version control and backup and restore of project version.

5.3.1.2 Hardware Requirements

- Development
 - Laptop/PC
 - Flashdrive/External Hardrive
- Deployment
 - Cloud Server for hosting
 - Workstations of Library Staffs (Librarians)

- QR Scanners (Smartphones)
- Backup and Storage Solutions

5.3.1.3 Network Communication Requirements

1. High-Speed Internet Connection: Ensure a reliable and high-speed internet connection for seamless data transfer and user experience.
2. Domain Name and Hosting: Acquire a domain name for the website and choose a reliable hosting provider to ensure the site is accessible to users.
3. SSL Certificate: Implement SSL (Secure Socket Layer) to secure data transmission and build trust with users by enabling HTTPS.
4. Database Management System (DBMS): Choose a suitable DBMS for efficient storage and retrieval of data related to events, clubs, and users.
5. Scalability Planning: Design the network architecture with scalability in mind to accommodate potential growth in traffic and data.
6. Redundancy and Backup Systems: Establish backup systems and redundancy measures to ensure data integrity and availability in case of system failures.
7. User Authentication and Authorization: Implement secure user authentication and authorization mechanisms to protect user accounts and sensitive information.
8. Cross-Browser Compatibility: Ensure the website is compatible with major web browsers to provide a consistent experience for users.
9. Mobile Responsiveness: Optimize the website for mobile devices to cater to users accessing the platform from smartphones and tablets.
10. Compliance with Data Protection Laws: Adhere to data protection regulations by implementing measures to protect user privacy and sensitive information.
11. Email Integration: Set up email services for communication with users, such as registration confirmations, event notifications, and password resets.
12. Regular Updates and Patch Management: Establish a process for regular updates and patch management to address security vulnerabilities and improve system performance.

5.3.2 Implementation Environment

5.3.2.1 Software Constraints

PC:

- Chrome
- Firefox
- Internet Explorer (IE)

Android:

- Chrome
- Browser

iOS:

- Safari

5.3.2.2 Hardware Constraints

Server Side:

- Web Server: Apache or Nginx.
- Database: MySQL or PostgreSQL.
- Server-side Scripting: PHP (version 7.0 or higher).

Client Side:

- Web Browser: Latest versions of Chrome, Firefox, Safari, or Edge.
- Client-side Scripting: JavaScript enabled.
- System Resources:
 - Processor: Dual-core processor or higher.
 - Memory (RAM): 4 GB or higher.
 - Storage: At least 20 GB of free disk space.
- Networking:
 - Internet Connection: Required for accessing online features and updates.

5.3.2.3 Deployment Constraints

- Executable Deployment: Ensure that the system's executables are packaged appropriately for deployment on target platforms. This involves creating installation packages or scripts for easy and consistent setup.
- Server Setup: Choose an appropriate deployment environment, whether local, network, or cloud based. The server must meet the system's hardware and software specifications, including hosting capabilities for a web-based application.
- Network Configuration: If deploying in a networked environment, configure the necessary network settings to ensure seamless communication between different components of the system.
- User Training: Conduct training sessions for end-users and administrators to familiarize them with the new system. This is crucial for a smooth transition and optimal utilization of the features provided by the Event and Clubs Management System.
- Backup and Recovery Plan: Establish a robust backup and recovery plan to safeguard data during and after deployment. This includes regular backups, testing restoration procedures, and ensuring the availability of backup resources.
- Security Measures: Implement necessary security measures, such as access controls and encryption, to protect sensitive data within the system. This is crucial, especially when dealing with event and club management, which may involve confidential information.
- Documentation: Provide comprehensive deployment documentation outlining step-by-step procedures for system setup, configuration, and any troubleshooting steps. This documentation serves as a reference for administrators during and after deployment.

5.4 Scope of the Product

a. High-Level Use Case

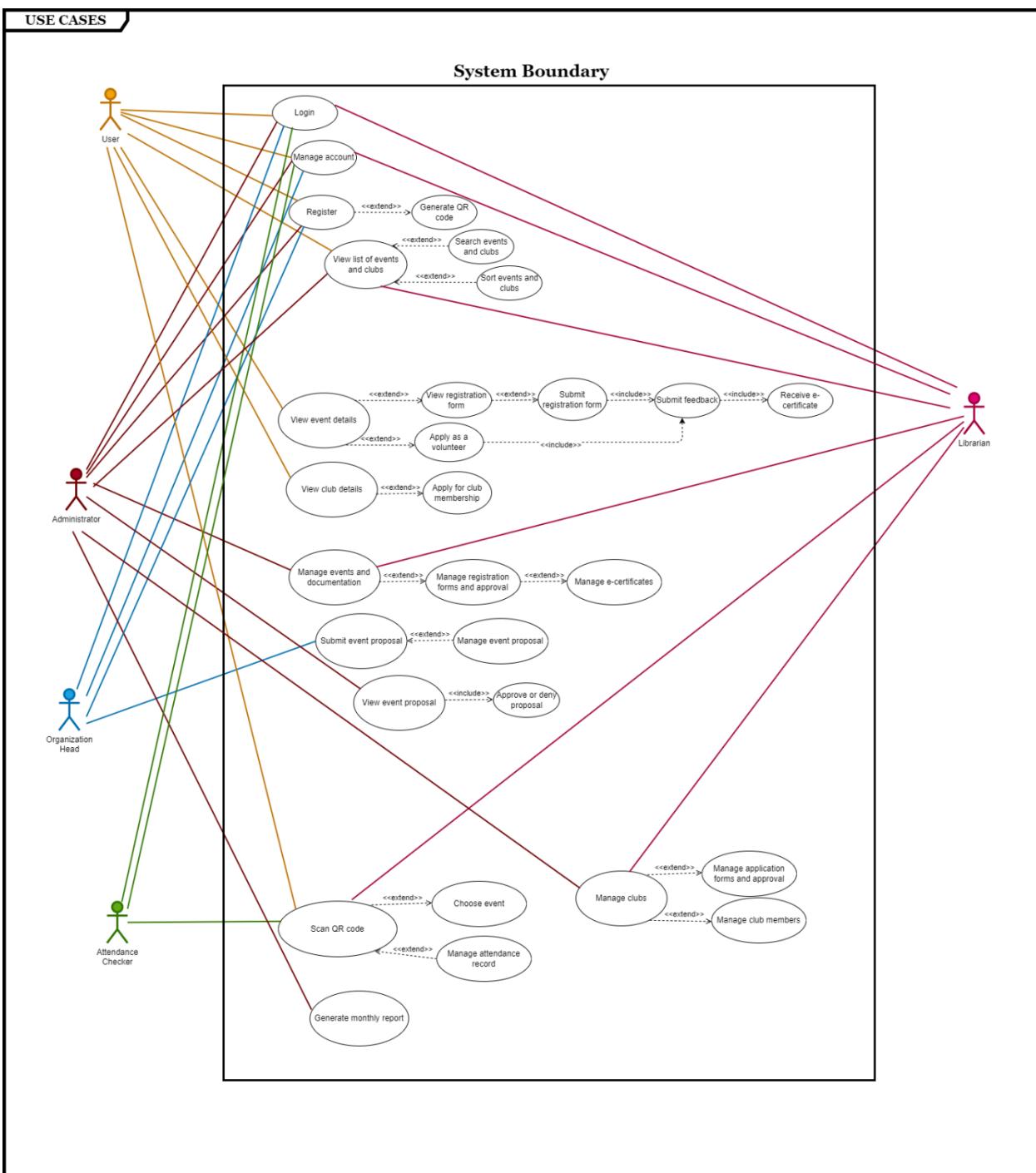


Figure 7. High-Level Use Case

b. Use Case Description

Use case name:	Login
Scenario:	User logs into the system.
Triggering event:	User accesses the system login page.
Brief Description:	Users need to log in to access the system.
Actor/s:	User
Related use case/s:	None

Stakeholder/s:	User, Administrator, Librarian, Organization Head, Attendance Checker	
Precondition/s:	System is running, and user credentials are valid.	
Postcondition/s:	User gains access to the system.	
Flow of activities:	Actor	System
	Enters username and password, clicks login.	Validates credentials, grants access.
Exception condition/s:	If invalid credentials are entered, display an error message.	

Use case name:	Register	
Scenario:	New user creates an account.	
Triggering event:	User accesses the registration page.	
Brief Description:	Users register to use the system.	
Actor/s:	User	
Related use case/s:	Generate QR code	
Stakeholder/s:	User, Administrator, Organization Head	
Precondition/s:	User is not registered.	
Postcondition/s:	User successfully registers.	
Flow of activities:	Actor	System
	Enters required information, clicks register.	Validates information, creates user account.
Exception condition/s:	If entered information is incomplete or invalid, display an error message.	

Use case name:	Generate QR code	
Scenario:	User generates a QR code after registration.	
Triggering event:	User completes the registration process.	
Brief Description:	After registration, the user generates a unique QR code.	
Actor/s:	User	
Related use case/s:	Register	
Stakeholder/s:	User, Administrator	
Precondition/s:	User has successfully registered.	
Postcondition/s:	User has a generated QR code.	
Flow of activities:	Actor	System
	Requests QR code generation.	Generates and assigns a unique QR code.
Exception condition/s:	If the QR code generation fails, display an error message.	
Use case name:	Manage Account	
Scenario:	User updates account information.	
Triggering event:	User accesses the account management section.	
Brief Description:	Users can modify their account details.	
Actor/s:	User	
Related use case/s:	None	
Stakeholder/s:	User, Administrator, Librarian, Organization Head, Attendance Checker	
Precondition/s:	User is logged in.	
Postcondition/s:	User account information is updated.	
Flow of activities:	Actor	System
	Edits account information, saves changes.	Validates and updates the account.
Exception condition/s:	If the update fails, display an error message.	

Use case name:	View list of events and clubs					
Scenario:	User explores available events and clubs.					
Triggering event:	User selects the "View" option.					
Brief Description:	Users can browse a list of events and clubs.					
Actor/s:	User					
Related use case/s:	Search events and clubs, Sort events and clubs					
Stakeholder/s:	User, Administrator, Librarian					
Precondition/s:	User is logged in.					
Postcondition/s:	User views a list of events and clubs.					
Flow of activities:	<table border="1"> <thead> <tr> <th>Actor</th> <th>System</th> </tr> </thead> <tbody> <tr> <td>Navigates to the events/clubs section.</td> <td>Presents a list of events and clubs.</td> </tr> </tbody> </table>	Actor	System	Navigates to the events/clubs section.	Presents a list of events and clubs.	
Actor	System					
Navigates to the events/clubs section.	Presents a list of events and clubs.					
Exception condition/s:	If the list is empty, display a message indicating no events or clubs available.					

Use case name:	Search events and clubs					
Scenario:	User searches for specific events or clubs.					
Triggering event:	User initiates a search.					
Brief Description:	Users can search for events or clubs based on criteria.					
Actor/s:	User					
Related use case/s:	View list of events and clubs					
Stakeholder/s:	User Administrator, Librarian					
Precondition/s:	User is on the events/clubs page.					
Postcondition/s:	User views filtered search results.					
Flow of activities:	<table border="1"> <thead> <tr> <th>Actor</th> <th>System</th> </tr> </thead> <tbody> <tr> <td>Enters search criteria, initiates search.</td> <td>Filters and displays search results.</td> </tr> </tbody> </table>	Actor	System	Enters search criteria, initiates search.	Filters and displays search results.	
Actor	System					
Enters search criteria, initiates search.	Filters and displays search results.					
Exception condition/s:	If no results match the search criteria, display a message indicating no matching events or clubs.					

Use case name:	Sort events and clubs					
Scenario:	User sorts the list of events or clubs.					
Triggering event:	User selects a sorting option.					
Brief Description:	Users can sort the list of events or clubs based on different criteria.					
Actor/s:	User					
Related use case/s:	View list of events and clubs					
Stakeholder/s:	User Administrator, Librarian					
Precondition/s:	User is on the events/clubs page.					
Postcondition/s:	User views a sorted list.					
Flow of activities:	<table border="1"> <thead> <tr> <th>Actor</th> <th>System</th> </tr> </thead> <tbody> <tr> <td>Selects a sorting option.</td> <td>Rearranges the list based on the selected criteria.</td> </tr> </tbody> </table>	Actor	System	Selects a sorting option.	Rearranges the list based on the selected criteria.	
Actor	System					
Selects a sorting option.	Rearranges the list based on the selected criteria.					
Exception condition/s:	If sorting fails, display an error message.					

Use case name:	View event details	
Scenario:	User explores detailed information about an event.	
Triggering event:	User clicks on a specific event.	
Brief Description:	Users can view detailed information about an event.	

Actor/s:	User	
Related use case/s:	View registration form, Apply as a volunteer	
Stakeholder/s:	User, Administrator	
Precondition/s:	User is on the events page.	
Postcondition/s:	User views detailed information about the selected event.	
Flow of activities:	Actor	System
	Clicks on a specific event.	Displays detailed information about the event.
Exception condition/s:	If the detailed information is unavailable, display an error message.	

Use case name:	View registration form	
Scenario:	User views the registration form for an event.	
Triggering event:	User clicks on "View Registration Form."	
Brief Description:	Users can preview the registration form for an event.	
Actor/s:	User	
Related use case/s:	View event details, Submit registration form	
Stakeholder/s:	User	
Precondition/s:	User is on the event details page.	
Postcondition/s:	User views the registration form.	
Flow of activities:	Actor	System
	Clicks on "View Registration Form."	Presents the registration form.
Exception condition/s:	If the registration form is unavailable, display an error message.	

Use case name:	Submit registration form	
Scenario:	User submits the registration form for an event.	
Triggering event:	User completes the registration form.	
Brief Description:	Users can register for an event by submitting the form.	
Actor/s:	User	
Related use case/s:	Submit feedback, Receive e-certificate	
Stakeholder/s:	User	
Precondition/s:	User views the registration form.	
Postcondition/s:	User successfully registers for the event.	
Flow of activities:	Actor	System
	Fills out and submits the registration form.	Validates and records the registration.
Exception condition/s:	If the submission fails, display an error message.	

Use case name:	Submit feedback	
Scenario:	User provides feedback for an event.	
Triggering event:	User selects the "Submit Feedback" option.	
Brief Description:	Users can share their feedback on an event.	
Actor/s:	User	
Related use case/s:	Apply as a volunteer, Submit registration form, Receive e-certificate	
Stakeholder/s:	User	
Precondition/s:	User attended the event.	
Postcondition/s:	User provides feedback on the event.	
Flow of activities:	Actor	System

	Selects the "Submit Feedback" option.	Presents a feedback form for the event.
Exception condition/s:	If the feedback submission fails, display an error message.	

Use case name:	Receive e-certificate	
Scenario:	User receives an electronic certificate after attending an event.	
Triggering event:	User successfully registers for an event and provides feedback.	
Brief Description:	Users receive an e-certificate for participating in an event.	
Actor/s:	User	
Related use case/s:	Submit feedback	
Stakeholder/s:	User	
Precondition/s:	User successfully registers for an event and provides feedback.	
Postcondition/s:	User receives an e-certificate.	
Flow of activities:	Actor	System
	Successfully registers for an event and provides feedback.	Generates and sends the e-certificate to the user.
Exception condition/s:	If the e-certificate generation or delivery fails, display an error	

Use case name:	Apply as a volunteer	
Scenario:	User expresses interest in volunteering for an event.	
Triggering event:	User selects the "Apply as a Volunteer" option.	
Brief Description:	Users can apply to volunteer for an event.	
Actor/s:	User	
Related use case/s:	View event details, Submit feedback, Receive e-certificate	
Stakeholder/s:	User	
Precondition/s:	User views event details.	
Postcondition/s:	User applies as a volunteer.	
Flow of activities:	Actor	System
	Selects "Apply as a Volunteer" on the event details page.	Registers the user as a volunteer for the event.
Exception condition/s:	If the application as a volunteer fails, display an error message.	

Use case name:	View club details	
Scenario:	User explores detailed information about a club.	
Triggering event:	User clicks on a specific club.	
Brief Description:	Users can view detailed information about a club.	
Actor/s:	User	
Related use case/s:	Apply for club membership	
Stakeholder/s:	User	
Precondition/s:	User is on the club's page.	
Postcondition/s:	User views detailed information about the selected club.	
Flow of activities:	Actor	System
	Clicks on a specific club.	Displays detailed information about the club.
Exception condition/s:	If the detailed information is unavailable, display an error message.	

Use case name:	Apply for club membership	
Scenario:	User expresses interest in joining a club.	

Triggering event:	User selects the "Apply for Club Membership" option.					
Brief Description:	Users can apply to become a member of a club.					
Actor/s:	User					
Related use case/s:	View club details					
Stakeholder/s:	User					
Precondition/s:	User views club details.					
Postcondition/s:	User applies for club membership.					
Flow of activities:	<table border="1"> <thead> <tr> <th>Actor</th> <th>System</th> </tr> </thead> <tbody> <tr> <td>Selects "Apply for Club Membership" on the club details page.</td> <td>Registers the user as a prospective member for the club.</td> </tr> </tbody> </table>	Actor	System	Selects "Apply for Club Membership" on the club details page.	Registers the user as a prospective member for the club.	
Actor	System					
Selects "Apply for Club Membership" on the club details page.	Registers the user as a prospective member for the club.					
Exception condition/s:	If the application for club membership fails, display an error message.					

Use case name:	Manage events and documentation					
Scenario:	Administrator oversees and manages events and related documentation.					
Triggering event:	Administrator accesses the event management section.					
Brief Description:	Administrators can manage events and associated documentation.					
Actor/s:	Administrator					
Related use case/s:	Manage registration forms and approval, Manage e-certificates					
Stakeholder/s:	Administrator, Event Facilitator					
Precondition/s:	Administrator is logged in.					
Postcondition/s:	Administrator manages events and documentation.					
Flow of activities:	<table border="1"> <thead> <tr> <th>Actor</th> <th>System</th> </tr> </thead> <tbody> <tr> <td>Navigates to the event management section.</td> <td>Presents options for managing events and documentation.</td> </tr> </tbody> </table>	Actor	System	Navigates to the event management section.	Presents options for managing events and documentation.	
Actor	System					
Navigates to the event management section.	Presents options for managing events and documentation.					
Exception condition/s:	If the access to event management fails, display an error message.					

Use case name:	Manage registration forms and approval					
Scenario:	Administrator reviews and approves registration forms for events.					
Triggering event:	Administrator accesses the registration forms section.					
Brief Description:	Administrators can review and approve registration forms for events.					
Actor/s:	Administrator					
Related use case/s:	Manage events and documentation, Manage e-certificates					
Stakeholder/s:	Administrator, Event Facilitator					
Precondition/s:	Administrator is logged in.					
Postcondition/s:	Administrator manages registration forms and approvals.					
Flow of activities:	<table border="1"> <thead> <tr> <th>Actor</th> <th>System</th> </tr> </thead> <tbody> <tr> <td>Navigates to the registration forms section.</td> <td>Displays registration forms and approval options.</td> </tr> </tbody> </table>	Actor	System	Navigates to the registration forms section.	Displays registration forms and approval options.	
Actor	System					
Navigates to the registration forms section.	Displays registration forms and approval options.					
Exception condition/s:	If the approval process fails, display an error message.					

Use case name:	Manage e-certificates	
Scenario:	Administrator generates and manages electronic certificates for events.	
Triggering event:	Administrator accesses the e-certificates section.	
Brief Description:	Administrators can generate and manage electronic certificates for events.	
Actor/s:	Administrator	
Related use case/s:	Manage events and documentation, Manage registration forms and	

	approval	
Stakeholder/s:	Administrator, Event Facilitator	
Precondition/s:	Administrator is logged in.	
Postcondition/s:	Administrator manages e-certificates.	
Flow of activities:	Actor	System
	Navigates to the e-certificates section.	Provides options for generating and managing e-certificates.
Exception condition/s:	If the generation or management of e-certificates fails, display an error message.	

Use case name:	Submit event proposal	
Scenario:	Organization head submits a proposal for a new event.	
Triggering event:	Organization head accesses the event proposal submission section.	
Brief Description:	Organization head can submit proposals for new events.	
Actor/s:	Organization head	
Related use case/s:	Manage event proposal	
Stakeholder/s:	Organization head	
Precondition/s:	Organization head is logged in.	
Postcondition/s:	Organization head submits an event proposal.	
Flow of activities:	Actor	System
	Navigates to the event proposal submission section.	Provides a form for submitting event proposals.
Exception condition/s:	If the submission of the event proposal fails, display an error message.	

Use case name:	Manage event proposal	
Scenario:	Organization head manages submitted event proposals.	
Triggering event:	Organization head accesses the event proposal management section.	
Brief Description:	Organization head can review and manage submitted event proposals.	
Actor/s:	Organization head	
Related use case/s:	Submit event proposal	
Stakeholder/s:	Organization head	
Precondition/s:	Organization head is logged in.	
Postcondition/s:	Organization head manages event proposals.	
Flow of activities:	Actor	System
	Navigates to the event proposal management section.	Presents options for reviewing and managing event proposals.
Exception condition/s:	If the management of event proposals fails, display an error message.	
Use case name:	View event proposal	
Scenario:	Administrator views details of a submitted event proposal.	
Triggering event:	Administrator accesses the event proposal details section.	
Brief Description:	Administrator can view detailed information about a submitted event proposal.	
Actor/s:	Administrator	
Related use case/s:	Approve or deny proposal	
Stakeholder/s:	Administrator	
Precondition/s:	Administrator is logged in.	
Postcondition/s:	Administrator views details of a submitted event proposal.	
Flow of activities:	Actor	System
	Navigates to the event proposal	Displays detailed information

	details section.	about the submitted event proposal.
Exception condition/s:	If viewing the event proposal details fails, display an error message.	

Use case name:	Approve or deny proposal	
Scenario:	Administrator approves or denies a submitted event proposal.	
Triggering event:	Administrator accesses the event proposal approval section.	
Brief Description:	Administrators can approve or deny submitted event proposals.	
Actor/s:	Administrator	
Related use case/s:	View event proposal	
Stakeholder/s:	Administrator	
Precondition/s:	Administrator is logged in.	
Postcondition/s:	Administrator approves or denies a submitted event proposal.	
Flow of activities:	Actor Navigates to the event proposal approval section.	System Provides options for approving or denying the event proposal.
Exception condition/s:	If the approval or denial process fails, display an error message.	

Use case name:	Manage clubs	
Scenario:	Administrator oversees and manages clubs.	
Triggering event:	Administrator accesses the club management section.	
Brief Description:	Administrators can manage clubs, including application forms and members.	
Actor/s:	Administrator	
Related use case/s:	Manage application forms and approval, Manage club members	
Stakeholder/s:	Administrator, Club Manager	
Precondition/s:	Administrator is logged in.	
Postcondition/s:	Administrator manages clubs.	
Flow of activities:	Actor Navigates to the club management section.	System Presents options for managing clubs.
Exception condition/s:	If the access to club management fails, display an error message.	

Use case name:	Manage application forms and approval	
Scenario:	Administrator reviews and approves application forms for club membership.	
Triggering event:	Administrator accesses the club membership application forms section.	
Brief Description:	Administrators can review and approve application forms for club membership.	
Actor/s:	Administrator, Club Manager	
Related use case/s:	Manage clubs	
Stakeholder/s:	Administrator	
Precondition/s:	Administrator is logged in.	
Postcondition/s:	Administrator manages application forms and approvals.	
Flow of activities:	Actor Navigates to the club membership application forms section.	System Displays application forms and approval options.
Exception condition/s:	If the approval process fails, display an error message.	

Use case name:	Manage club members
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Scenario:	Club Manager manages members of a club.	
Triggering event:	Club Manager accesses the club member's section.	
Brief Description:	Club Manager can manage the members of a club.	
Actor/s:	Club Manager	
Related use case/s:	Manage clubs	
Stakeholder/s:	Club Manager, Administrator	
Precondition/s:	Club Manager is logged in.	
Postcondition/s:	Club Manager manages club members.	
Flow of activities:	Actor	System
	Navigates to the club member's section.	Displays options for managing club members.
Exception condition/s:	If the management of club members fails, display an error message.	

Use case name:	Scan QR code	
Scenario:	Attendance checker scans a QR code to record attendance.	
Triggering event:	Attendance checker accesses the QR code scanning section.	
Brief Description:	Attendance checkers can use QR codes to record attendance.	
Actor/s:	Attendance Checker	
Related use case/s:	Choose event, Manage attendance record	
Stakeholder/s:	Attendance Checker, User, Librarian	
Precondition/s:	Attendance Checker is logged in.	
Postcondition/s:	Attendance checker records attendance using QR code.	
Flow of activities:	Actor	System
	Navigates to the QR code scanning section.	Provides options for scanning QR codes.
Exception condition/s:	If the QR code scanning fails, display an error message.	

Use case name:	Choose event	
Scenario:	Attendance checker chooses the event for recording attendance.	
Triggering event:	Attendance checker accesses the event selection section.	
Brief Description:	Attendance checker chooses the event for recording attendance.	
Actor/s:	Attendance Checker	
Related use case/s:	Scan QR code	
Stakeholder/s:	Attendance Checker, User, Librarian	
Precondition/s:	Attendance Checker is logged in and has accessed the QR code scanning section.	
Postcondition/s:	Attendance checker selects the event for recording attendance.	
Flow of activities:	Actor	System
	Navigates to the event selection section.	Displays a list of events for selection.
Exception condition/s:	If event selection fails, display an error message.	

Use case name:	Manage attendance record	
Scenario:	Attendance checker views the list of attendance for the chosen event.	
Triggering event:	Attendance checker selects "View Attendance."	
Brief Description:	Attendance checker views the list of attendance for the chosen event.	
Actor/s:	Attendance Checker	
Related use case/s:	Scan QR code	

Stakeholder/s:	Attendance Checker, User, Librarian	
Precondition/s:	Attendance Checker has chosen the event and is in the attendance viewing section.	
Postcondition/s:	Attendance records are displayed for the chosen event.	
Flow of activities:	Actor	System
	Selects "View Attendance" for the chosen event.	Retrieves and displays the attendance records for the chosen event.
Exception condition/s:	If viewing attendance fails, display an error message.	

Use case name:	Generate monthly report	
Scenario:	Administrator generates a monthly report of events and attendance.	
Triggering event:	Administrator accesses the report generation section.	
Brief Description:	Administrators can generate a report summarizing events and attendance for a specific month.	
Actor/s:	Administrator	
Related use case/s:	None	
Stakeholder/s:	Administrator	
Precondition/s:	Administrator is logged in.	
Postcondition/s:	Administrator generates a monthly report.	
Flow of activities:	Actor	System
	Navigates to the report generation section.	Provides options for selecting the month and generates a report.
Exception condition/s:	If report generation fails, display an error message.	

Table 12. Use Case Description

5.5 Functional Requirements

Requirement #:	Requirement 1
Description:	The system allows the Administrator, Librarians, and Attendance Checker to access the system.
Rationale:	To secure the system.
Fit Criterion:	The Administrator, Librarians, and Attendance Checker must be able to access the System by providing the Username and password that the Administrator gave them. This will define the Member's level of access to the system.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 2
Description:	This module allows the Administrator to add Librarians, and Attendance Checker accounts.
Rationale:	To allow the Administrator to create an account in the system.
Fit Criterion:	The Administrator shall be able to input in the create account form.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 3
Description:	This module allows the Users and Organization Head create an account.
Rationale:	To allow the Users and Organization Head create an account by entering the required data in the system.
Fit Criterion:	The Users shall be able to input in the create account form.

Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 4
Description:	This module allows the system to validate usernames and email addresses to avoid duplications.
Rationale:	To allows the system to validate usernames and email addresses to avoid duplications in the system.
Fit Criterion:	The System shall be able to check and avoid duplication of usernames and email addresses.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 5
Description:	This module automatically generates QR Codes after the Administrator accepts the User's request for creating account.
Rationale:	To automatically generate QR Codes after the Administrator accepts the User's request for creating account in the system.
Fit Criterion:	The system shall be able automatically generate QR Codes after the Administrator accepts the User's request for creating account.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 6
Description:	This module allows the Administrator, Librarians, Attendance Checker, Organization Head, and Users view their account information.
Rationale:	To allow the Administrator, Librarians, Attendance Checker, Organization Head, and Users view their account information in the system.
Fit Criterion:	The Administrator, Librarians, Attendance Checker, Organization Head, and Users shall be able to view their account information.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 7
Description:	This module allows the Administrator, Librarians, Attendance Checker, Organization Head, and Users update their account.
Rationale:	To allow the Administrator, Librarians, Attendance Checker, Organization Head, and Users update their account in the system.
Fit Criterion:	The Administrator, Librarians, Attendance Checker, Organization Head, and Users shall be able to input in the update account form.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 8
Description:	This module automatically updates QR Codes when changing User's Information.
Rationale:	To automatically update QR Codes when changing User's Information in the system.
Fit Criterion:	The system shall be able automatically update QR Codes when changing User's Information.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5

Customer Dissatisfaction:	5
Priority:	5
Requirement #:	Requirement 9
Description:	This module allows the Administrator to delete Librarians and Attendance Checker accounts
Rationale:	To allow the Administrator delete Librarians and Attendance Checker account in the system.
Fit Criterion:	The Administrator shall be able to delete Librarians and Attendance Checker account.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 10
Description:	This module allows the Users and Organization Head to delete their account.
Rationale:	To allow the Users to delete their account in the system.
Fit Criterion:	The User shall be able to delete their account.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 11
Description:	This module allows the Users, Organization Head, Librarians, and Attendance Checker to recover their forgotten password account.
Rationale:	To allows the Users, Organization Head, Librarians, and Attendance Checker to recover their forgotten password account in the system.
Fit Criterion:	The Users, Organization Head, Librarians, and Attendance Checker shall be able to recover their account by sending email of authentication code on the account's email address.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 12
Description:	This module allows the Administrator to add events.
Rationale:	To allow the Administrator to add event in the system.
Fit Criterion:	The Administrator shall be able to input in the add event form.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 13
Description:	This module allows the Administrator to assign event facilitator/s for the event.
Rationale:	To allow the Administrator to assign events facilitator/s for the event in the system.
Fit Criterion:	The Administrator shall be able to click and choose people in the event facilitator list.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 14
Description:	This module allows the Administrator, Librarians, and Users to view the list of events.
Rationale:	To allow the Administrator, Librarians, and Users to view list of events in the system.

Fit Criterion:	The Administrator, Librarians, and Users shall be able to view list of events.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 15
Description:	This module allows the Administrator, Librarians, and Users to search events.
Rationale:	To allow the Administrator, Librarians, and Users to search events in the system.
Fit Criterion:	The Administrator, Librarians, and Users shall be able to search the list of all events.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 16
Description:	This module allows the Administrator, Librarians, and Users to narrow down events search results.
Rationale:	To allow the Administrator, Librarians, and Users to narrow down events search results in the system.
Fit Criterion:	The Administrator, Librarians, and Users shall be able to filter by clicking on filter options for narrow down events search results.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 17
Description:	This module allows the Administrator, Librarians, and Users to sort events search results based on different criteria.
Rationale:	To allow the Administrator, Librarians, and Users to sort events search results based on different criteria in the system.
Fit Criterion:	The Administrator, Librarians, and Users shall be able to sort events search results by clicking on sorting options.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 18
Description:	This module allows the Administrator to update events.
Rationale:	To allow the Administrator to update event in the system.
Fit Criterion:	The Administrator shall be able to input in the update event form.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 19
Description:	This module allows the Administrator to delete events.
Rationale:	To allow the Administrator to delete event in the system.
Fit Criterion:	The Administrator shall be able to delete event from the list.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 20
Description:	This module allows the Administrator and Event Facilitators to print list of events.

Rationale:	To allow the Administrator and Event Facilitators to print list of events in the system.
Fit Criterion:	The Administrator and Event Facilitators shall be able to print list of events.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 21
Description:	This module allows the Administrator to create registration forms for events.
Rationale:	To allow the Administrator to create registration forms for events in the system.
Fit Criterion:	The Administrator shall be able to input in the create registration forms for events--form.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 22
Description:	This module allows the Administrator and Event Facilitators to view the registration forms for events.
Rationale:	To allow the Administrator and Event Facilitators to view list of registration forms for events in the system.
Fit Criterion:	The Administrator and Event Facilitators shall be able to view registration forms for events.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 23
Description:	This module allows the Administrator to update registration forms for events.
Rationale:	To allow the Administrator to update registration forms for events in the system.
Fit Criterion:	The Administrator shall be able to input in the update registration forms—form for events.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 24
Description:	This module allows the Administrator to delete registration forms for events.
Rationale:	To allow the Administrator to delete registration forms for events in the system.
Fit Criterion:	The Administrator shall be able to delete registration from the list.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 25
Description:	This module allows the Administrator and Event Facilitators to print registration forms for events.
Rationale:	To allow the Administrator and Event Facilitators to print registration forms for events in the system.
Fit Criterion:	The Administrator and Event Facilitators shall be able to print registration forms for events.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5

Priority:	5
Requirement #:	Requirement 26
Description:	This module allows the User to fill up registration forms for events.
Rationale:	To allow the User to fill up registration forms for events in the system.
Fit Criterion:	The User shall be able to input in the registration forms for events.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5
Requirement #:	Requirement 27
Description:	This module allows the User to view the registration forms for events.
Rationale:	To allow the User to view list of registration forms for events in the system.
Fit Criterion:	The User shall be able to view registration forms for events.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5
Requirement #:	Requirement 28
Description:	This module allows the Users to apply as volunteer on event.
Rationale:	To allow the User to apply as volunteer on event in the system.
Fit Criterion:	The User shall be able to click the apply as volunteer button.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5
Requirement #:	Requirement 29
Description:	This module allows the Event Facilitators to approve registration forms.
Rationale:	To allow the Event Facilitators to approve registration forms for events in the system.
Fit Criterion:	The Event Facilitators shall be able to approve registration forms for events from the list.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5
Requirement #:	Requirement 30
Description:	This module allows the Event Facilitators to deny registration forms for events.
Rationale:	To allow the Event Facilitators to deny registration forms for events in the system.
Fit Criterion:	The Event Facilitators shall be able to deny registration forms from the list.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5
Requirement #:	Requirement 31
Description:	This module allows the User to receive notifications about their registration form for events.
Rationale:	To allow the User to receive notifications about their registration form for events in the system.
Fit Criterion:	The User shall be able to receive notifications about their registration form for events.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 32
Description:	This module allows the Administrator and Event Facilitator to view the Participant's Information who signed up on the event.
Rationale:	To allow the Administrator and Event Facilitator to view the Participant's Information who signed up on the event in the system.
Fit Criterion:	The Administrator and Event Facilitator shall be able to view the Participant's Information who signed up on the event from the participant records.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 33
Description:	This module allows the Administrator grant access on scanning QR code for attendance to Events and Volunteers.
Rationale:	To module allows the Administrator grant access on scanning QR code for attendance to Events and Volunteers in the system.
Fit Criterion:	The Administrator shall be able to input in the grant access form.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 34
Description:	This module allows the Event Facilitator and Volunteer to scan Participant's QR Code for event's attendance.
Rationale:	To allow the Event Facilitator and Volunteer scan Participant's QR Code for event's attendance.
Fit Criterion:	The Event Facilitator and Volunteer shall be able scan QR code in the QR scanner.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 35
Description:	This module allows the Administrator to add template of the certificate.
Rationale:	To allow the Administrator to add template of the certificate in the system.
Fit Criterion:	The Administrator and Event Facilitator shall be able to insert template of the certificate in the add certificate template form.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 36
Description:	This module allows the Administrator and Event Facilitator to view template of the certificate.
Rationale:	To allow the Administrator and Event Facilitator to view template of the certificate in the system.
Fit Criterion:	The Administrator and Event Facilitator shall be able to view the list of clubs.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 37
Description:	This module allows the Administrator to update template of the certificate.
Rationale:	To allow the Administrator to update template of the certificate in the system.
Fit Criterion:	The Administrator shall be able to update template of the certificate in the update certificate template form.

Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 38
Description:	This module allows the Administrator to delete template of the certificate.
Rationale:	To allow the Administrator to delete template of the certificate in the system.
Fit Criterion:	The Administrator shall be able to delete template of the certificate from the list.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 39
Description:	This module allows the Participant to add feedback on the event.
Rationale:	To allow the Participant to add feedback on the event in the system.
Fit Criterion:	The Participant shall be able to input on the event feedback form.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 40
Description:	This module automatically gives certificate on Participant after giving feedback on event.
Rationale:	To automatically gives certificate on Participant after giving feedback on event in the system.
Fit Criterion:	The Participant shall be able to download certificate.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 41
Description:	This module allows the Event Facilitator to add event documentation.
Rationale:	To allows the Event Facilitator to add event documentation in the system.
Fit Criterion:	The Administrator shall be able to input in add event documentation form.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 42
Description:	This module allows the Event Facilitator to update event documentation.
Rationale:	To allows the Event Facilitator to update event documentation in the system.
Fit Criterion:	The Administrator shall be able to input in update event documentation form.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 43
Description:	This module allows the Administrator and Event Facilitator to view event documentation.
Rationale:	To allows the Administrator and Event Facilitator to view event documentation in the system.
Fit Criterion:	The Administrator and Event Facilitator shall be able to view the event documentation records.
Originator:	Madelyn F. Candido

Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 44
Description:	This module allows the Administrator and Event Facilitator to delete event documentation.
Rationale:	To allow the Administrator and Event Facilitator to delete event documentation in the system.
Fit Criterion:	The Administrator and Event Facilitator shall be able to delete event documentation records from the list.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 45
Description:	This module allows the Organization Head to create event proposals.
Rationale:	To allow the Organization Head to create event proposals in the system.
Fit Criterion:	The Organization Head shall be able to input in the add event proposal form.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 46
Description:	This module allows the Organization Head to send event proposals to the Administrator.
Rationale:	To allow the Organization Head to send event proposals in the system to the Administrator.
Fit Criterion:	The Organization Head shall be able to submit event proposals to the Administrator.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 47
Description:	This module allows the Organization Head to view event proposals they sent to the Administrator.
Rationale:	To allow the Organization Head to view event proposals they sent to the Administrator in the system.
Fit Criterion:	The Organization Head shall be able to view event proposal they sent to the Administrator.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 48
Description:	This module allows the Organization Head to delete event proposals.
Rationale:	To allow the Organization Head to delete event proposals in the system.
Fit Criterion:	The Organization Head shall be able to delete event proposals.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 49
Description:	This module allows the Organization to receive notifications about their event proposal.
Rationale:	To allow the Organization to receive notifications about their event proposal in

	the system.
Fit Criterion:	The Organization shall be able to receive notifications about their event proposal.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 50
Description:	This module allows the Administrator to view the list of Organization who sent event proposal/s.
Rationale:	To allow the Administrator Facilitator to view the list of Organization who sent event proposal/s in the system.
Fit Criterion:	The Administrator shall be able to view the list of Organization who sent event proposal/s.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 51
Description:	This module allows the Administrator to view event proposals sent by the Organization.
Rationale:	To allow the Administrator to view event proposals sent by the Organization in the system.
Fit Criterion:	The Administrator shall be able to view event proposals sent by the Organization.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 52
Description:	This module allows the Administrator to approve event proposals.
Rationale:	To allow the Administrator to approve event proposals in the system.
Fit Criterion:	The Administrator and Event Facilitators shall be able to approve event proposals from the list.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 53
Description:	This module allows the Administrator to deny event proposals.
Rationale:	To allow the Administrator to deny event proposals in the system.
Fit Criterion:	The Administrator shall be able to deny event proposals from the list.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 54
Description:	This module allows the Administrator to block organization that spams event proposals.
Rationale:	To allow the Administrator to block organization that spams event proposals in the system.
Fit Criterion:	The Administrator shall be able to block organization.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 55
Description:	This module allows the Administrator to unblock organization that spams event proposals.
Rationale:	To allow the Administrator to unblock organization that spams event proposals in the system.
Fit Criterion:	The Administrator shall be able to unblock organization.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 56
Description:	This module allows the Administrator to add clubs.
Rationale:	To allow the Administrator to add clubs in the system.
Fit Criterion:	The Administrator shall be able to input in the add club form.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 57
Description:	This module allows the Administrator, Librarians, and Users to view the list of clubs.
Rationale:	To allow the Administrator, Librarians, and Users to view the list of clubs in the system.
Fit Criterion:	The Administrator, Librarians, and Users shall be able to view the list of clubs.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 58
Description:	This module allows the Administrator, Librarians, and Users to search clubs.
Rationale:	To allow the Administrator, Librarians, and Users to search clubs in the system.
Fit Criterion:	The Administrator, Librarians, and Users shall be able to search the list of all clubs.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 59
Description:	This module allows the Administrator, Librarians, and Users to narrow down club's search results.
Rationale:	To allow the Administrator, Librarians, and Users to narrow down club's search results in the system.
Fit Criterion:	The Administrator, Librarians, and Users shall be able to filter by clicking on filter options for narrow down club's search results.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 60
Description:	This module allows the Administrator, Librarians, and Users to sort clubs search results based on different criteria.
Rationale:	To allow the Administrator, Librarians, and Users to sort clubs search results based on different criteria in the system.
Fit Criterion:	The Administrator, Librarians, and Users shall be able to sort clubs search results by clicking on sorting options.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5

Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 61
Description:	This module allows the Administrator and Club Manager to update clubs.
Rationale:	To allow the Administrator and Club Manager to update club in the system.
Fit Criterion:	The Administrator and Club Manager shall be able to input in the update club form.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 62
Description:	This module allows the Administrator to delete clubs.
Rationale:	To allow the Administrator to delete clubs in the system.
Fit Criterion:	The Administrator shall be able to delete clubs from the list
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 63
Description:	This module allows the Administrator to create application forms for clubs.
Rationale:	To allow the Administrator to create application forms for clubs in the system.
Fit Criterion:	The Administrator shall be able to input in the create application forms for clubs --form.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5
Requirement #:	Requirement 64
Description:	This module allows the Administrator and Club Manager to view the application forms for clubs.
Rationale:	To allow the Administrator and Club Manager to view list of application forms for clubs in the system.
Fit Criterion:	The Administrator and Club Manager shall be able to view application forms for clubs.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 65
Description:	This module allows the Administrator to update application forms for clubs.
Rationale:	To allow the Administrator to update application forms for clubs in the system.
Fit Criterion:	The Administrator shall be able to input in the update application forms for clubs --form.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 66
Description:	This module allows the Administrator to delete application forms for clubs.
Rationale:	To allow the Club Manager to delete application forms for clubs in the system.
Fit Criterion:	The Club Manager shall be able to delete application from for clubs the list.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 67
Description:	This module allows the Administrator and Club Manager to print application forms for clubs.
Rationale:	To allow the Administrator and Club Manager to print application forms for clubs in the system.
Fit Criterion:	The Administrator and Club Manager shall be able to print application forms for clubs.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 68
Description:	This module allows the User to view the application forms for clubs.
Rationale:	To allow the User to view list of application forms for clubs in the system.
Fit Criterion:	The User shall be able to view application forms for clubs.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 69
Description:	This module allows the User to fill up application forms for clubs.
Rationale:	To allow the User to fill up application forms for clubs in the system.
Fit Criterion:	The User shall be able to input in the application forms for clubs.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 70
Description:	This module allows the Club Manager to approve application forms for clubs.
Rationale:	To allow the Club Manager to approve application forms for clubs in the system.
Fit Criterion:	The Club Manager shall be able to approve application forms for clubs from the list.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 71
Description:	This module allows the Club Manager to deny application forms for clubs.
Rationale:	To allow the Club Manager to deny application forms for clubs in the system.
Fit Criterion:	The Club Manager shall be able to deny application forms for clubs from the list.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 72
Description:	This module allows the Administrator and Club Manager to view the list of club members.
Rationale:	To allow the Administrator and Club Manager to view the list of club members in the system.
Fit Criterion:	The Administrator and Club Manager shall be able to view the list of club members.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 73
Description:	This module allows the Club member to view the list of club members.
Rationale:	To allow the Club member to view the list of club members in the system.
Fit Criterion:	The Club member shall be able to view list of club members.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 74
Description:	This module allows the User to receive notifications about their application form for clubs.
Rationale:	To allow the User to receive notifications about their application form for clubs in the system.
Fit Criterion:	The User shall be able to receive notifications about their application form for clubs.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 75
Description:	This module allows the Club member to leave clubs.
Rationale:	To allow the Club member to leave clubs in the system.
Fit Criterion:	The Club member shall be able to input in the leave club form.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 76
Description:	This module allows the Club Manager to remove club member.
Rationale:	To allow the Club Manager to remove club members in the system.
Fit Criterion:	The Club Manager shall be able to remove club members.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	4
Priority:	4

Requirement #:	Requirement 77
Description:	This module allows the User to receive notifications about removal of their membership in the club.
Rationale:	To allow the User to receive notifications about removal of their membership in the club in the system.
Fit Criterion:	The User shall be able to receive notifications about their removal of their membership in the club.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	3
Priority:	4

Requirement #:	Requirement 78
Description:	This module allows the Administrator to view the list of Librarians, Attendance Checker, Organization Head, and Users accounts.
Rationale:	To allow the Administrator to view the list of Librarians, Attendance Checker, Organization Head, and Users accounts in the system.
Fit Criterion:	The Administrator shall be able to view the list of Librarians, Attendance Checker, Organization Head, and Users accounts.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5

Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 79
Description:	This module allows the Administrator to search Librarians, Attendance Checker, Organization Head, and Users accounts.
Rationale:	To allow the Administrator search Librarians, Attendance Checker, Organization Head, and Users account in the system.
Fit Criterion:	The Administrator shall be able to search the list of all Librarians, Attendance Checker, Organization Head, and Users accounts.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 80
Description:	This module allows the Administrator to sort Librarians, Attendance Checker, Organization Head, and Users accounts based on different criteria.
Rationale:	To allow the Administrator to sort Librarians, Attendance Checker, Organization Head, and Users account in the system based on different criteria.
Fit Criterion:	The Administrator shall be able to sort the list of all Librarians, Attendance Checker, Organization Head, and Users accounts based on different criteria.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 81
Description:	This module allows the Attendance Checker to scan User's QR Code for library attendance.
Rationale:	To allow the Attendance Checker scan User's QR Code for library attendance.
Fit Criterion:	The Attendance Checker shall be able scan QR code in the QR scanner.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 82
Description:	This module allows the Administrator and Attendance Checker to view attendance record.
Rationale:	To allow the Administrator and Attendance Checker to view attendance record in the system.
Fit Criterion:	The Administrator and Attendance Checker shall be able to view attendance list or record.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	4
Priority:	4

Requirement #:	Requirement 83
Description:	This module allows the Users to view their attendance list.
Rationale:	To allow the Users to view their attendance list in the system.
Fit Criterion:	The User shall be able to view their attendance list.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	4
Priority:	4

Requirement #:	Requirement 84
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Description:	This module allows the Administrator and Attendance Checker to search attendance record information.
Rationale:	To allow the Administrator and Attendance Checker to view attendance record information in the system.
Fit Criterion:	The Administrator and Attendance Checker shall be able to view attendance list or record information.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	4
Priority:	4

Requirement #:	Requirement 85
Description:	This module allows the Administrator and Attendance Checker to print attendance record.
Rationale:	To allow the Administrator and Attendance Checker to print attendance record in the system.
Fit Criterion:	The Administrator and Attendance Checker shall be able to print attendance list or record.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	4
Priority:	4

Requirement #:	Requirement 86
Description:	This module allows the Administrator to view statistical reports by collecting relevant data from the system.
Rationale:	To allow the Administrator to view statistical reports by collecting relevant data from the system.
Fit Criterion:	The Administrator shall be able to view the list statistical reports.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 87
Description:	This module allows the Administrator to narrow down statistical reports.
Rationale:	To allow the Administrator to narrow down statistical reports in the system.
Fit Criterion:	The Administrator shall be able to filter by clicking on filter options for narrow down from the list.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 88
Description:	This module allows the Administrator to print statistical reports.
Rationale:	To allow the Administrator to print statistical reports in the system.
Fit Criterion:	The Administrator shall be able to print list statistical reports from the list.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5
Customer Dissatisfaction:	5
Priority:	5

Requirement #:	Requirement 89
Description:	This module allows the Administrator, Librarian, Event Facilitator, Club Manager, Organization Head, and Users log out their accounts.
Rationale:	To allow the Administrator, Librarian, Event Facilitator, Club Manager, Organization Head, and Users log out their accounts in the system.
Fit Criterion:	The Administrator, Librarian, Event Facilitator, Club Manager, Organization Head, and Users shall be able to click the logout button.
Originator:	Madelyn F. Candido
Customer Satisfaction:	5

Customer Dissatisfaction:	5
Priority:	5

Table 13. Functional Requirements

5.6 Non-Functional Requirements

- a. Look and Feel Requirements
 - The system shall maintain a consistent and intuitive user interface design across all modules to enhance user understanding and navigation.
 - The user interface shall be responsive to various screen sizes and devices.
 - The system shall provide clear visual feedback such as hover and button animations for better user interactions.
- b. Usability and Humanity Requirements
 - The color palette of the system shall be blue, red, and yellow.
 - The system shall implement an advance search feature that enables users to quickly and accurately locate events and clubs based on various criteria, including name of the event and club, date, description, and target sector.
 - The system shall maintain consistent and user-friendly terminology.
- c. Performance Requirements
 - The system shall have an average response time under 3 seconds for common interactions such as searching events to ensure efficient user experience.
 - The system shall be scalable to accommodate more events, clubs, and users to ensure long term events, clubs, and user base expand.
- d. Operational and Environmental Requirements
 - The system shall be compatible with the latest versions of popular web browsers (Chrome, Firefox, Safari, and Edge) to facilitate user access from various platforms.
 - Users shall be able to access the system with a minimum internet.
- e. Maintainability and Support Requirements
 - The codebase of the system needs to be modular to facilitate updates and changes without affecting the system as a whole.
 - To enable effective system maintenance and troubleshooting, comprehensive documentation including code documentation, user manuals, and system architectural guide must be provided.
 - Establish knowledge transfer procedures to guarantee that, even in the event of staff turnover, institutional knowledge and system expertise are maintained.
- f. Security Requirements
 - Enforce Role-Based Access Control to restrict system access based on user roles, ensuring that each user can only perform actions relevant to their responsibilities.
 - To prevent unwanted access to active sessions, use secure session management techniques like token validation and session timeouts.

g. Cultural Requirements

- Design the user interface with cultural sensitivity, avoiding potentially offensive symbols or color choices and incorporating culturally neutral and inclusive design elements.

h. Legal Requirements

- The system must implement safeguards to protect user privacy and secure personal information to comply with data protection laws (e.g., GDPR, HIPAA).
- Obtain explicit user consent for data processing activities and provide clear and comprehensive terms of service, ensuring transparency and legal compliance.
- Inform users about data collection, storage, and sharing procedures in a clear and compliant manner, all in accordance with applicable privacy laws.

5.7 Project Issues

5.7.1 Open Issues

Open issues for the City Library's events and club management system encompass uncertainties that could significantly impact the product's development and functionality. These uncertainties are explicitly stated to provide clarity on factors that require resolution. Examples include ongoing investigations into the compatibility of a new processor version for the system and potential government rule changes affecting responsibilities for motorway gritting. Additionally, issues related to feasibility studies on utilizing external databases and proposed changes in working hours for event drivers are highlighted.

These open issues serve as focal points for risk analysis, ensuring that potential challenges are acknowledged and addressed proactively. Throughout the requirements gathering process, it's crucial to surface questions that may arise from evolving user business needs or external changes in organizational contexts. The form for tracking open issues includes issue numbers, cross-references to affected requirements, summaries, involved stakeholders, and proposed actions for resolution. Regular updates and resolution of these issues contribute to the overall clarity and effectiveness of the project, aligning development efforts with evolving circumstances and requirements.

5.7.2 Off-the-Shelf Solutions

a. Ready-Made Products

To explore potential solutions, a list of existing products is provided, referencing any surveys conducted on these products. The motivation is to evaluate the feasibility of purchasing a solution rather than developing it in-house. Considerations include the possibility of acquiring existing or soon-to-be-available products. While confidence levels may vary at this stage, the list highlights likely products for further investigation.

b. Reusable Components

In the consideration of reusable components for the City Library's events and club management system, potential candidate components, either procured externally or developed in-house, are described. This section lists libraries that could serve as sources for components, emphasizing the motivation for reusing existing solutions rather than reinventing the wheel. The goal is to optimize efficiency and streamline development efforts through the strategic incorporation of pre-existing, proven components.

c. Products That Can Be Copied

This section outlines a list of other similar products or parts of products that could be legally copied or easily modified for integration into the City Library's system. The motivation is again centered around the principle of reuse rather than reinvention, seeking opportunities to leverage existing solutions that align with the project's requirements. Examples might include similar systems implemented by other libraries or organizations, where specifications or functionalities could be adapted to suit the specific needs of the City Library.

5.7.3 Risks

- Incomplete or Inaccurate data entry will result in errors and false information while organizing events or managing clubs.
- Lack of customization of the system may not adequately meet the unique needs of different clubs or events, leading to dissatisfaction among users.
- Mistakes made by users, deliberate manipulation, or technological issues could cause the system to record attendance incorrectly.

5.7.4 Waiting Room

Events and Clubs Management System encompasses requirements that won't be part of the initial product release. This includes various requirements at different levels of detail, such as advanced features, customization options, or integrations that exceed the scope of the current development cycle.

- Capture and Preserve Ideas: The Waiting Room aims to capture and preserve innovative ideas generated during the requirements discovery process, ensuring that they are not overlooked despite not being part of the current release.
- Backlog for Iterative Development: This serves as a backlog, facilitating iterative development by storing requirements for future consideration. It enables continuous improvement and evolution of the Event Management System.
- Avoid Idea Loss: The Waiting Room prevents the loss of valuable ideas by providing a structured space for documenting features, improvements, or integrations that may be explored in future releases.
- Sophistication and Time Constraints: Acknowledge that certain requirements may be beyond the sophistication or time constraints of the current release. The Waiting Room allows for a gradual approach to implementation in future versions.
- Stimulate Creativity: Encourage users and clients to contribute ideas freely, knowing that their suggestions are being taken seriously and will be stored for potential future implementation.
- Expectation Management: Clearly communicate that while these requirements won't be part of the initial product release, they are recognized, documented, and may be considered for inclusion in subsequent releases.

This Waiting Room Project Issue is crucial for proactive backlog management, idea preservation, and collaborative planning to enhance and refine the Event Management System over time.

Chapter 6 – System Design

6.1 Context Flow Diagram

DFD 0

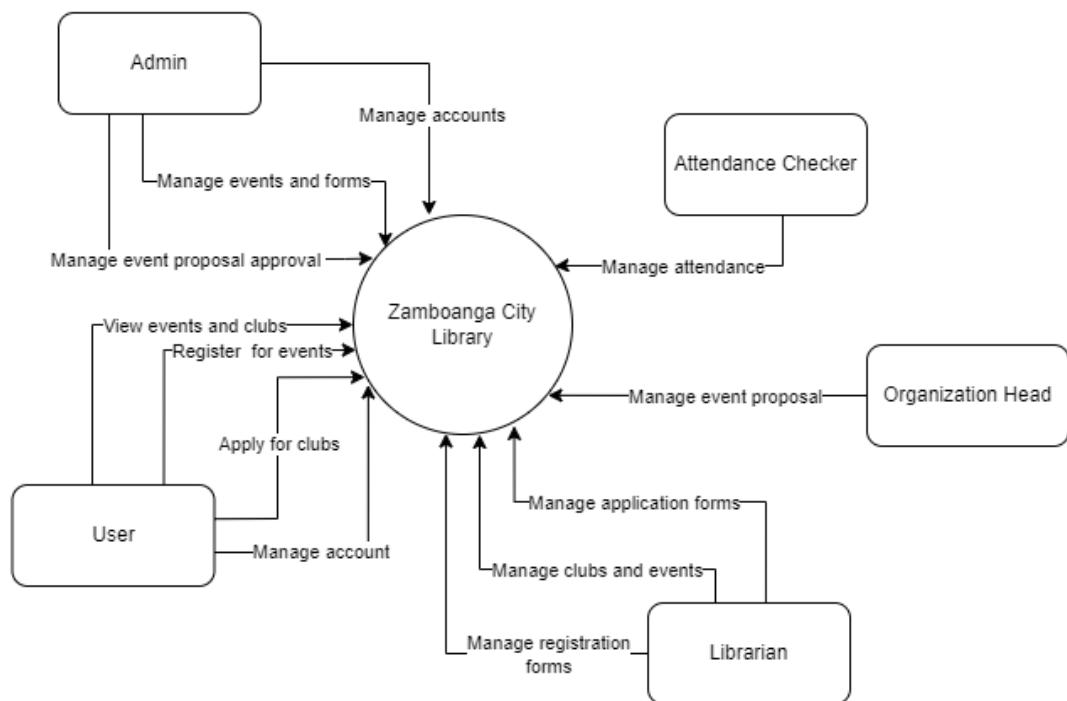


Figure 8. Control Flow Diagram

6.2 Data Flow Diagram

DFD 1

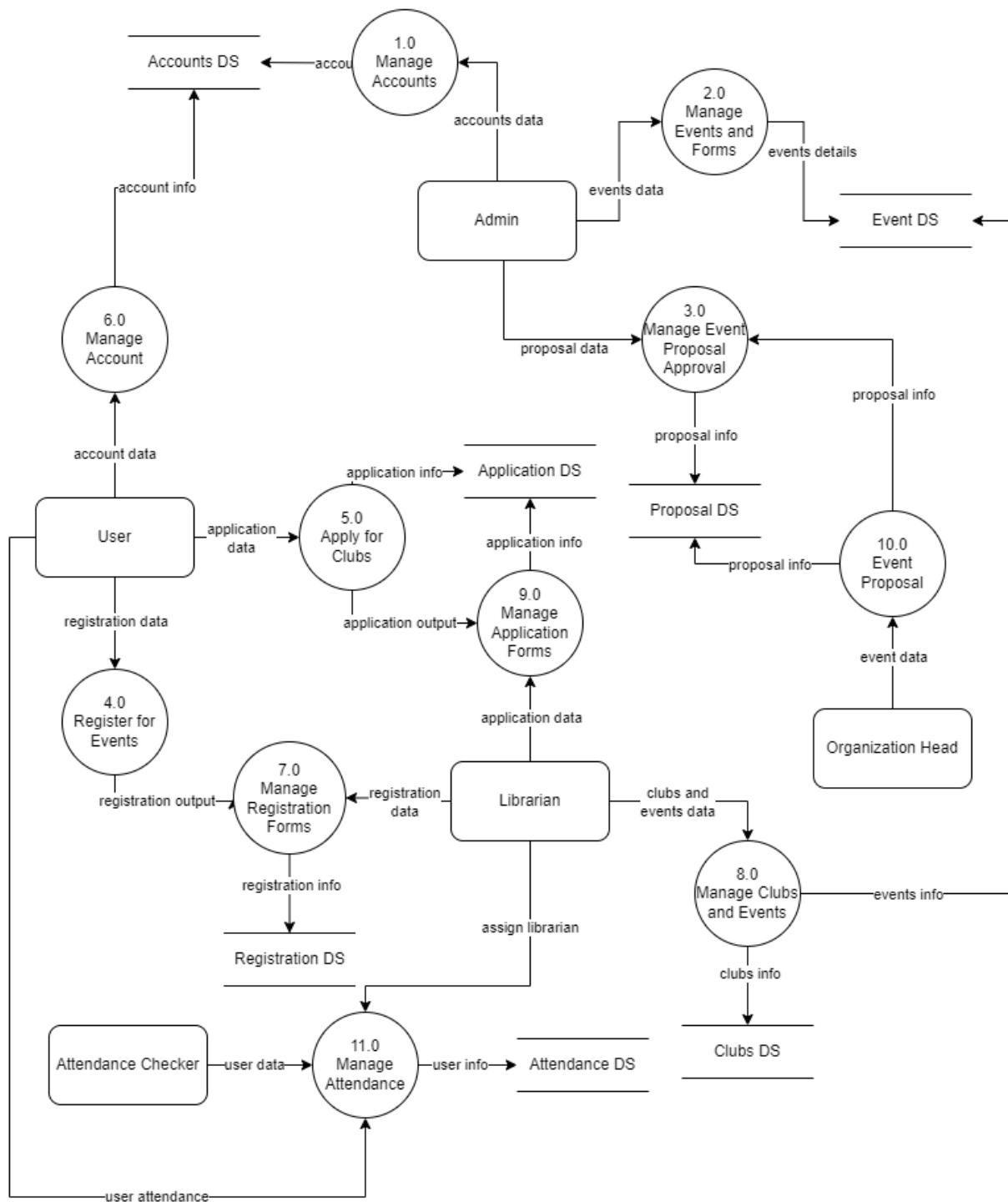


Figure 9. Data Flow Diagram 1

DFD 2

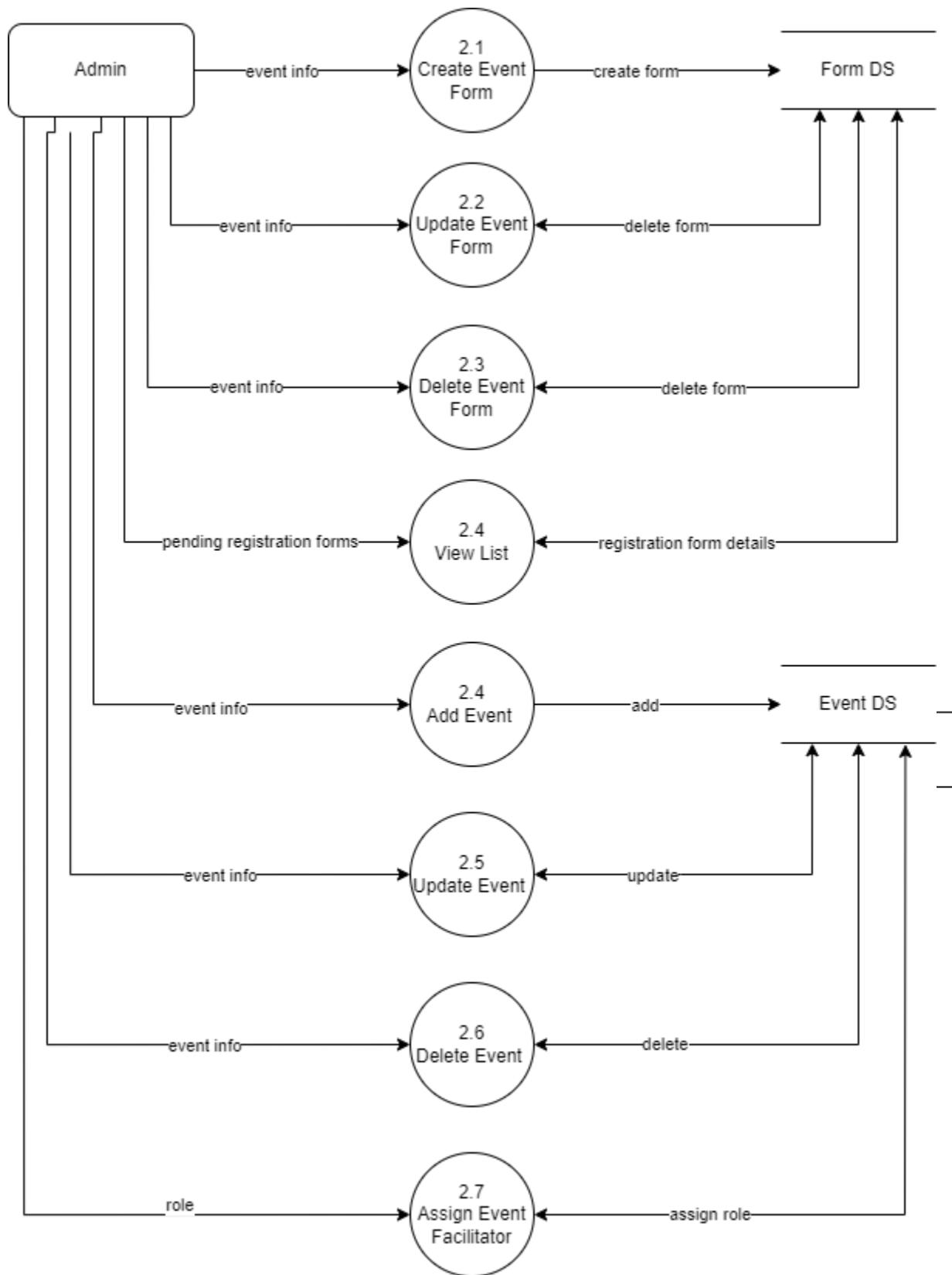


Figure 10. Data Flow Diagram 2.1

DFD 2 (Continuation)

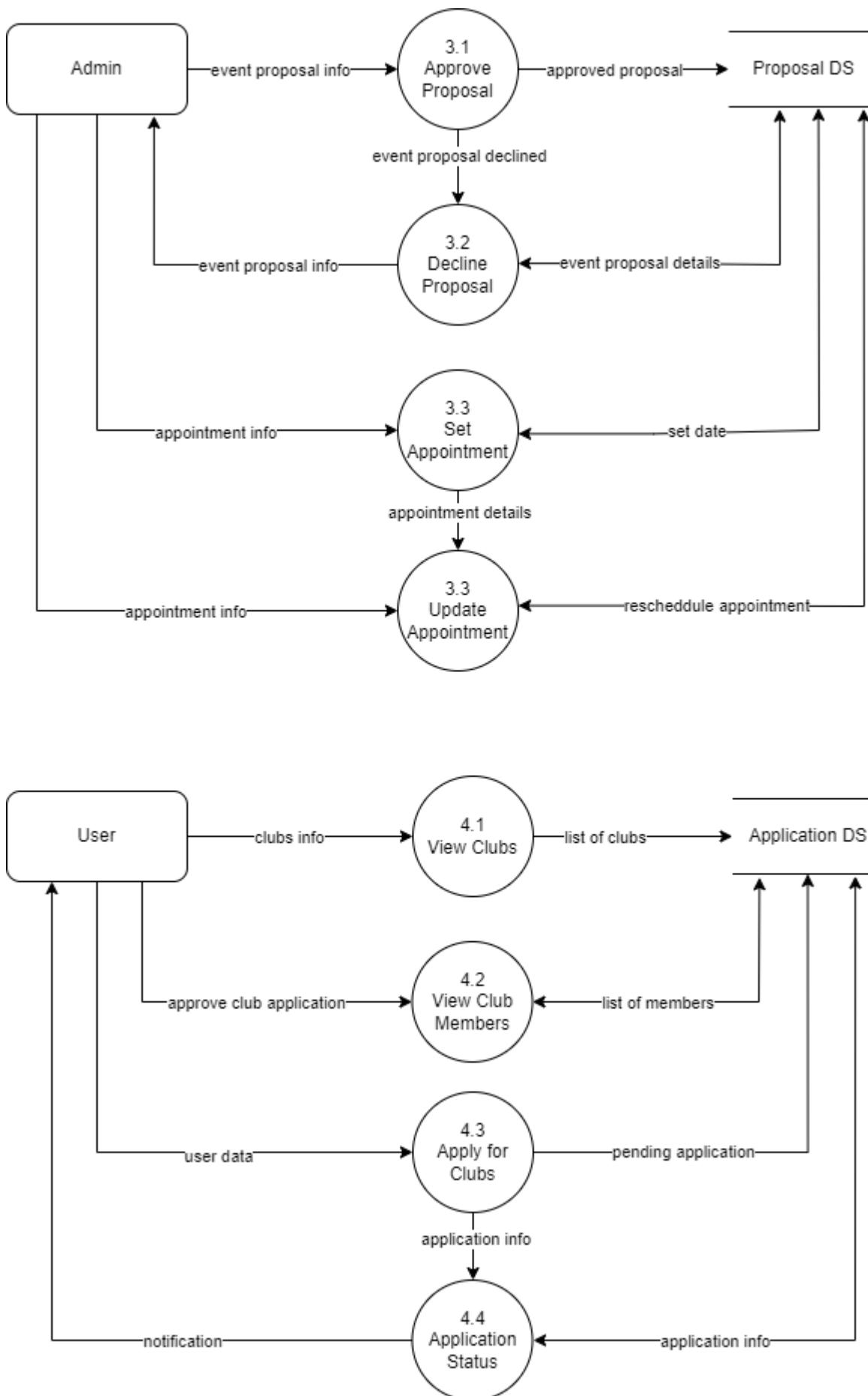


Figure 11. Data Flow Diagram 2.2

DFD 2 (Continuation)

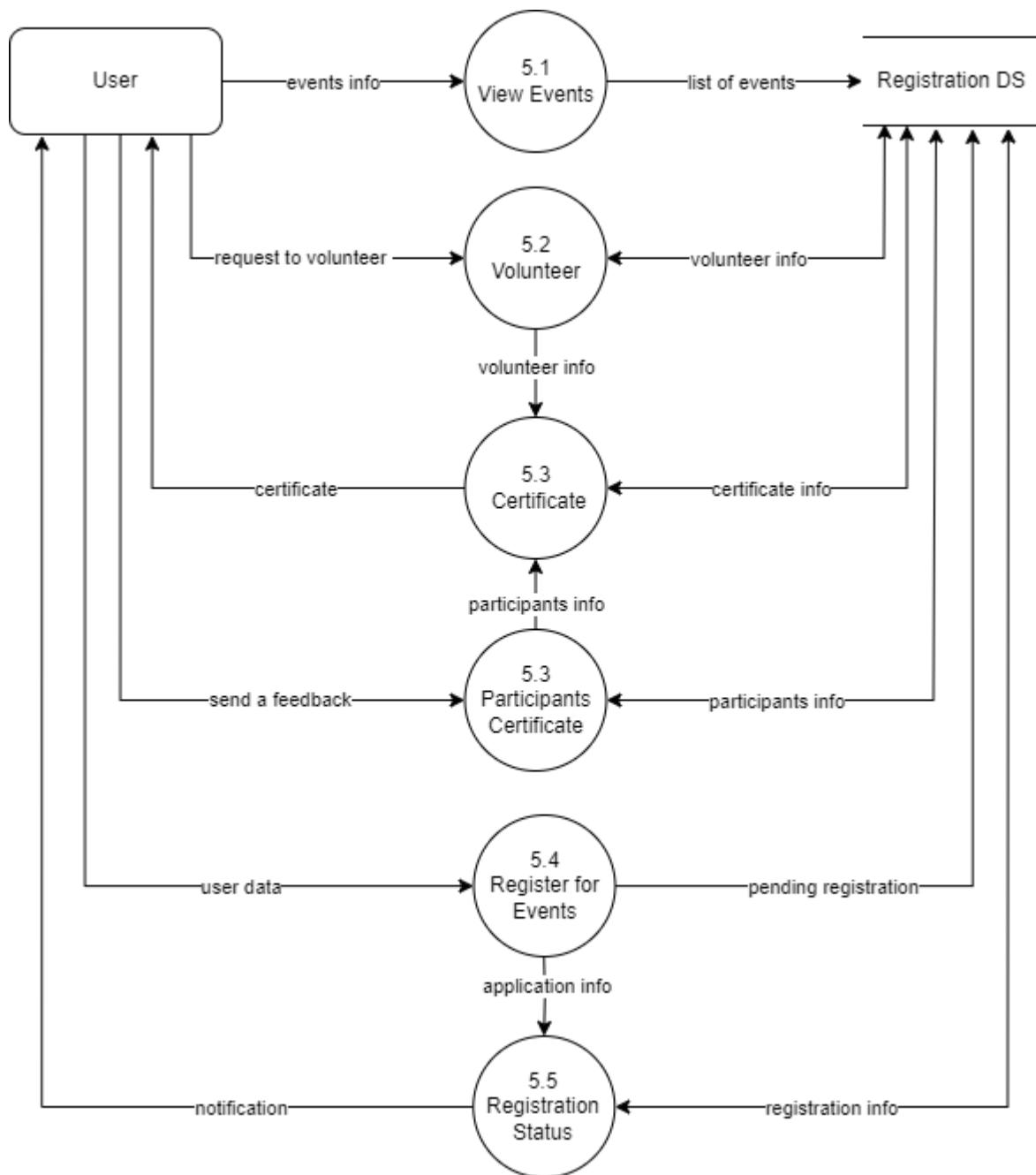


Figure 12. Data Flow Diagram 2.3

DFD 2 (Continuation)

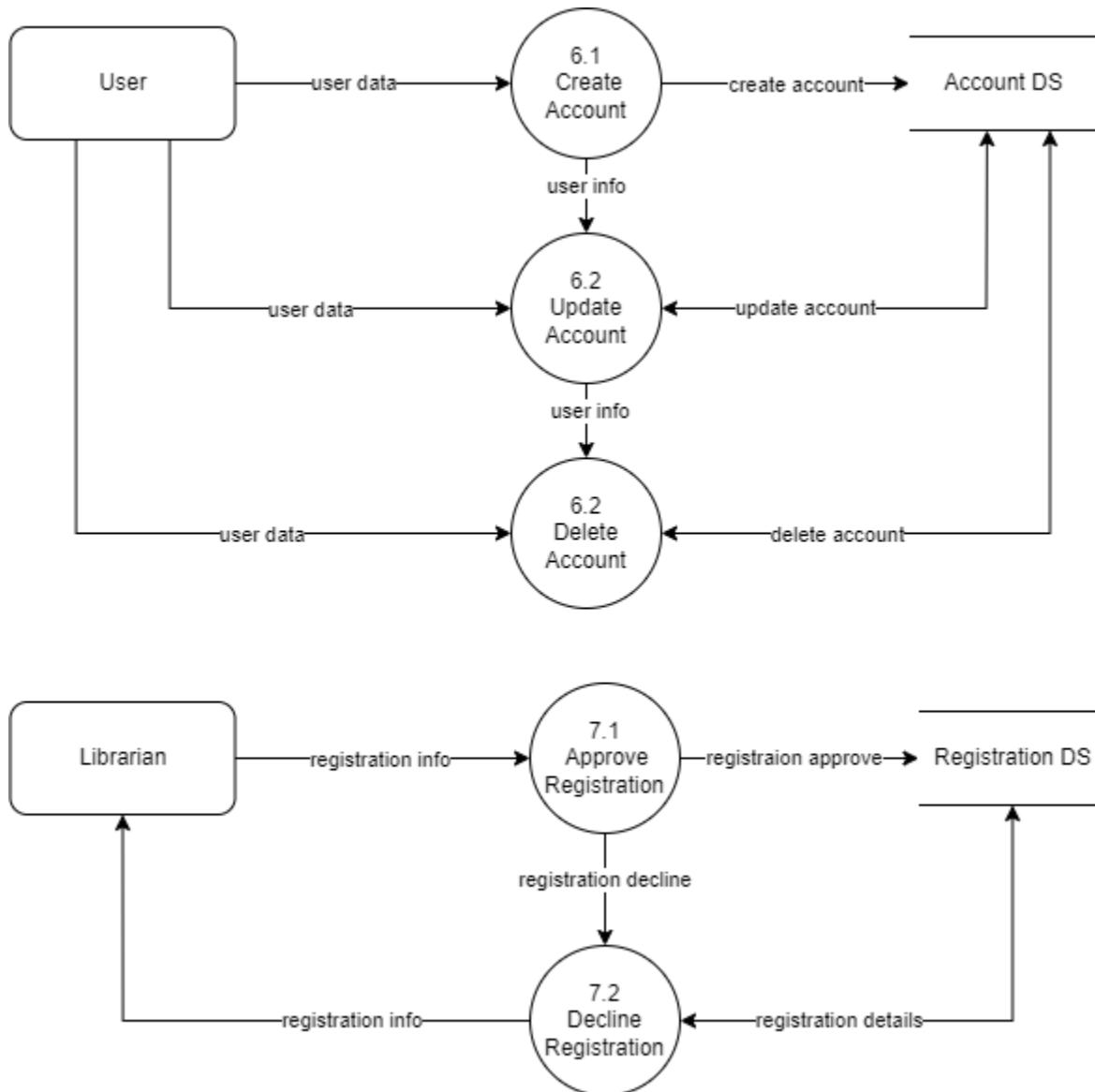


Figure 13. Data Flow Diagram 2.4

DFD 2 (Continuation)

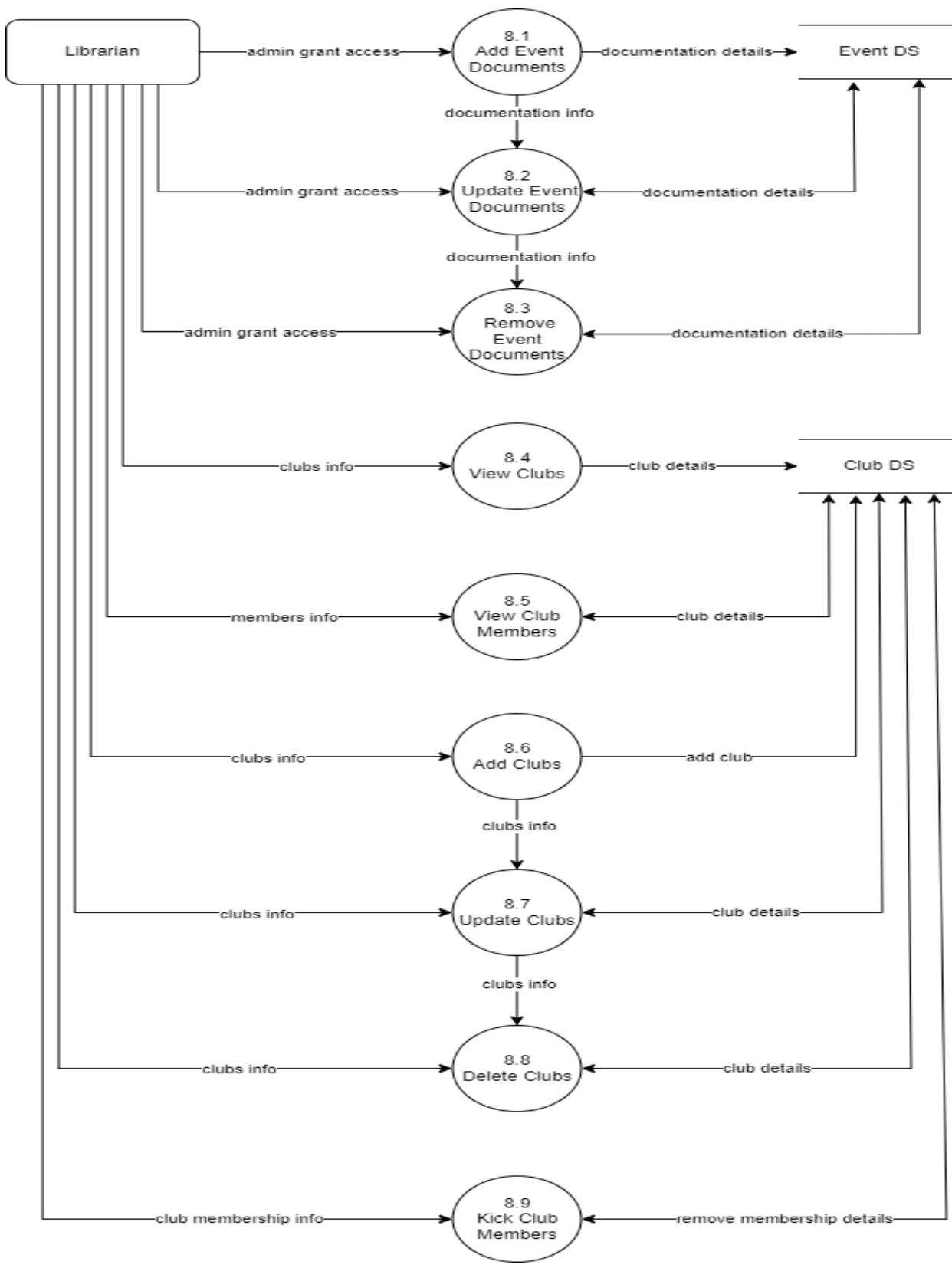


Figure 14. Data Flow Diagram 2.5

6.3 Data Model (ERD)

a. Conceptual ERD

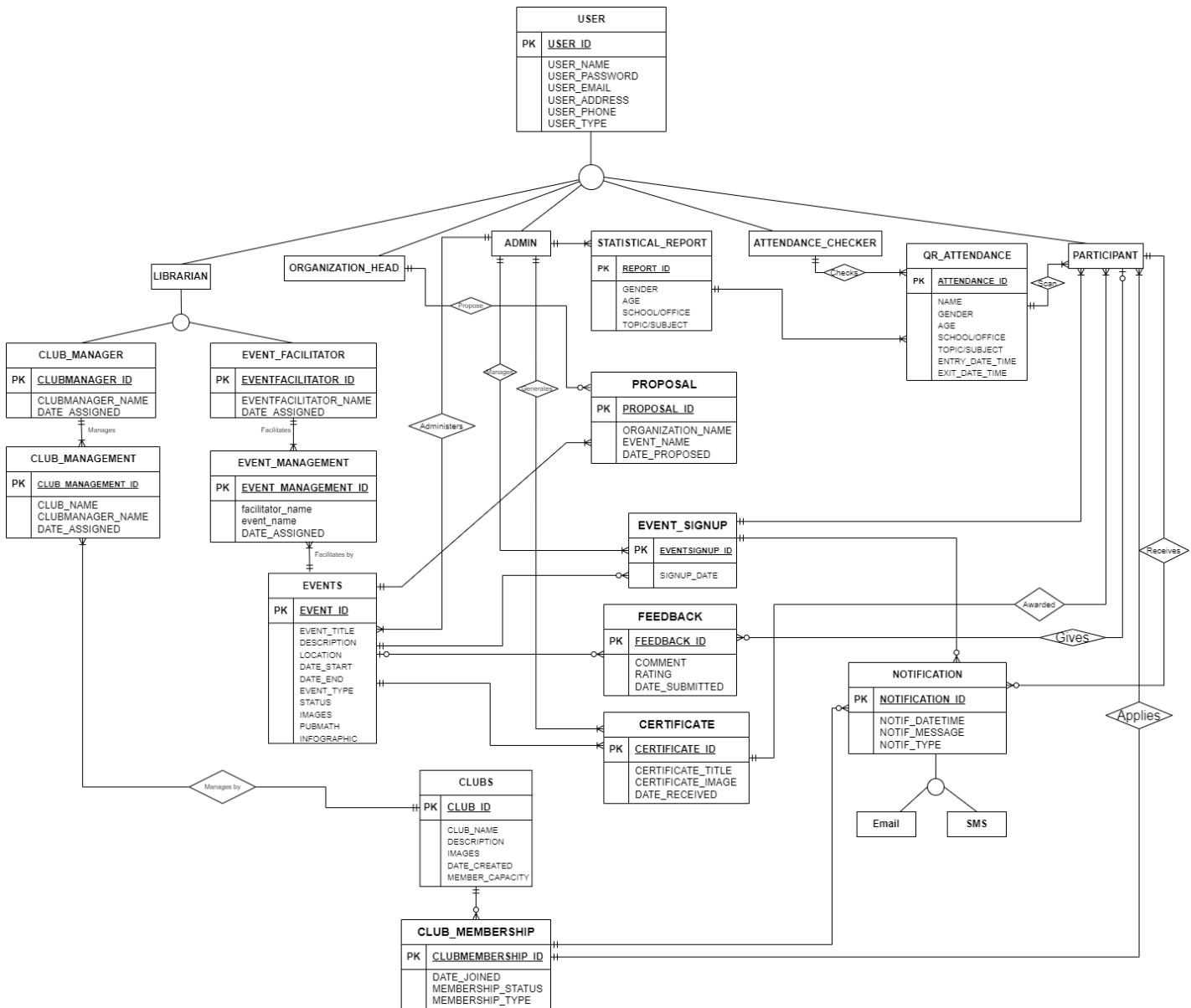


Figure 15. Conceptual ERD

EXPLANATION:

The Entity-Relationship Diagram (ERD) for the event management system consists of a network of interconnected entities capturing the various functionalities and relationships within the system. At its core are entities such as Admin, Club, Event, User, and associated entities representing sign-ups, feedback, notifications, and more. The Admin entity encompasses details of system administrators, including their username, password, contact information, and role. Clubs, which can be managed by club managers, are described by attributes like Club_name, Description, and associated multimedia resources. Users, representing individuals interacting with the system, have

their attributes, including login credentials and contact details. Users can join clubs, receive notifications, sign up for events, and provide feedback. The system facilitates event management with detailed attributes for events, including titles, descriptions, start and end dates, and sign-up deadlines. The system incorporates media elements with entities like Infographic, Pubmath, and Gallery, allowing admins and users to share visual content related to events and clubs. Certificates for events are managed through entities like Certificates, streamlining the process of generating certificates for participants. The ERD also includes entities for statistics report and QR code-based attendance tracking. The relationships in the ERD collectively define the intricate connections between various entities, reflecting the comprehensive functionalities and interactions within the event management system.

6.4 Proposed Prototype

- a. Admin, Librarian, and Attendance Checker Side

Admin Login

The screenshot shows the login interface for the Zamboanga City Library. On the left is a photograph of a person in a library, with the text "Read, Discover, Learn More." overlaid. On the right, the word "Admin" is displayed above two input fields: "Email" and "Password". Below these is a blue "Login" button. Red boxes highlight the input fields and the button, with circled numbers 1 and 2 indicating steps: 1 for entering credentials and 2 for logging in.

1. Fill the text field with the admin credentials.
2. Click the “Log In” button below to login the admin account.

Dashboard

The screenshot shows the 'Dashboard' page of the system. At the top, there is a header with the library logo and a user profile icon. Below the header, the word 'DASHBOARD' is centered in large capital letters. To the left of the dashboard area, there is a sidebar with navigation links: 'Dashboard' (selected), 'Clubs', 'Events', 'Users', 'Librarian', 'Attendance' (with a dropdown arrow), and 'Settings'. In the center, there is a horizontal bar with five colored boxes representing different metrics: 'Users' (red, value 05), 'Clubs' (blue, value 03), 'Upcoming Events' (green, value 01), 'Pending Proposal' (orange, value 00), and 'Logged In' (purple, value 02). Below this bar, a red box highlights the 'Daily Activities' link, which is currently selected and shows a value of 6. The main content area below the bar is currently empty.

1. This displays the number of users registered into the system.
2. This displays the number of clubs that the system has.
3. This displays the total upcoming events in the system.
4. This displays the total pending event proposal sent by the organizations.
5. This displays the number of users logged in daily.
6. This displays the daily activities within the system.

Admin Profile

The screenshot shows the 'Admin Profile' page. At the top, there is a header with the library logo and a user profile icon. Below the header, the word 'Profile' is centered in large capital letters. To the left of the profile area, there is a sidebar with navigation links: 'Dashboard' (selected), 'Clubs', 'Events', 'Users', 'Librarian', 'Attendance' (with a dropdown arrow), and 'Settings'. In the center, there is a large red box highlighting the profile section. It shows a circular profile picture of a woman named Madelyn Candido, followed by her name 'Madelyn Candido' and title 'Administrator'. Below this, there is a table with user information:

Username	Madelyn_01
Email	madelyn@gmail.com
Contact No	09068171700
Birth Date	July 10, 1987
Gender	Female
Position	Head Librarian

At the top right of the profile section, there is a 'Logout' button. Above the 'Logout' button, there is a small red box containing a 'Profile' link and a 'Logout' link. A red circle with the number 1 is placed above the 'Logout' link. To the right of the profile section, there is a red box containing a blue 'Update' button. A red circle with the number 4 is placed above the 'Update' button. A red circle with the number 3 is placed to the right of the 'Update' button.

1. Click the dropdown icon to
2. Click the “Profile” to navigate to the admin profile settings.
3. This displays the information of the administrator.
4. Click the “Update” button to update the administrator.

Updating Admin

The screenshot shows the 'Zamboanga City Library' dashboard with a sidebar containing links: Dashboard, Clubs, Events, Users, Librarian, Attendance (with a dropdown arrow), and Settings. The main area displays a profile for 'Madelyn Candido' (Administrator). The profile includes a photo, the name 'Madelyn Candido', and the title 'Administrator'. Below this, there is a form for updating details. The form fields are grouped into two columns: Name (First name: Madelyn) and Last name (Candido), Username (Madelyn_01), Contact No (09068171700), Email (madelyn@gmail.com), Gender (Female), Birth Date (07/10/1987), and Position (Head Librarian). A red box surrounds the entire update form. Two numbers are overlaid: '1' points to the 'Done' button at the top right of the form, and '2' points to the 'Edit Profile' link just above the photo.

1. The admin may update their details within these text fields.
2. Click the done button to update the details.

Clubs

The screenshot shows the 'Clubs' section of the library management system. On the left is a sidebar with links: Dashboard, Clubs (which is selected), Events, Users, Librarian, Attendance, and Settings. The main area has a header 'Clubs'. A table lists one club: 'Library Scavenger Hunt' (2 members, managed by Carmelita Agustin). The table includes columns for club name, member count, manager, and edit/delete icons. A red box highlights the table, and numbered circles (1-7) point to specific UI elements: 1 points to the table; 2 points to the club title; 3 points to the dropdown menu; 4 points to the search bar; 5 points to the edit icon; 6 points to the delete icon; and 7 points to the 'Add' button.

1. This displays the number of clubs registered and their information within the system.
2. Click the club title to view more of the club's information.
3. This is for sorting.
4. You can search for the clubs using the search feature.
5. Click the edit icon to update the club.
6. Click the delete icon to delete the club.
7. Click the "Add" button to add clubs.

Club Overview

The screenshot shows the 'Club Overview' page for the 'Zamboanga City Library'. The left sidebar has 'Clubs' selected. The main area shows a club named 'Library Scavenger Hunt' with a description: 'Our library scavenger hunt is a brilliant way to get the kids involved at the library and help them discover everything that's on offer. Print a page for each child, give them a pencil, and off they go!'. Below the description is a table of members:

#	Name	Role	Email address	Contact no	Gender
1	Carmelita Agustin	Club Manager		09269058990	Female
Members					
1	Fred Anthony Yu	Member	fredu@gmail.com	09513037043	Male
2	Christiana Bagotao	Member	christiana@gmail.com	09231001233	Female

1. This displays the information of the club.
2. Click the back button to navigate back.

Add Club

The screenshot shows the 'Add Club' page for the 'Zamboanga City Library'. The left sidebar has 'Clubs' selected. The main area has a form to fill in:

Club name:

Club Description:

Club Manager:

Add

1. Fill in these text fields.
2. Click the "Add" button to add club after filling in the text fields.

Update Club

The screenshot shows the 'Update Club' page. On the left is a sidebar with links: Dashboard, Clubs (which is selected), Events, Users, Librarian, Attendance (with a dropdown arrow), and Settings. The main area has a title 'Update Club' with a back arrow. It contains four input fields: 'Club name' (Library Scavenger Hunt), 'Club Description' (Our library scavenger hunt is a brilliant way to get the kids involved at the library and help them discover everything that's on offer. Print a page for each child, give them a pencil, and off they go!), 'Club Manager' (Carmelita Agustin), and a 'Done' button. A red box surrounds the entire input area, and a red circle is placed over the 'Done' button.

1. The admin may update the club's information within these text fields.
2. Click the "Done" button to update the details.

Events

The screenshot shows the 'Event List' page. The sidebar includes: Dashboard, Clubs, Events (selected), Users, Librarian, Attendance (with a dropdown arrow), and Settings. The main area has a title 'Event List' with a back arrow. It features a search bar ('Search') with a dropdown ('Default') and a sorting dropdown ('Sort by'). Below is a table with columns: Event Title, Host, Facilitator, Date, and Action. The first row shows 'Character Dress-Up Day', 'Host Name', 'Carmelita Agustín', '12/10/2023', and three action icons: a checkmark, a trash can, and a pencil. A red box surrounds the table area, and numbered circles point to specific elements: 1 points to the table header, 2 points to the search bar, 3 points to the sort dropdown, 4 points to the checkmark icon, 5 points to the trash can icon, and 6 points to the 'Add' button.

Event Title	Host	Facilitator	Date	Action
Character Dress-Up Day	Host Name	Carmelita Agustín	12/10/2023	<input checked="" type="checkbox"/>

1. This displays the number of events registered and their information within the system.
2. Click the event title to view more of the event's information.
3. This is for sorting.

4. You can search for the events using the search feature.
5. Click the edit icon to update the event.
6. Click the delete icon to delete the event.
7. Click the “Add” button to add events.

Event Overview

The screenshot shows the 'Event List' page of the Zamboanga City Library application. On the left, a sidebar menu includes 'Dashboard', 'Clubs', 'Events' (which is selected and highlighted in grey), 'Users', 'Librarian', 'Attendance', and 'Settings'. The main area is titled 'Event List' and contains a single event entry. The event details are as follows:

- Title:** Character Dress-Up Day
- Host:** Host Name
- Facilitator:** Carmelita Agustin
- Date:** 12/10/2023
- Description:** Have your students go to the library dressed up as their favorite book characters. Library teachers could come up with a standard library theme for students, or they can pick their characters on their own. How fun!

A red box highlights the entire event entry, and a red circle with the number '1' is positioned at the top right corner of this box. At the bottom right of the event card, there is an 'Action' button with a pen icon and a trash bin icon.

1. This is the overview of the event.

Add Event

The screenshot shows the 'Add Event' page of the Zamboanga City Library application. The sidebar menu is identical to the previous screen. The main form is titled 'Add Event' and contains the following fields:

- Title**: A text input field with a red border and a red circle with the number '1' at its top right corner.
- Description**: A large text area for entering event details.
- Host**: A text input field.
- Facilitator**: A dropdown menu with the option 'Select'.
- Date**: A date input field with the placeholder 'mm/dd/yy'.

At the bottom of the form is a blue 'Add' button with a red border and a red circle with the number '2' at its bottom right corner.

1. Fill in these text fields.
2. Click the “Add” button to add event after filling in the text fields.

Update Event

Zamboanga City Library

Dashboard Clubs Events Users Librarian Attendance Settings

← Back

Title
Character Dress-Up Day

Description
Have your students go to the library dressed up as their favorite book characters. Library teachers could come up with a standard library theme for students, or they can pick their characters on their own. How fun!

Host
Host Name

Facilitator
Carmelita Agustin

Date
12/10/2023

Done

1. The admin may update the events information within these text fields.
2. Click the “Done” button to update the details.

Users

The screenshot shows the 'Users' section of the library's website. On the left, a sidebar lists navigation options: Dashboard, Clubs, Events, Users (which is selected and highlighted in grey), Librarian, Attendance, and Settings. The main content area has a title 'Users' and a search bar with three dropdown menus: 'All Gender' (set to 'All'), 'Default' (set to 'Default'), and a search input field. A red box highlights the search area with numbered callouts 1 through 5. Below the search bar is a table listing five users:

Name	ID	Email address	Contact no	Gender	Occupation	Sector	more
Fred Anthony Yu	1231	fredyu@gmail.com	09513037043	Male	Student	WMSU	more
Charlyn Elorde	1232	chaelorde@gmail.com	09673412234	Female	Student	WMSU	more
Qhadaff Annuarie	1233	qhadaff@gmail.com	09717345174	Male	Student	WMSU	more
Christiana Bagotao	1234	christiana@gmail.com	09231001233	Female	Student	WMSU	more
Kim Badilles	1235	kimbadilles@gmail.com	09231247896	Male	Student	WMSU	more

1. This displays the number of users registered and their information within the system.
2. You can search for users using the search feature.
3. This is for sorting.
4. This is for filtering.
5. Click the “more” button to view the user’s recent and past activities.

Librarians

The screenshot shows a web-based application for managing librarians. On the left, a sidebar lists navigation options: Dashboard, Clubs, Events, Users, Librarian (which is selected and highlighted in grey), Attendance (with a dropdown arrow), and Settings. The main content area has a title "Librarian". At the top right are a bell icon, a user profile picture, and a dropdown menu. Below the title is a search bar with a dropdown for "Designation" set to "All Designation" and a search input field. A red box labeled "1" surrounds the search bar. To its left is a blue button labeled "Add" with a red box labeled "7" indicating seven new entries. A red box labeled "2" surrounds the search bar and the "Add" button. Below these are two rows of librarian data in a table:

Name	Username	Designation	Contact no	Action
Carmelita Agustin	Carmelita_01	Librarian II	09269058990	<input checked="" type="checkbox"/> 5 6
Rechelda Patrimonio	Rechelda_02	Librarian III	09124700324	7 8

A red box labeled "3" surrounds the table header. A red box labeled "4" surrounds the "Default" dropdown. A red box labeled "5" surrounds the edit icon in the first row's action column. A red box labeled "6" surrounds the delete icon in the first row's action column. A red box labeled "7" surrounds the edit icon in the second row's action column. A red box labeled "8" surrounds the delete icon in the second row's action column.

1. This displays the number of librarians registered and their information within the system.
2. You can search for librarian using the search feature.
3. You can find a specific librarian using the designation sorting.
4. This is for sorting.
5. Click the edit icon to update the librarian details.
6. Click the delete icon to delete the librarian's account.
7. Click the "Add" button to add librarian.

Update Librarian

Zamboanga City Library

Dashboard Clubs Events Users Librarian Attendance Settings

Update Librarian

First Name: Carmelita
Last Name: Agustin
Contact No: 09269058990
Role: Librarian II
Username: Carmelita_01
Password:

Done

2. The admin may update the librarian's information within these text fields.

2. Click the "Done" button to update the details.

Add Librarian

Zamboanga City Library

Dashboard Clubs Events Users Librarian Attendance Settings

Add Librarian

First Name: [empty]
Last Name: [empty]
Contact No: [empty]
Designation: Select Designation
Username: [empty]
Password: [empty]

Add

1. Fill in these text fields.

2. Click the “Add” button to add librarian after filling in the text fields.

Attendance

The screenshot shows the "Attendance List" page. On the left is a sidebar with links: Dashboard, Clubs, Events, Users, Librarian, **Attendance**, and Settings. The main area has a title "Attendance List" and a table with columns: #, Name, Purpose, Date, Time, and Time Leave. Two rows of data are shown: Fred Anthony Yu (Study, 11/20/2023, 09:30:35, 11:49:56) and Charllyn Elorde (Event, 11/20/2023, 01:05:26, 04:31:50). At the top right are a "Default" dropdown, a search input field, and a "Print" button. A red box surrounds the entire table area. Numbered callouts point to specific elements: 1 points to the table header, 2 points to the search input, 3 points to the "Default" dropdown, and 4 points to the "Print" button.

#	Name	Purpose	Date	Time	Time Leave
1	Fred Anthony Yu	Study	11/20/2023	09:30:35	11:49:56
2	Charllyn Elorde	Event	11/20/2023	01:05:26	04:31:50

1. This displays the attendance of the users and participants within the system.
2. You can search for users or participants attendance using the search feature.
3. This is for sorting.
4. Click the “print” button to print the attendance list.

Attendance Checker

The screenshot shows the "Attendance Checker" page. On the left is a sidebar with links: Dashboard, Clubs, Events, Users, Librarian, **Attendance**, and Settings. The main area has a title "Attendance Checker" and a table with columns: Name, Username, Contact no, and Action. One row of data is shown: Manong Guard (guardme, 09523475231). At the top right are a "Default" dropdown, a search input field, and an "Add" button. A red box surrounds the entire table area. Numbered callouts point to specific elements: 1 points to the "Attendance" link in the sidebar, 2 points to the table header, 3 points to the "Default" dropdown, 4 points to the search input, 5 points to the checkbox in the "Action" column, and 6 points to the trash icon in the "Action" column.

Name	Username	Contact no	Action
Manong Guard	guardme	09523475231	<input checked="" type="checkbox"/>

1. Click the drop down icon beside the attendance in the side panel to locate the attendance checkers account management.
2. This displays the number of attendance checker registered and their information within the system.
3. You can search for the attendance checker using the search feature.
4. This is for sorting.
5. Click the edit icon to update the attendance checker details.
6. Click the delete icon to delete the attendance checker account.
7. Click the “Add” button to add attendance checker.

Add Attendance Checker

The screenshot shows the 'Add Checker' form. On the left, a sidebar lists navigation options: Dashboard, Clubs, Events, Users, Librarian, Attendance (which is selected and has a dropdown arrow), and Settings. The main area is titled 'Add Checker' with a 'Back' link. It contains five text input fields: 'First Name', 'Last Name', 'Contact No', 'Username', and 'Password'. Below these fields is a blue 'Add' button. A red box surrounds the entire input section, and a red circle with the number 1 is placed over the 'First Name' field. Another red box surrounds the 'Add' button, and a red circle with the number 2 is placed over it.

1. Fill in these text fields.
2. Click the “Add” button to add attendance checker after filling in the text fields.

Update Attendance Checker

Zamboanga City Library

Update Checker

First Name 1
Manong

Last Name
Guard

Contact No
09523475231

Username
guardme

Password

Done 2

1. The admin may update the attendance checker's information within these text fields.
2. Click the "Done" button to update the details.

Settings

Zamboanga City Library

Settings

Notifications 1

Privacy 2

Accounts 3

1. This is the notification settings of the system.
2. This is the privacy settings of the system.
3. This is the management accounts settings of the system.

Notification

The screenshot shows the 'Notification' page of the Zamboanga City Library system. On the left is a sidebar with links: Dashboard, Clubs, Events, Users, Librarian, Attendance (with a dropdown arrow), and Settings. The main area has a back button labeled '← Notification'. A red box highlights the notification list. Each notification card contains a timestamp, a message, and a 'Mark as read' button. A red circle with the number '2' is at the top right of the list. A red box highlights the 'Mark all as read' button at the bottom left of the list. A red circle with the number '3' is next to it. A red box highlights the 'Delete' button at the bottom right of the list. A red circle with the number '5' is next to it.

1. Clicking the notification bell icon beside the admin's profile picture can navigate to the notification page.
2. This displays all the notifications within the system.
3. By clicking the "mark as read" can automatically read the notification without viewing the details.
4. By clicking the "mark all as read" can automatically mark read all the notifications without viewing the details.
5. Click "delete" to delete a specific notification.

Delete Notification

The screenshot shows the 'Notification' page with a sidebar and a back button. A red box highlights the first notification card, which has a checkbox next to its timestamp. A red circle with the number '4' is at the top right of the list. A red box highlights the 'Cancel' button at the bottom left of the list. A red circle with the number '3' is next to it. A red box highlights the 'Delete' button at the bottom right of the list. A red circle with the number '2' is next to it.

1. Click the checkbox icon to select a specific notification to delete.
2. Click “delete” to delete a notification.
3. Click “cancel” to cancel the delete.
4. Click the back icon to go back to the dashboard.

b. User, Organization Head, and Attendance Checker

Create Account – User

Zamboanga City Library

Last Name

First Name

Email

Password

Confirm Password

By signing Up, I agree with [terms and conditions](#).

Already have an account? [Login](#)

Next

It's Not Just Books:
Library Services for the Modern Explorer.

Zamboanga City Library

Date of Birth

Gender

Day-Month-Year

Select Gender

Address

Street Name, Baranggay, City, Province, Country

School/Office

School/Office

Contact Number

(+63) Contact Number

Account Type

Individual

Sign Up

G Sign Up with Google

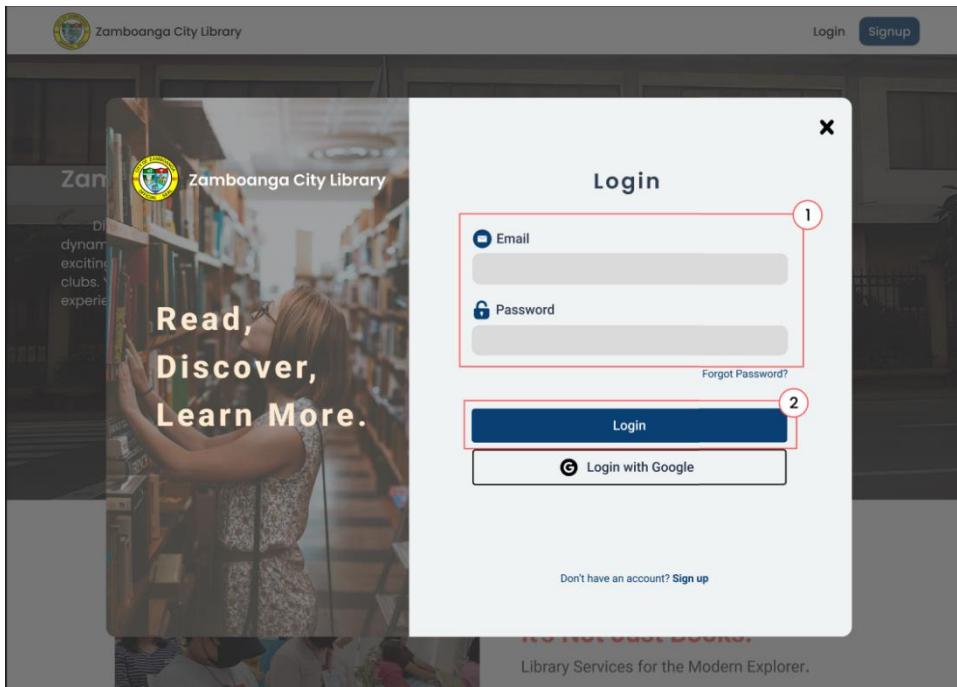
Already have an account? [Login](#)

It's Not Just Books:
Library Services for the Modern Explorer.

1. Fill the text field with the User’s Information.

2. Click the “Next” button to proceed to next form.
3. Fill the text field with the User’s additional information.
4. Click the “Sign Up” button after filling the text fields.

Login – User



1. Fill the text field with the User’s credentials.
2. Click the “Login” button below to login the admin account.

General Search and Announcements

The screenshot shows the homepage of the Zamboanga City Library website. At the top, there is a navigation bar with a search field labeled "Search Events and Clubs" (1), a dropdown menu "All Events and Clubs" (2), and a sort/filter icon (3). On the right, there is a user profile icon and a dropdown menu.

The main content area has a sidebar on the left with links: Home, Events and Announcements (selected), Announcements, All Events, Clubs, All Clubs, and Your Clubs.

The main content area features a "Welcome Back, Fred Anthony!" message. Below it is a section titled "Announcements!" containing two orange boxes:

- The City Library will be **CLOSED** on Nov. 1 & 2, 2023. The library operations will resume on Nov. 3, 2023 (Friday).
- The City Library will be open only 8:00am - 11:00am on December 9, 2023 because there will be an event inside the library.

Below these announcements is a "Cyber Awareness" event card:

- Cyber Awareness** Upcoming Event
- Date: 9:00am - 3:00pm, November 30, 2023
- Description: Join us for an eye-opening Cyber Awareness Seminar designed to empower you with the knowledge and skills to navigate the digital landscape securely.
- View More button
- Image: A blue-toned circuit board with a large padlock symbol.

Below the event card is another card:

- Library Tour and Orientation** Documentation
- Date: 8:00am - 11:00am, November 22, 2023
- Description: The City Library conducted the Day 2 Library Tour and
- Image: Two people standing in a library setting.

1. Search all Events and Announcements by inputting in the search field.
2. Click Filter to narrow down the search results.
3. Click sort button to sort search results.
4. View Annoucements.

Notifications

The screenshot shows the same website as above, but with a dropdown menu open over the "Announcements" section. The dropdown is titled "Notifications" and contains two items:

- Your membership application on "Friends of the Library" Club is approved. (Yesterday, 03:36pm)
- There will have Cyber Awareness Seminar is tomorrow. (Yesterday, 03:36pm)

At the bottom of the dropdown, there is a "View All Notifications" link. The rest of the page content is identical to the first screenshot, including the sidebar, the "Cyber Awareness" event card, and the "Library Tour and Orientation" documentation card.

1. Click the bell button to dropdown the notifications.

2. Notify user about the club application form.
3. Notify user about the event registration form.

Logout

The screenshot shows the user profile of Fred Anthony D. Yu. The profile picture is a placeholder. The user has 1 notification. The profile area includes links for Account Dashboard, Settings, Help and Support, and Logout. The main content area displays a welcome message and an announcement about library operations. Below the announcements, there is a section for an upcoming event titled "Cyber Awareness".

1. This allow the user to logout their account.

Events

The screenshot shows the list of events. There are four numbered callouts: 1 points to the list of events on the left; 2 points to the search bar at the top; 3 points to the filter dropdown menu; 4 points to the sort button. The events listed are "Cyber Awareness" (Upcoming Event), "Library Tour and Orientation" (Documentation), and "Book Character Contest & Chabacano Storytelling Session" (Documentation).

1. This displays the list of events within the system.
2. Search all Events by inputting in the search field.
3. Click Filter to narrow down the events search results.
4. Click sort button to sort event search results.

Event Registration and Volunteer

The screenshot shows the website of the Zamboanga City Library. At the top, there is a navigation bar with links for Home, Events and Announcements, Announcements, All Events, Clubs, All Clubs, and Your Clubs. A search bar and a dropdown menu for 'All Events' are also present. On the right side of the header is a user profile icon.

The main content area features a large banner image of a blue circuit board. Below the banner, a section titled 'Cyber Awareness' is described as an 'Upcoming Event'. It includes a date range from '8:00am - 3:00pm, November 30, 2023' and a brief description: 'Join us for an eye-opening Cyber Awareness Seminar designed to empower you with the knowledge and skills to navigate the digital landscape securely. Enhance your online presence and protect yourself from cyber threats in today's interconnected world. Register to attend the seminar!'. There are three buttons at the bottom of this section: 'Register' (highlighted with a red circle), 'Back', and 'Apply as Volunteer'.

At the bottom of the page, there is a footer with the library's logo, address ('Located at: Justice R.T. Lim Boulevard, Zamboanga City, 7000'), a 'View Map' link, and social media links for Facebook and Instagram. Navigation links for Events (Incoming Events, Recent Events, More...), Clubs (Reader's Club, Friends of the Library, More...), and a 'Connect With Us' section are also included.

1. Displays the event's details.
2. Click the "Apply as volunteer" button to volunteer in the event.
3. Click the "Register" button to open registration form of the event.

Event Registration form

This screenshot shows the event registration form for the 'Cyber Awareness Seminar'. The form is titled 'Cyber Awareness Seminar Registration Form'. It asks the question 'Do you already experience cyber threats? (data phishing, etc.)' with a dropdown menu showing 'Yes' and 'No'. A checkbox labeled 'Notify me about the event ahead of time.' is checked and highlighted with a red circle. At the bottom of the form are two buttons: 'Register' (highlighted with a red circle) and 'Apply as Volunteer'.

The background of the page shows the same banner and event details as the previous screenshot, indicating this is a modal or a new window.

1. Fill the text field with the information needed.
2. Click the “Notify me” checkbox for the event’s notification.
3. Click the “Register” button to submit registration form.

Event Documentation

The screenshot shows a web page from the Zamboanga City Library. At the top, there's a navigation bar with a logo, a search bar, and a dropdown menu. Below the navigation is a sidebar with links for Home, Events and Announcements (which is selected), Announcements, All Events, Clubs, All Clubs, and Your Clubs. The main content area displays an event titled "Library Tour and Orientation" with a documentation link. It includes a timestamp (8:00am - 10:00am, November 22, 2023) and a note about the library conducting a tour for Grade 7 students. Two thumbnail images show people at the event. A red circle with the number "1" is drawn around the event title "Library Tour and Orientation".

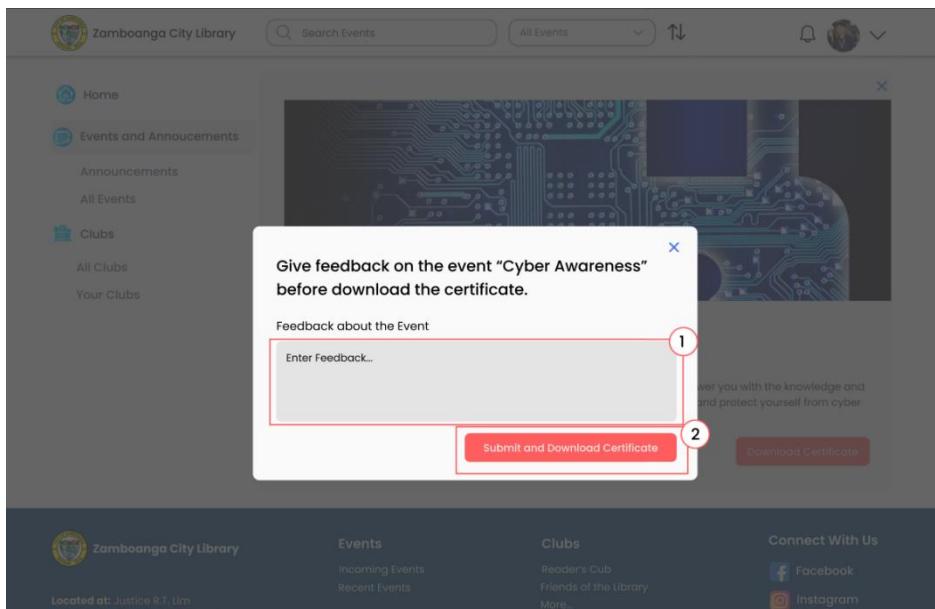
1. Displays the event documentation.

Event's Certificate

The screenshot shows a web page from the Zamboanga City Library. The layout is similar to the previous one, with a sidebar on the left and a main content area on the right. The sidebar has links for Home, Events and Announcements (selected), Announcements, All Events, Clubs, All Clubs, and Your Clubs. The main content area features a large blue circuit board graphic. Below it, an event titled "Cyber Awareness" is listed with a "Post Event" link. It includes a timestamp (9:00am - 3:00pm, November 30, 2023) and a descriptive text about the seminar. At the bottom right of the content area, there is a red button labeled "Download Certificate" with a red circle containing the number "1" to its left. A "Back" button is also visible.

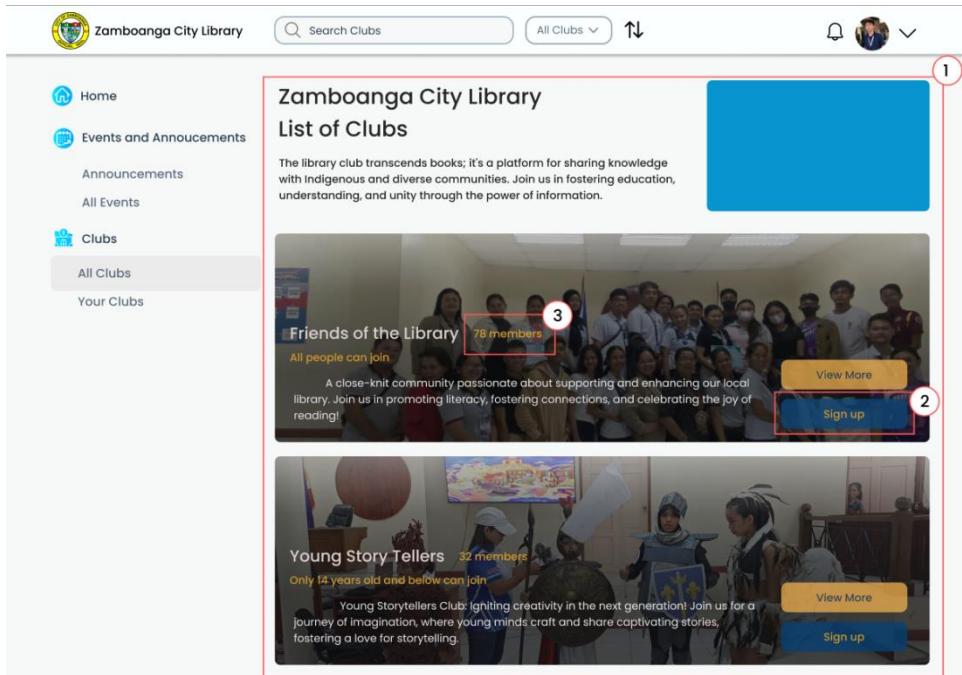
1. Click the “Download Certificate” button to open feedback form.

Feedback and Download Certificate



1. Fill the text field with the User's feedback on the event.
2. Click "Submit and Download Certificate" to submit the feedback form and download the certificate acquired from the event.

Clubs



1. Display the list of clubs of the Zamboanga City Library.
2. Click the “Sign up” button to open club application form.
3. Click the number of members to view the club member list.

Club Application Form

Zamboanga City Library
List of Clubs

**Friends of the Library Club
Membership Form**

Why do you want to join this club?

How frequent you can join on the club's activities? (estimated)

Apply for Membership 2

Young Story Tellers ... Only 18 years old and twelve years plus
Young Storytellers Club igniting creativity in the next generation! Join us for a journey of imagination, where young minds craft and share captivating stories, fostering a love for storytelling.

[View More](#) [Sign up](#)

1. Fill the text field with the information needed.
2. Click the “Apply for Membership” button to submit the club application form.

Club Member List

Zamboanga City Library [Search Clubs](#)

Friends of the Library 78 members
All people can join

A close-knit community passionate about supporting and enhancing our local library. Join us in promoting literacy, fostering connections, and celebrating the joy of reading!

Members:
Name
1. Charllyn Elorde
2. Christiana Bagotao
3. Fred Anthony Yu
4. Kim Badilles
5. Moh. Qhadaff Annuarie

1. Display the Club member list.

Club Announcements

The screenshot shows a user interface for managing club announcements. On the left, there are navigation buttons for "All Clubs" and "Your Clubs". A red box highlights the "Your Clubs" section, which contains three announcement cards:

- Meeting about Caroling on Indigenous People** (Optional)
9:00am - 10:00am, December 5, 2023
Join our crucial discussion! Let's collaborate on providing essential goods for Indigenous communities. Your voice matters in making a positive impact. Together, we can bring meaningful change and support those in need.
- Monthly Assembly** (Important)
9:00am - 10:00am, December 3, 2023
Attention all members! Join us for our monthly assembly on December 3, 2023 at 9 AM in the Zamboanga city library. Exciting updates and important information await. See you there!
- Warnings to members inactive on months.** (Important)
Until December 2, 2023
"Attention members! If you've been inactive for the past month, please engage in our activities to stay connected and informed or else you'll be removed from this club. Let's build our community together!"

A red circle with the number "1" is positioned in the top right corner of the main content area.

1. Display the club's announcements for the members.

User's Account Information

The screenshot displays the user's account information on the Zamboanga City Library website. At the top, there is a navigation bar with the library's logo, a search bar, and a dropdown menu for events and clubs. A user profile icon is also present.

1. User Summary: This section provides a quick overview of the user's participation. It includes a profile picture of Fred Anthony D. Yu, a name badge, and three cards showing activity statistics:

- Total Events Participated:** 12 (View More)
- Pending Events Registered:** 3 (View More)
- Total Clubs Joined:** 1 (View More)

2. Library Attendance: This section lists the user's attendance records at the library. The table includes columns for Date, Time, Purpose, Section Entered, and Time Leaved.

Date	Time	Purpose	Section Entered	Time Leaved
10-19-2023	09:24 am	Research	History	11:34 am
10-15-2023	03:46 pm	Reading	Periodicals	04:16 pm
10-11-2023	11:12 am	Reading	Children's	01:23 pm

Event Attendance: This section lists the user's attendance at various events. The table includes columns for Date, Time, Event, Checked By, and Time Leaved.

Date	Time	Event	Checked By	Time Leaved
11-28-2024	09:24 am	Story Telling Competition	Carmelita Agustin	11:34 am
11-25-2023	11:46 am	Cyber Literacy Webinar	Juan Alfonso	04:16 pm
11-22-2023	11:12 am	Open House	Hermina Sanchez	01:23 pm

1. Displays the User's summarized activity data.
2. Displays the User's attendance on library's entrance and events.

User's Card (QR Code)

The screenshot shows the Zamboanga City Library website interface. At the top, there is a navigation bar with links for Home, Events and Announcements, Announcements, All Events, Clubs, All Clubs, and Your Clubs. On the right side of the header, there is a search bar labeled "Search Events and Clubs", a dropdown menu for "All Events and Clubs", and a user profile icon.

The main content area displays a user profile for "Fred Anthony D. Yu". It includes a circular profile picture of a young man, his name, and a "Change Profile Picture" link. Below the profile, there is a "View User Card" button and a "Download User Card" button. A red box highlights a modal window titled "Zamboanga City Library" containing the user's information: Name: Fred Anthony Yu, Email: yufredanthony@gmail.com, Birthdate: March 07, 2003, Contact #: 09353742658, and Address: Maasin, Zamboanga City. To the right of this information is a large QR code.

Below the user card, there is a section titled "Event Attendance" with a table header:

Date	Time	Event	Checked By	Time Leaved
------	------	-------	------------	-------------

The table contains three rows of data:

10-19-2023	09:24 am	Research	History	11:34 am
10-15-2023	03:46 pm	Reading	Periodicals	04:16 pm
10-11-2023	11:12 am	Reading	Children's	01:23 pm

A "See More" button is located at the bottom right of the attendance table.

1. Display the user's card with QR code that generated by the system for attendance.

Account Settings

The screenshot shows the 'Account Settings' page of the Zamboanga City Library website. At the top, there is a navigation bar with links for Home, Events and Announcements, Clubs, and a search bar. The main content area displays a user profile for 'Fred Anthony Yu' with a circular profile picture. Below the profile, there are several input fields for updating personal information: Last Name (Yu), First Name (Fred Anthony), Email (yufredanthony@gmail.com), Birthdate (03/07/2003), Gender (Male), Contact Number (0935-374-2658), Sector (WMSU), Password (*****), and Address (Maasin, Zamboanga City. Zamboanga Del Sur, Philippines 7000). There are also buttons for 'View User Card' (orange) and 'Download User Card' (green). At the bottom right are 'Cancel' and 'Save' buttons. Red numbers 1 through 5 are overlaid on the page to indicate specific interaction points.

1. Change the input fields to update User's Information.
2. Click the "Save" button to save User's Information updates.
3. Click the "Change Profile Picture" to update User's picture.
4. Click the "View User Card" to view User Card.
5. Click the "Download User Card" to download.

Organization Head Event Proposal

The screenshot shows the 'Event Proposal' section of the Zamboanga City Library website. On the left sidebar, there are links for Home, Events and Announcements (with sub-links for Announcements and All Events), Clubs (with sub-links for All Clubs and Your Clubs), and Event Proposal. The main content area displays a proposal titled 'Welfare and Literacy Symposium' with a status of 'Pending'. It includes a date (December 13, 2023) and a note about an eye-opening Cyber Awareness Seminar. A red circle labeled '1' points to the proposal card. A red circle labeled '2' points to the 'Add Event Proposal' button at the bottom right of the main content area.

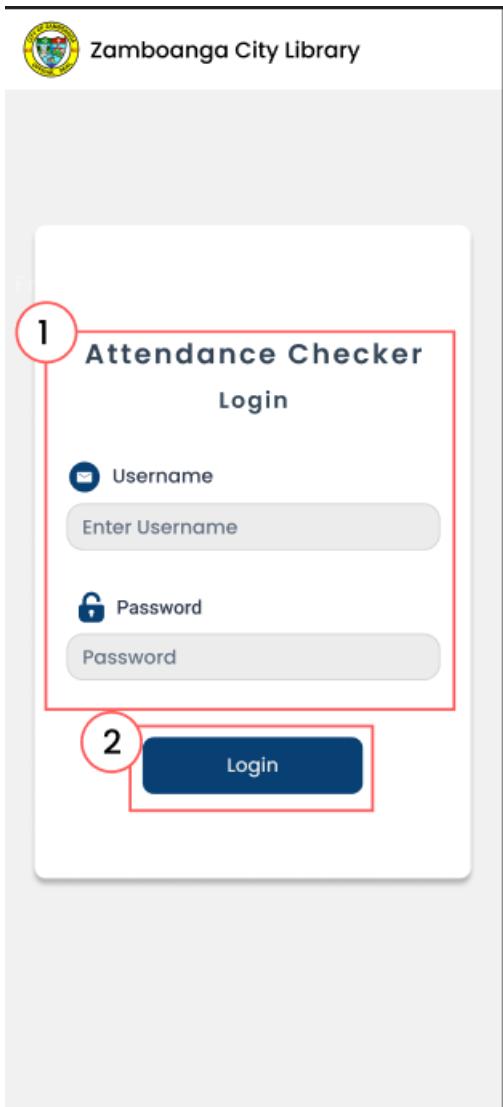
1. Display the list of event proposals of the Organization Head.
2. Click the “Add event Proposal” button to open Event Proposal Form.

Event Proposal Form

The screenshot shows the 'Event Proposal Form' for the 'Welfare and Literacy Symposium'. The form has a blue border and contains fields for 'Proposal Title' (with placeholder 'Enter Proposal Title'), 'Description' (with placeholder 'Enter Proposal Description'), 'Event Proposal Date' (with placeholder 'dd/mm/yyyy'), and 'Attach File' (with placeholder 'Choose File | No file chosen'). A red circle labeled '1' points to the top right corner of the form. A red circle labeled '2' points to the 'Submit' button at the bottom right of the form.

1. Fill the text field with the Event's proposal information.
2. Click the "Submit" button to submit the event proposal form.

Attendance Checker - Login



The image shows the login interface for the Attendance Checker. At the top, there is a logo for 'Zamboanga City Library' next to the text 'Attendance Checker - Login'. Below this is a large input field labeled 'Enter Username' with a placeholder 'Enter Username'. Underneath it is another input field labeled 'Password' with a placeholder 'Password'. At the bottom of the form is a blue 'Login' button. A red circle with the number '1' is placed over the 'Enter Username' field, and a red circle with the number '2' is placed over the 'Login' button.

1. Fill the text field with the Attendance Checker credentials.
2. Click the "Login" button to login the Attendance Checker's account.

Attendance for entrance

The screenshot shows a mobile application interface for checking attendance. At the top, there is a logo for "Zamboanga City Library". Below the logo, there are two buttons: "Check Attendance" and "View Attendance List". To the right of these buttons is a menu icon represented by three horizontal lines.

The main form area contains the following fields:

- Name:** Christiana Bagotao
- Address:** Boalan, Zamboanga City
- Gender:** Female
- Contact Number:** 0945 678 2345
- School/Office:** WMSU
- Purpose:** A dropdown menu labeled "Select Purpose".

At the bottom of the form, there is a large orange button labeled "Scan QR Code".

1. Click the “Scan QR Code” to open QR scanner for scanning User’s QR Code.
2. Displays in the text field the information fetched in the QR code.
3. Select Purpose.

View Attendance List and logout

Zamboanga City Library

Check Attendance View Attendance List

Name	Purpose
Charlyn Elorde	Research
Qhadaff Annuarie	Read
Fred Anthony Yu	Research

Logout

1. Displays the attendance list.
2. Let the attendance checker logout their account.

Events Attendance Checking

The screenshot shows the login interface for the "Attendance Checker". At the top left is the "Zamboanga City Library" logo with the text "CITY OF ZAMBOANGA CITY LIBRARY". Below it is the title "Attendance Checker" and the word "Login". The form contains three input fields: "Event Name" (with a dropdown menu "Select Event"), "Username" (with a text input field "Enter Username"), and "Password" (with a password input field). A large red circle labeled "1" highlights the "Event Name" field. A red rectangle labeled "2" highlights the "Login" button at the bottom.

1. Fill the input fields with assigned attendance checker's credentials for the events.
2. Click the “Login” button to login.

View Event's Attendance list and logout

The screenshot shows a web-based application for managing event attendance. At the top left is the library's logo and name, "Zamboanga City Library". To the right is a menu icon consisting of three horizontal lines. Below the header, there are two red-outlined buttons: one labeled "Logout" and another labeled "1" which points to the attendance list table. The main content area has two tabs at the top: "Check Attendance" and "View Attendance List", with "View Attendance List" being active. A section titled "Cyber Awareness Webinar" displays a table of attendees. The table has columns for "Name" and "Time in". The data is as follows:

Name	Time in
Charlyn Elorde	09:03am
Qhadaff Annuarie	09:07am
Fred Anthony Yu	09:30am

1. Display the attendance list of event.
2. Let the assigned event's attendance checker to logout their account.

Chapter 7 – Testing and Results

7.1 Testing Plan

7.1.1. Test Strategy and Approach

The Test Plan is an extensive plan of action that makes sure the system being developed adheres with all of the requirements and standards that are specified. It includes a thorough description of the project's testing activities' timeline, resources, methodology, and scope that is related to the proposed system, Events and Clubs Management System : Zamboanga City. The plan outlines the modules or components that require testing and clarifies the approaches, goals, expected results, responsible parties, and necessary resources for carrying out the tests. This test plan serves as a thorough outline that covers each stage of the testing process. Additionally, it facilitates communication between stakeholders and team members by providing a detailed history of all releases, including the feedback and remarks.

7.1.1.1. Test Type

- Unit Testing
- Functional Testing
- Integration Testing
- System Testing
- Performance Testing

7.1.1.2. Scope

These are all of the features that were defined in the requirements engineering that needs to be tested.

Module Name	Applicable Roles	Description
Registration Module	User	User: A user can register using their email account.
Login Module	User, Admin, Librarian	User: A user can login using their email account. Admin: The admin can login using their email account. Librarian: A librarian can login using their username.
Account Module	User	User: A user can edit their profile such as editing their display Name, address, telephone number, etc.
Events/Clubs Management Module	Admin, Librarian	Admin: The Admin can add, delete, and update events and clubs. Librarian: A librarian can approve club application and update clubs.
Club Membership Module	User, Librarian	User: Users can apply for clubs. Librarian: The librarian will be the one to approve the memberships for clubs.

Event Registration Module	User, Admin	User: Users can register for different events. Admin: The admin will manage the registration forms of the users.
Calendar Module	User, Admin, Librarian	User: A user can view the event's calendar. Admin: The admin can add, delete, and update events in calendar. Librarian: A librarian can view the event's calendar.
Attendance Management	Admin	Admin: The admin can view and print the attendance record.
Event Proposal Module	User	User: Users can send an event proposal to the admin.

Table 14. Features to be Tested

7.1.1.3 Risk and Issues

Risk	Mitigation
The delay in receiving the UX design significantly impeded the front-end integration process, resulting in prolonged coding efforts and project delays.	By establishing early communication channels with UX designers to clarify project timelines and requirements, implementing agile development methodologies to allow for flexibility in accommodating design iterations, and developing contingency plans to address potential delays by allocating additional resources or adjusting project schedules.
Difficulties in coordinating frontend and backend development may disrupt functionalities that rely on the seamless transfer or synchronization of data between these two components.	The development team modified CSS media queries and reviewed responsive design breakpoints to better support a variety of screen sizes and resolutions. To guarantee consistent rendering and the best possible user experience across a range of devices, We also carried out a thorough device test using browser developer tools.
Deciding on what might be the final interface design for the user to make it more pleasing and convincing to use.	after a number of meetings, we decided to divide it on where we are most effective and just ask for help from one another if more challenges can be faced.
The calendar doesn't output the expected output which is if there is an event then it should show in the calendar in the calendar features.	We conduct thorough testing of the calendar feature to identify and resolve any potential bugs or issues. Then the quality assurance checks to ensure that the calendar accurately displays events as intended

Table 15. Risk and Issues

7.1.1.4 Test Logistics

Who will test?

The project team will work together with client representatives to test the system. This will ensure that the testing considers a variety of perspectives and aligns with project goals and user needs. This cooperative strategy encourages clear communication, quick issue resolution, and guarantees that the finished product meets both technical standards and customer demands. Regular feedback sessions and open communication channels will be maintained during the testing phase to guarantee a comprehensive evaluation.

When will the test occur?

The testing phase will start once the following listed is ready or completed:

- The software main modules are done.
- The test plan is prepared.
- Test specification has been completed.
- Establishment of the test environment is completed.

7.1.2 Test Objective

The aim of testing the Events and Clubs Management System : Zamboanga City is to confirm its effective management capabilities. This includes creating, updating, and deleting events and clubs, handling user registrations, sending out notifications, producing reports. The system should also provide user-friendly interfaces, effortless navigation, and dependable performance on various devices and platforms.

7.1.3. Test Criteria

7.1.3.1. Entry Criteria

These are some of the entry criteria to start the testing phases:

- Testable codes
- Well-defined requirements and approved by the involved stakeholders
- Test-cases are well-defined
- Established test environment for testing with all of the necessary tools

7.1.3.2. Suspension Criteria

Testing will be suspended and resumed in the following iteration once the development team fixes all of the failed cases, if the testing team reports that 40% of the test cases failed.

7.1.3.3. Resumption Criteria

This section describes the resumption of the failed cases.

- The failed cases or the bugs were solved.
- No further detection of errors and meet the expected output.

7.1.3.4. Exit Criteria

This section describes the criteria on how to evaluate the successful completion of a test phase.

- Run rate shall be of 100%, otherwise, the build test case that failed shall be iterated.
- *Passing rate shall be 80%.*

7.1.4 Resource Planning

7.1.4.1 System Resource

No.	Resource	Description
1	Computer	At least computers running on Windows 7 or higher, 4GM RAM or more, Processor Base Frequency of 1.8GHz or higher, and 75 MB of available disk space or more.
2	Browser	Google Chrome (minimum Chrome version: Version 59)
3	Network or Internet Connection	Minimal Bandwidth of 0.75 Mbit/s upload and 0.75 Mbit/s download (*)

Table 16. System Resource

7.1.4.2 Human Resource

No.	Member	Task
1	Test Manager	The test manager plays a central role in the testing process, ensuring that all aspects of testing are effectively managed and coordinated.
2	Tester	The tester runs the system, finds any faults, and tells the System and Design Analyst Tester about them. This person then passes the information on to the developer.
3	Quality Assurance Engineer	QAE is accountable for ensuring that all requirements are met and that the system's functionality is in accordance with expectations.
4	System and Analyst Tester	The System Analyst Tester examines and analyzes bug reports submitted by testers, communicates identified issues and defects to software developers, evaluates and confirms that the system meets its specified requirements and functionalities.

Table 17. Human Resource

7.1.5 Test Environment

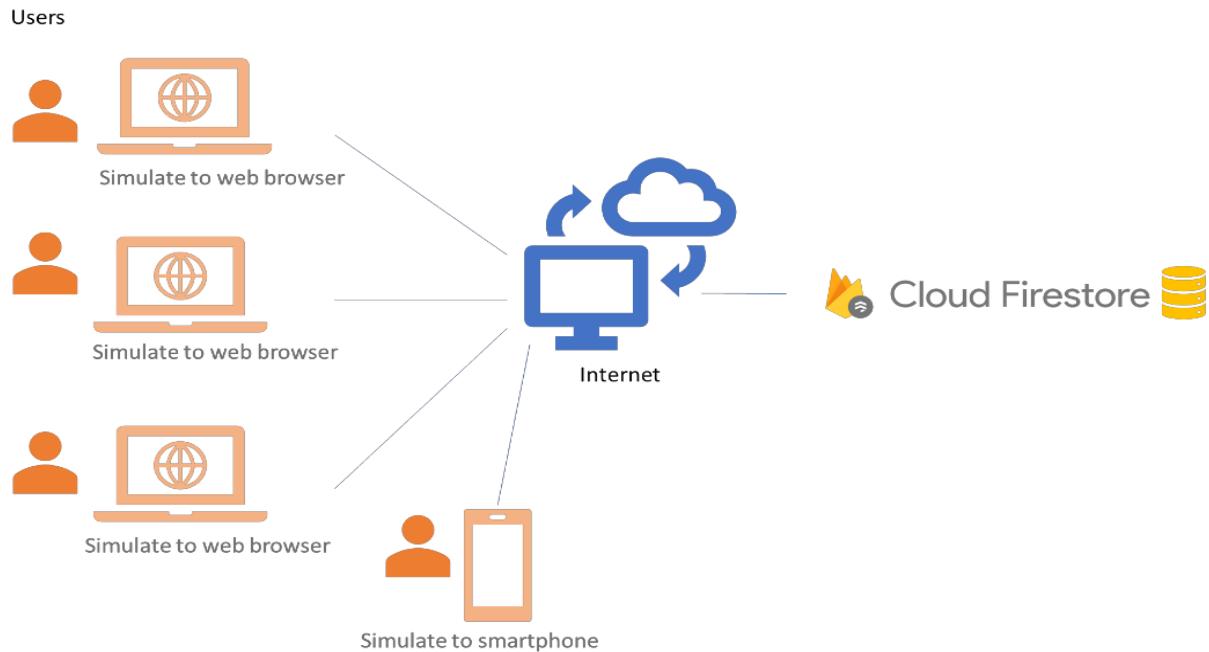


Figure 16. Test Environment

7.1.6 Schedule and Estimation

TASK	MEMBERS	ESTIMATE EFFORT
Creation of the test specification	Test Manager and Test Analyst or Designer	50-man hour
Test Analysis and Test Design	Test Analyst or Designer	50-man hour
Test Execution	Tester	90-man hour
Test Report	Tester and Quality Assurance Engineer	45-man hour
Test Delivery	Tester and Quality Assurance Engineer	25-man hour
Total		260-man hour

Table 18. All Project Tasks and Estimation

7.1.7 Test Deliverables

Before testing phase

- Documentation of the test plan
- Documentation of the test cases and designing the test environment
- Design specifications of the testing phase.

During testing

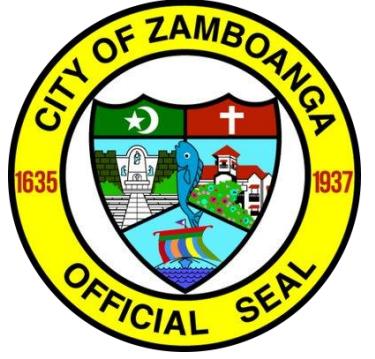
- Test Tools
- Simulators (using browser for both phones and laptop/desktop)
- Test Data

- Test Trace-ability Matrix
- Error logs and execution logs

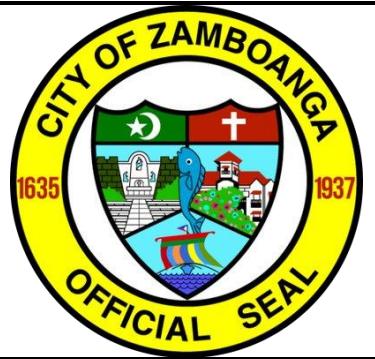
After the testing cycle

- Test results and reports
- Reports for any defects
- Installation plan or guidelines
- Release notes

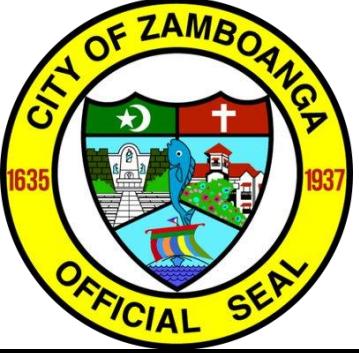
7.2 Test Cases

Project Name:	Events and Clubs Management System								
Module Name:	Registration Module								
Reference Document:	Functional Requirements								
Created by:									
Date of Creation:	06-Jan-24								
Date of Review:	25-Mar-24								
Test Case ID	Test Scenario	Test Case	Precondition	Test Steps	Test Data	Expected Results	Post Condition	Actual Result	Status (Pass/Fail)
TC_REGISTRATION _001	Verify Registration	Enter your full name	Needs a complete name, all spaces characters will not be accepted	Enter First name, middle name, last name	All forms in the name field are provided in alphabet characters only	Accepts the name when it's not all spaces only	Denied when a number is included and spaces are spammed	Accepts the name when it's not all spaces only	Pass
TC_REGISTRATION _001	Verify Registration	Enter your Email address	needs a valid email address to continue	Enter a valid email address	Verify if the email address is valid	No warnings pop up	Deny when email is not valid	same with the expected results	Pass
TC_REGISTRATION _001	Verify Registration	Enter a unique password	needs a valid password to continue	Password length must be a minimum of 8 characters long	Verify if the password is 8 characters long	No errors pop up	Deny when the password didn't reach 8 characters long	same with the expected results	Pass
TC_REGISTRATION _001	Verify Registration	Provide the Birth date	When the user is 18+ years old, proceed to next step	Enter the user's real birth date	Verify the age	An alert message will pop up that the user will provide another field to comply	stays on the registration page	same with the expected results	Pass

						when the user is below 18 years old			
TC_REGISTRATION _001	Verify Registration	Enter user's role	Users select what role they are (Student, Employee, etc.)	Users upload a photo that proves their role	Verify role	The admin will verify and decline when the user provides the wrong/fake data	Register again	same with the expected results	fail

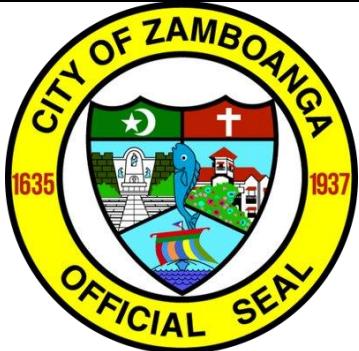
Project Name:		Events and Clubs Management System							
Module Name:		Login Module							
Reference Document:		Functional Requirements							
Created by:									
Date of Creation:		06-Jan-24							
Date of Review:		25-Mar-24							
Test Case ID	Test Scenario	Test Case	Precondition	Test Steps	Test Data	Expected Results	Post Condition	Actual Result	Status (Pass/Fail)
TC_REGISTRATION _001	Verify the login	Enter a valid email address	Needs a valid email address to continue	1. Enter email 2. Enter password 3. click the login button	1. valid Email 2. valid password	Successfully login then directed to homepage	Homepage is shown with the header updated of a user who's logged in	Same with the expected results	Pass
TC_REGISTRATION _001	verify user role	enter a valid name and password	needs a valid password to continue	1. Enter email 2. Enter Password 3. Click "Login" button	1. Valid Email 2. Valid Password	Successfully login, directed to homepage	Homepage is shown with the header updated of a user who's logged in	same with the expected results	Pass
TC_REGISTRATION _001	verify admin role	Enter valid name and password	needs a valid password to continue	1. Enter email 2. Enter Password 3. Click "Login" button	1. Valid Email 2. Valid Password	Successfully login, directed to homepage	Homepage is shown with the header updated of a user who's logged in with the link to "My Admin"	same with the expected results	Pass
TC_REGISTRATION _001	Verify the login	Enter valid email and an invalid password	needs a valid password to continue	1. Enter email 2. Enter Password 3. Click "Login" button	1. Valid Email 2. Valid Password	alert message "The password is invalid, or the user does not have a password."	stays on the log in page	same with the expected results	Pass

TC_REGISTRATION _001	Verify the login	Enter valid email and an invalid password	needs a valid password to continue	1. Enter email 2. Enter Password 3. Click "Login" button	1. Valid Email 2. Valid Password	Alert message "There is no user record corresponding to this identifier. The user may have been deleted"	stays on the log in page	same with the expected results	Pass
TC_REGISTRATION _001	Verify the login	Enter blank email and a password	Needs a valid email to continue	1. Enter email 2. Enter Password 3. Click "Login" button	Needs a valid email to continue	A tool tip on the email field with a message "Please fill out this field."	stays on the log in page	same with the expected results	Pass
TC_REGISTRATION _001	Verify the login	Enter blank email and a password	Needs a valid email to continue	3. Click "Login" button	Needs a valid email to continue	A tool tip on the email field with a message "Please fill out this field."	stays on the log in page	same with the expected results	Pass

Project Name:	Events and Clubs Management System	
Module Name:	Account Module	
Reference Document:	Functional Requirements	
Created by:		
Date of Creation:	06-Jan-24	
Date of Review:	25-Mar-24	

Test Case ID	Test Scenario	Test Case	Precondition	Test Steps	Test Data	Expected Results	Post Condition	Actual Result	Status (Pass/Fail)
TC_REGISTRATION _001	Account checking	Edit/add contact number	Notify when done changing, the user must put 11 digits number	Click edit/add contact number then save	Alert when the condition is not fulfilled	Added/edited number provided	Stays on account information	Same with the expected results	pass
TC_REGISTRATION _001	Add clubs	Adding clubs the user wants to join	Notify when the user is already in that club otherwise, add to users' clubs	Click add club, choose the club you want to join, fulfill required details, then save	Alert when the user successfully joined or otherwise	Added to clubs joined	Stays on choosing another club to join when pre-conditions are not met	Same with the expected results	pass
TC_REGISTRATION _001	Join Events	Joining to available events	Don't include the user when there's	Search for desired events to	Notify when the user is included to	Added to the events list user wanted to join in	Stays on account information	Same with the expected results	pass

			a conflict to any events, he/she joined	join with, check the availability, save when available	the new events, he/she wants to join				
TC_REGISTRATION _001	Edit email	Editing email address	Verify if the email provided is available	Click edit email, input new email, send and wait for verification code, input code, then done	Ask for verification code Before saving the new created email	New email is registered	Stay on the old email provided	Same with the expected results	fail
TC_REGISTRATION _001	Edit password	Create new password	Verify if the password met the requirement	Click edit password, make new password, ask for verification code then save if done	Ask for verification code Before saving the new created password	New password has been saved	Stay on the old password provided	Same with the expected results	fail
TC_REGISTRATION _001	Check calendar	Checking your calendar of activities	Update/delete activities to your calendar	Click your calendar of activities, scan then you decide if you're going to update or delete	Alert for the action done (updated/deleted activity)	Calendar of activity has been updated	Stays on account information	Same with the expected results	fail

Project Name:	Events and Clubs Management System	
Module Name:	Events/Clubs Management Module	
Reference Document:	Functional Requirements	
Created by:		
Date of Creation:	06-Jan-24	
Date of Review:	25-Mar-24	

Test Case ID	Test Scenario	Test Case	Precondition	Test Steps	Test Data	Expected Results	Post Condition	Actual Result	Status (Pass/Fail)
TC_REGISTRATION _001	Events management	Manage events	Events are sorts accordingly in ascending/descending order (By Alphabet/Date/etc)	Tap events/clubs, go to events, manage events(check info's and etc), the data must be sorted accordingly	The data is not sorted properly	The data should be sorted depending whether it is ascending or descending	The data will have a button to choose the sorting method	Same with the expected results	Pass

TC_REGISTRATION_001	Event creation	Create new events	User is logged into the system and has access to event creation	Go to the event creation page, Fill in all required fields (event title, date, time, location, description), Click on the "Create Event" button	Valid event details	Event is successfully created, and the user is redirected to the event details page	Event is listed in the system, and the user can see it in their list of created events	Same with the expected results	Pass
TC_REGISTRATION_001	Event creation	Creating an Event Without Required Fields	User is logged into the system and has access to event creation	Go to the event creation page, Leave one or more required fields blank. Attempt to create the event	Missing required fields	Error message is displayed indicating the missing fields, and the event is not created	No new event is added to the system	Same with the expected results	Pass
TC_REGISTRATION_001	Event Registration	Registering for an Event	Event is available for registration	Go to the event details page, Click on the "Register" button, Fill in any required registration information. Submit registration	Valid user information	User is successfully registered for the event, and a confirmation message is displayed	User is added to the list of attendees for the event	Same with the expected results	Pass
TC_REGISTRATION_001	Event Registration	Registering for a Full Event	Event has reached its registration limit	Go to the event details page, Try to register for the event	User attempting to register for a full event	Error message is displayed indicating that the event is full, and registration is not possible	User is not added to the list of attendees for the event	Same with the expected results	Fail
TC_REGISTRATION_001	Club Creation	Creating a New Club	User is logged into the system and has access to club creation	Navigate to the club creation page, Fill in all required fields (club name, description, category, etc.), Click on the "Create Club" button	valid club details	Club is successfully created, and the user is redirected to the club details page	Club is listed in the system, and the user can see it in their list of created clubs	Same with the expected results	Pass
TC_REGISTRATION_001	Club Creation	Creating a Club Without Required Fields	User is logged into the system and has access to club creation	Navigate to the club creation page, Leave one or more required fields blank.,Attempt to create the club	Missing required fields	Error message is displayed indicating the missing fields, and the club is not created	No new club is added to the system	Same with the expected results	Pass
TC_REGISTRATION_001	Club Membership	Joining a Club	Club is available for membership	Go to the club details page,	Valid user information	User's membership request is	User's request is pending	Same with the	Pass

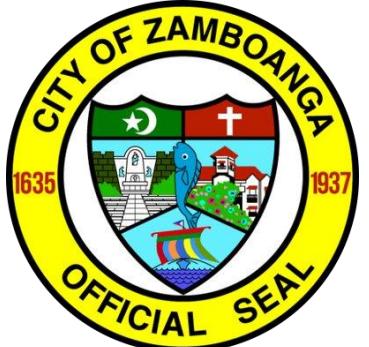
				Click on the "Join Club" button, Fill in any required membership information, Submit membership request		successfully submitted, and a confirmation message is displayed	approval by club administrators	expected results	
TC_REGISTRATION_001	Club Membership	Approving Club Membership Request	User is a club administrator and has pending membership requests	Go to the club administration panel, Review pending membership requests, Approve or reject membership request	No test data	Membership request is approved/rejected accordingly, and the user is notified via email	Approved user is added to the list of club members	Same with the expected results	Pass
TC_REGISTRATION_001	Club Updates	Updating Club Details	User is logged into the system and has permission to edit clubs	Navigate to the club details page of an existing club, Click on the "Edit" button, Update club details (description, category, meeting schedule, etc.). Save changes	Modified club details	Club details are successfully updated, and the user is redirected to the club details page with the updated information	Club details are changed in the system	Same with the expected results	Fail

Project Name:	Events and Clubs Management System	
Module Name:	Events Membership Module	
Reference Document:	Functional Requirements	
Created by:		
Date of Creation:	06-Jan-24	
Date of Review:	25-Mar-24	

Test Case ID	Test Scenario	Test Case	Precondition	Test Steps	Test Data	Expected Results	Post Condition	Actual Result	Status (Pass/Fail)
TC_REGISTRATION_001	Membership Registration	Registering for Event Membership	User is logged into the system and has access to event memberships	Go to the event membership registration page. Select the desired event membership option (e.g., individual,	Valid user information and membership selection	User's membership is successfully registered/purchased, and a confirmation message is displayed	User's membership status is updated in the system	same with the expected results	Pass

				family, premium). Fill in any required membership information. Click on the "Register" or "Purchase" button.					
TC_REGISTRATION_001	Membership Registration	Registering for Event Membership with Insufficient Information	User is logged into the system and has access to event memberships	Navigate to the event membership registration page, Leave one or more required fields blank, Attempt to register/purchase the membership. Test Data: Missing required membership information	Missing required membership information	Error message is displayed indicating the missing fields, and the membership registration/purchase is not completed	No new membership is added to the system	same with the expected results	Pass
TC_REGISTRATION_001	Membership Renewal	Renewing Event Membership	User's event membership is nearing expiration	Navigate to the event membership renewal page, Select the renewal option for the desired membership duration, Proceed with the renewal process (e.g., payment)	No test data	User's event membership is successfully renewed, and a confirmation message is displayed.	User's membership is renewed and updated data in the system	same with the expected results	Pass
TC_REGISTRATION_001	Error Handling	Test error handling for various scenarios	User interacts with the system with invalid or missing data	Submit registration or renewal forms with missing or invalid data, Attempt to register for an event that is already full, Try to access membership features without being logged in	Incomplete/ Invalid Form Data Full Event Registration	Appropriate error messages should be displayed for each scenario	User is informed of any errors and prompted to correct them.	same with the expected results	Fail
TC_REGISTRATION_001	Event Capacity Limit	Test the handling of event registration	Event registration is open, and the event has	Try to register for the event, Verify that the event	User attempting to register	User's registration for the event is successful,	Notify the user when the event	same with the expected results	Pass

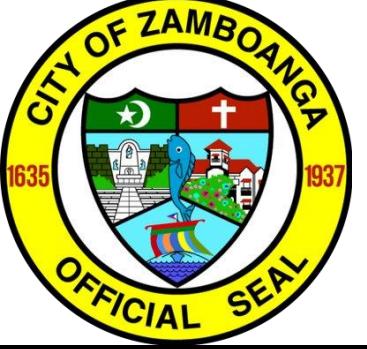
		when the capacity limit is reached	reached its maximum capacity	registration form indicates that the event is full	for a full event	a confirmation message will notify the user	membership reach its full capacity		
TC_REGISTRATION_001	Join Events	User Attempts to Join an Event Without Logging In	User is not logged in	Go to the event details page. Click on the "Join Event" button	Valid event ID	User is prompted to log in or sign up	User remains on the event details page without being added to the attendee list	same with the expected results	Pass

Project Name:	Events and Clubs Management System	
Module Name:	Clubs Registration Module	
Reference Document:	Functional Requirements	
Created by:		
Date of Creation:	06-Jan-24	
Date of Review:	25-Mar-24	

Test Case ID	Test Scenario	Test Case	Precondition	Test Steps	Test Data	Expected Results	Post Condition	Actual Result	Status (Pass/Fail)
TC_REGISTRATION_001	Clubs Registration Module	User Successfully Registers for a Club	User is logged in and the club exists	Go to the club registration page, then, Fill out the registration form with valid information , after that Submit the registration form	Valid user authentication and club information	User is successfully registered as a member of the club	User's profile reflects their membership in the club, and club's member count is incremented	same with the expected results	Pass
TC_REGISTRATION_001	Clubs Registration Module	User Attempts to Register for a Club Without Logging In	User is not logged in	Go to the club registration page, Fill out the registration form with valid	Valid club information	User is prompted to log in or sign up	User remains on the registration page without being added to the club	same with the expected results	Pass

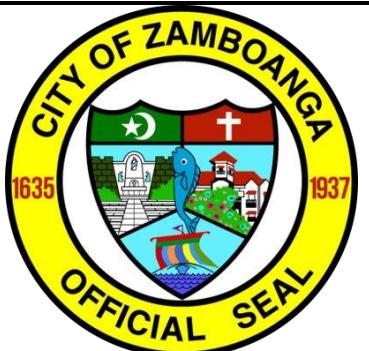
				information then Submit the registration form					
TC_REGISTRATION_001	Clubs Registration Module	User Attempts to Register for a Nonexistent Club	User is logged in	Navigate to a nonexistent club's registration page. Attempt to register for the club	Invalid club information	User receives an error message indicating that the club does not exist	User remains on the registration page without being added to any club	same with the expected results	Pass
TC_REGISTRATION_001	Clubs Registration Module	User Attempts to Register for a Club That They've Already Joined	User is logged in and has already registered for the club	Go to the club registration page, then Verify that the registration form is not visible or disabled	Valid club information and user authentication	User is unable to register for the club again, and no changes are made to the membership list	User's membership status remains unchanged	same with the expected results	Fail
TC_REGISTRATION_001	Clubs Registration Module	Club Administrator Removes a User from the Club	User is a member of the club, and the administrator is logged in	Access the club's member list, next is to select the user to be removed then Click on the "Remove from Club" option	Valid club information, user authentication, and administrator privileges	User is removed from the club's member list	User's profile no longer reflects their membership in the club, and club's member count is decremented	same with the expected results	Pass
TC_REGISTRATION_001	Clubs Registration Module	User Cancels Club Registration	User is logged in and has initiated the club registration process	Go to the club registration page then Click on the "Cancel" or "Back" button before submitting the registration form	Valid user authentication and club information	User is redirected to the previous page or remains on the registration page without completing the registration process	User's registration process is halted, and no changes are made to the club's membership list	same with the expected results	Pass

Project Name:	Events and Clubs Management System	
Module Name:	Calendar Module	
Reference Document:	Functional Requirements	
Created by:		
Date of Creation:	06-Jan-24	

Date of Review:	25-Mar-24	
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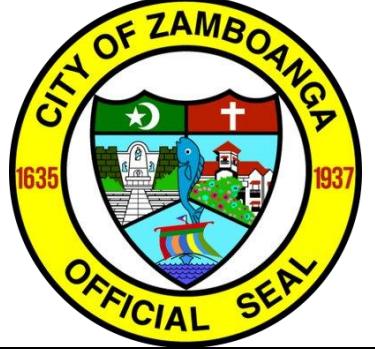
Test Case ID	Test Scenario	Test Case	Precondition	Test Steps	Test Data	Expected Results	Post Condition	Actual Result	Status (Pass/Fail)
TC_REGISTRATION _001	Adding Events	Trying if the data will reflect in the calendar	Provide all the necessary data before saving to proceed to the next step	Fill out required data on the specific date the user want to add events, then save	Data provided will be save	The events name will reflect on the specific dates of the calendar when save	Don't reflect to the calendar when error occurred	Same with the expected results	Pass
TC_REGISTRATION _001	Adding events	Trying if Blank form or space name only will accept	Will not save if the data needed is all spaces only	Trying to put all Spaces only in the data	The data provided using all spaces only will not accept by the system	The form needed to be fill will required to input valid characters and not all spaces only	Can't save when the required task is not fulfil	Same with the expected results	Pass
TC_REGISTRATION _001	Adding Events	Add another events	Provide all the necessary data before saving to proceed to the next step	Fill out required data on the specific date the user want to add events, then save	The new added data won't overlay to the existing data on the specific dates in the calendar	New added events will be added to the specific date in the calendar that will not overlay to the existing one	Alert message will appear saying " Event not save because the date you trying to fill is already taken "	Same with the expected results	Pass
TC_REGISTRATION _001	Deleting Events	Trying to delete the saved events in the calendar	Stay on the same UI when error occurred	Select specific events in the calendar you wanted to delete, click "delete" button, click "yes" if you're sure to delete	The data on the specific date will be moved to trash for recovery/deleting permanent	The data on the specific date will be deleted and moved to trash for another operation(recove r/permanent delete)	Alert message will appear when the operation is not successful	Same with the expected results	Pass

TC_REGISTRATION _001	Updating Events	Updating the events in the calendar specifically	Don't update when error occurred	Select specific events in the calendar you wanted to update, click "update" button, Provide the details you want to update, click "save" if you're done	Updated data will be applied	The updated data will reflect on the specific date on the calendar	Alert message will appear when the operation is not done correctly	Same with the expected results	Pass
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Project Name:	Events and Clubs Management System	
Module Name:	Attendance Management	
Reference Document:	Functional Requirements	
Created by:		
Date of Creation:	06-Jan-24	
Date of Review:	25-Mar-24	

Test Case ID	Test Scenario	Test Case	Precondition	Test Steps	Test Data	Expected Results	Post Condition	Actual Result	Status (Pass/Fail)
TC_REGISTRATION _001	Type of attendance	Choosing the type of attendance	When library attendance is clicked, proceed to library attendance UI	Login account, select type, provide details	Data provided will be save	The data will be save to the system's server	Don't save data when error occurred	Same with the expected results	Fail
TC_REGISTRATION _001	Type of attendance	Choosing the type of attendance	When events/clubs attendance is clicked, proceed to the events/clubs attendance UI	Login account, select type, provide details	Data provided will be save	The data will be save to the system's server	Don't save data when error occurred	Same with the expected results	Fail
TC_REGISTRATION _001	Events/ clubs attendance	Choosing the type of clubs user wants to attend	Checking the availability of the clubs before applying the attendance	Login account, select type, provide details	Save data when the clubs is available for attendance	Attendance will be save when the clubs is available, otherwise	Alert message that the attendance will not accept when the clubs is not available	Same with the expected results	Pass

TC_REGISTRATION _001	Events/ clubs attendance	Choosing the type of events user wants to attend	Checking the availability of the events before applying the attendance	Login account, select type, provide details	Save data when the events is available for attendance	Attendance will be save when the events is available, otherwise	Alert message that the attendance will not accept when the events is not available	Same with the expected results	Pass
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Project Name:	Events and Clubs Management System	
Module Name:	Event Proposal Module	
Reference Document:	Functional Requirements	
Created by:		
Date of Creation:	06-Jan-24	
Date of Review:	25-Mar-24	

Test Case ID	Test Scenario	Test Case	Precondition	Test Steps	Test Data	Expected Results	Post Condition	Actual Result	Status (Pass/Fail)
TC_REGISTRATIO N_001	Create new proposal	Creating a proposal letter	Do not accept when the message is blank or all spaces characters only	Tap Proposals, Add new proposal, input data needed, then save when done	The system accept when the operation is correct	Created new proposal will be added and will not when it's blank or all spaces characters only	Can't save when the message is blank or all space characters	Created new proposal will be added and will not when it's blank or all spaces characters only	Pass
TC_REGISTRATIO N_001	Delete Proposal	Deleting proposal	Don't delete when the operation is not done until the end pf the process	Tap the desired proposal you wanted to delete, tap yes if you're really sure on deleting it	The data will be moved to trash for final decision if want to retrieve or permanently delete	The data will be deleted if all operations have done	Cancel all operations when not properly done	The data will be deleted if all operations have done	Fail
TC_REGISTRATIO N_001	Update proposal	Updating the proposal	Save as Draft when unintentionally left the interface	Tap the desired proposal to update, update the proposal you wish to renew and save after you're done	The data to the proposal updated after clicking the save button	The proposal that has been updated will reflect immediately after tapping the save button	Back to last data provided when error occurred	The proposal that has been updated will reflect immediately after tapping the save button	Fail
TC_REGISTRATIO N_001	Same day proposal creation	Creating multiple proposal in same day	Accepts multiple creation in the same day without limitations	Tap Proposals, Add new proposal, input data needed, then	New proposal has been made in the same day and it is valid	The system can accept multiple proposal creation in the same day	Don't save new created proposal when the operation is not fully done,	The system can accept multiple proposal creation in the same day	Pass

				save when done		without limitations	save as draft only instead	without limitations	
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Table 19. Test Cases

7.3 Bug Reports

Bug Report														
Project Number:		Project Name:		Iteration Number:		Test Case Number:		Date:		Task Name:		CPAR Control Number:		
SN	ERROR(S) / BUG(S)	Description(s)	Bug Type	Test Date	Root Cause(s)	Mitigating/Immediate Action	Permanent Corrective	Owner	Date Due	Date Closed	Total Debugging Time (HRS)	Recurring (Y/N)	Status	Remarks
1	1. Loading session after login	Loads the logged in homepage longer than expected at times	C	26-Mar-24	Internet Connection or stitching of data delay	4/5/2024 Need to find and fix the root cause of the bug that occurred	4/5/2024 Fixed the source of the bug that occurred wih L4	UX/UI Designer	9-April-24	10-April-24	11:00	N	Closed	
2	2. Reload of page	Reloading page will return to the homepage instead of where you last left off	C	5-April-24	Unable to locate history of page left off	4/5/2024 Fix the bug of not retaining the page history where the user last left off	4/8/2024 Fix the history where the user last left off and locate the page module	UX/UI Designer	9-April-24	10-April-24	3:00	N	Closed	
3	3. Password Validation	Checking of the password	H	26-Mar-24	Verification bug	3/26/2024 To verify and make sure password validation works completely	4/10/2024 Fix the bug of password validation bug/error	Developer	10-April-24	10-April-24	10:00	N	Open	
4	4. Admin Page - Checking of calendar	Upcoming events can't display from the calendar when editing	H	18-Mar-24	Error in backend	3/25/2024 Debugging the code	4/15/2024 Fix the backend by the developer	Developer	16-April-24	-	10:00	Y	Open	
5	5. Loading session after registration	Loads the logged in homepage longer than expected at times	C	26-Mar-24	Delay of Update	3/23/2024 A need for action to prevent the bug from occurring	4/11/2024 Found the source of the bug from the developer	UX/UI Designer	15-April-24	17-April-24	10:00	N	Closed	
6	6. Account - refresh for update	To see updated inputs, there is a need to reload page	M			3/29/2024 Make UI responsive to the updated information	4/04/2024 Recognize problem of updated information for viewing	UX/UI Designer	05-April-24	-	600	Y	Open	
7														
8														
9														
10														
11														
12														
13														
Status:	Bug Type:	Total												
open	H - Major - High Criticality (includes data entry & runtime error)	2												
for verification	M - Minor - Medium Criticality (includes validation errors)	1												
closed	C - Cosmetic (includes Graphical User Interface errors)	3												
Requested By:	Confirmed By:													
Kim John Badiles	Christiana Bagtao													
Test Engineer(s):	Project Leader:													

Table 20. Bug Report 1

Bug Report														
Project Number:		Project Name:		Iteration Number:		Test Case Number:		Date:		Task Name:		CPAR Control Number:		
SN	ERROR(S) / BUG(S)	Description(s)	Bug Type	Test Date	Root Cause(s)	Mitigating/Immediate Action	Permanent Corrective	Owner	Date Due	Date Closed	Total Debugging Time (HRS)	Recurring (Y/N)	Status	Remarks
1	1. Loading session after login	Loads the logged in homepage longer than expected at times	C	26-Mar-24	Internet Connection or stitching of data delay	4/1/2024 Need to find and fix the root cause of the bug that occurred	4/5/2024 Fixed the source of the bug that occurred wih L4	UX/UI Designer	9-April-24	10-April-24	1:00	N	Closed	
2	2. Reload of page	Reloading page will return to the homepage instead of where you last left off	C	5-April-24	Unable to locate history of page left off	4/5/2024 Fix the bug of not retaining the page history where the user last left off	4/8/2024 Fix the history where the user last left off and locate the page module	UX/UI Designer	9-April-24	10-April-24	3:00	N	Closed	
3	3. Reload of page	Reloading page will return to the homepage instead of where you last left off	H	26-May-24	Unable to locate history of page left off	3/23/2024 To verify and make sure password validation works completely	4/5/2024 Fix the bug of password validation bug/error	UX/UI Designer	11-May-24	-	10:00	Y	for verification	
4	4. Password Validation	Checking of the password	H	26-Mar-24	Verification bug	3/25/2024 To verify and make sure password validation works completely	4/3/2024 Fix the bug of password validation bug/error	Developer	11-May-24	-	10:00	Y	for verification	
5	5. Admin Page - Checking of calendar	Upcoming events can't display from the calendar when editing	H	18-Mar-24	Error in backend	3/25/2024 Debugging the code	4/15/2024 Fix the backend by the developer	Developer	16-April-24	-	10:00	Y	Open	
6	6. Loading session after registration	Loads the logged in homepage longer than expected at times	C	29-Mar-24	Delay of Update	3/21/2024 A need for action to prevent the bug from occurring	4/16/2024 Found the source of the bug from the developer	UX/UI Designer	11-April-24	11-April-24	6:00	N	Closed	
7	7. Account - refresh for update	To see updated inputs, there is a need to reload page	M			3/29/2024 Make UI responsive to the updated information	4/05/2024 Recognize problem of updated information for viewing	UX/UI Designer	30-Mar-24	-	600	Y	for verification	
8														
9														
10														
11														
12														
13														
Status:	Bug Type:	Total												
open	H - Major - High Criticality (includes data entry & runtime error)	2												
for verification	M - Minor - Medium Criticality (includes validation errors)	1												
closed	C - Cosmetic (includes Graphical User Interface errors)	3												
Requested By:	Confirmed By:													
Kim John Badiles	Christiana Bagtao													
Test Engineer(s):	Project Leader:													

Table 21. Bug Report 2

7.4 Test Results Summary

Build/Version	Total Test Case	Passed Test Case	Failed Test Case	Remarks
1.0	53	45	8	
1.1	53	51	2	
2.0	53	49	4	

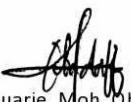
Table 22. Test Results Summary

Appendices

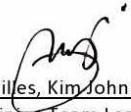
Appendix A: Company Agreement Form

CONTRACT OF AGREEMENT

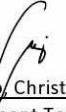
We, the undersigned, hereby understood and abide the rules and regulations, policies, and penalties set by the Zamboanga City Library Company. Signed this November 08, 2023 at the College of Computing Studies, Western Mindanao State University, Normal Road, Baliwasan, Zamboanga City, Philippines, 7000.



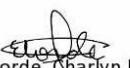
Annuarie, Moh. Chadaff A.
Analysis and Design Team
Lead



Badilles, Kim John L.
Training Team Lead



Bagotab, Christiana O.
Management Team Lead



Elorde, Charlyn L.
Testing Team Lead



Yu, Fred Anthony D.
Development Team Lead

Noted by:

Mr. Marvic A. Lines
Instructor

Mr. Salimar B. Tahil
Instructor

Figure 17. Company Agreement Form

Appendix B: Client Agreement Form



Western Mindanao State University
College of Computing Studies
DEPARTMENT OF COMPUTER SCIENCE
Zamboanga City
Email: cs.ccs@wmsu.edu.ph



CLIENT AGREEMENT FORM

Organization Name:	Zamboanga City Library
Organization Address:	R.T. Lim Boulevard, Zamboanga City, Zamboanga del Sur, Philippines, 7000
Project Working Title:	Zamboanga City Library: Event and Clubs Management System
Project Description:	It is a web-based events and clubs management system that will create announcements, events, and clubs. The user can browse for library events, check for announcements, view list of clubs, join events by signing up, and apply for club membership in the website. The admin can generate reports for user engagement in events by scanning QR generated codes from the user to serve as their attendance. Also, the admin can create registration/application forms within the system.

Developers (Students)	
1. Annuarie, Moh. Qhadaff A.	
2. Badilles, Kim John L.	
3. Bagotao, Christiana O.	
4. Elorde, Charllyn L.	
5. Yu, Fred Anthony D.	

I, the undersigned, hereby confirm my commitment to act as their client and pledge to furnish the essential information and assistance to the aforementioned students for the execution of an information system development project for our organization. This project is scheduled to span from the 1st Semester of the academic year 2023 – 2024 to the 2nd Semester of the academic year 2023 – 2024, aligned with the academic calendar of Western Mindanao State University.

The Client (Top-Management Member of the Organization):

Signature: (Can be digitally signed)	
Name of the Client:	Madelyn F. Candido
Designation:	Librarian IV
Office:	Zamboanga City Library
Email:	zamboangacitylibrary@gmail.com / mcandido2018@gmail.com
Contact Number:	09068171700

The Contact Person (Top-Management Member or Employee of the Organization):

Signature: (Can be digitally signed)	
Name of the Person:	Carmelita T. Agustin
Designation:	Librarian III
Office:	Zamboanga City Library
Email:	Pinkyagustin76@gmail.com
Contact Number:	09269058990

Note: Upon successful completion of the project, the client should be able to issue a letter certifying the suitability and acceptance of the developed software for the organization.

Figure 18. Client Agreement Form

Appendix C: Data Collection Methods

A. Interviews

Conducting interviews with librarians, library staff, and library users can help gather qualitative data and provide in-depth insight about their needs, preferences, and challenges related to library event and clubs and it can help uncover problems or issues that may not be apparent through other methods. For example, questions about specific features can be asked in the system or in their current workflow.

B. Observation

The system will assess how well event announcements work and how much library users interact with clubs run by the City library by observing daily activities. By identifying inefficiencies and user behaviors that may go unreported in surveys or interviews, this method highlights how flexible the system is to the complex needs of event and club management.

Appendix D: Interview Questions

A. Process-related Questions

1. How do you process Clubs?
2. Who manages clubs?
3. What are the different types of clubs you have in the library?
4. When does clubs started?
5. Who is assigned in each club?

B. Data-related Questions

6. Do you collect data in every events?
7. Where is this data stored, and how is it managed?
8. Are there any privacy or security concerns related to the data collected?
9. What specific points do you believe are crucial for improving library event and clubs' management system?
10. How frequently is data related to library activities and attendance analyzed or reported?

C. Organization-related Questions

11. Can you provide an overview of the library's mission and goals?
12. What are the major challenges the library faces in its day-to-day operations?
13. How does the library currently engage with its library users, and what is the primary focus of its programs and services?
14. Are there any long-term strategic plans or initiatives in place for the library's growth and development?
15. What are the key values or principles that guide the library's approach to serving the community?

Appendix E: Transcribed Interview

Ma'am Madelyn: hmmm... So hindi na siya ano o?

Christiana: Hindi na po library management system.

Ma'am Madelyn: So ano na, Events and Clubs Management System.(Christiana: yes) Announcement, events and clubs nalang.

Christiana: Tas, yun din sabi niyo ma'am na "The library is not just about the books, ma'am. So, i-anong din i-showcase din yung mga clubs and events na meron sa library.

Ma'am Madelyn: So eto na yung ano yung ano, change, totally change talaga yung ano niyo. (Christiana: Yes Ma'am!) Tapos ano man ang kailangan niyong ano o (Fred: Interview ma'am!) Ah, data sa akin?

Fred: First ma'am o, Yung ano...

Ma'am Madelyn: ... kay mainit doon sa Office!

Christiana: ahm, una po ma'am, How do you process clubs, ma'am, and who manages it? Ano-ano bang clubs ang meron dito sa library ma'am?

Ma'am Madelyn: Dalawa man, pero hindi pa talaga siya na, ano talaga (Christiana: Like, na establish ba?) Na establish na, pero hindi talaga siya na, na, maximize. oo.

Christiana: Bakit po ma'am?

Ma'am Madelyn: More on the process of, ano, uh, recruiting mga members.(Christiana: hmm... So, hindi pa po siya na, ano?) na-established naman pero hindi siya gaano ka, strong talaga kasi nag rerecruit pa ng members.

Christiana: Kailan po pala nag-start yung clubs dito ma'am?

Ma'am Madelyn: Yung young storytellers and reading ambassadors , quando ba kel ma'am, neng last year lang kita yan submit el ano, no?(Ma'am Neng: el ano?) yan launch, no? Akel diatun "Young storyteller club" (Ma'am Neng: Si!) Last year lang. (Christiana: ah! Last year lang, tapos sino po yung head?) Quanto members ba kel kita chene ma'am Neng? (Ma'am Neng: akel Last time?) Si? (Ma'am Neng: More or less, mga 30 yata.) 30 ba ma'am no? Akel yan ano akel kanda kana Marfina, Sila lang kel yan sign. Hindi kel sila todo diba? (Ma'am Neng: ahh!!) Diba kel yan picture kita more or less, mga 9 lang gaha kel sila diba?(Ma'am Neng: Akel estudyante gale tu tan mean?) oo, akel mga yan storytellers (Ma'am Neng: Oh yeah! 9, 9!!) yan endore gale kel sila el diila membership, Parang 9 palang sila! So, eventually nag aano pa kami, nag recruit!

Christiana: Ikaw yung nag head ma'am sa clubs?

Ma'am Madelyn: Ang assigned, si Ma'am Neneng!(Christiana: ah! sa clubs!?) kasi since siya man ang assigned sa children's library, 8 lang so, meron din kami yung "Friends of the library" yan Friends of the library, yan ano, mga Volunteers na all ages na siya, pwede mga Professionals, pwede mga Students, mga other school youth, or mga graduate na walang trabaho na volunteer sa amin mag tulong, pwede din mga employado, Marami kami, Kwanto members ba kel kita ma'am neng? Chene tamen kel sila yan sign no? tas ang naka assign dyan si ma'am Pinky din, sa Friends of the Libraries.

Christiana: Yung ano ba yung ambassadress?

Ma'am Madelyn: Ah, yang reading ambassadors. (Christiana : Ah, Ambassador!) join na yan siya for the Young Storytellers. (Christiana: Ah, parang ano na sila, ano yang ginagawa nila ma'am ?) Meron sa kanila nag le-lead sa storytelling (Christiana: hmm!) yan mga storyteller(Christiana: May mga events?) oo, (Christiana: Ah, Sila mag ano..) hmm² Sila ang mag lead!, Meron ding Young Reading Ambassadors, sila yung mag lead ng Read Aloud Sessions din namin.(Christiana:hmm!) Basa, Basa so yun is dalawang clubs, dalawang association. Clubs. One club, then isang association.

Christiana: Tapos may possibility ma'am na magka-Club membership fee para ma-ano yung ano?

Ma'am Madelyn: Hindi! kasi pag ano siya dito sa, kasi public yan ang mahirap dito sa amin (Christiana: Hmm!) ... public library kasi kami, so, as much as possible, ah, Yun talaga one², uh, important na ano aspect na dito sa public library is our services are free. Non-profit talaga kami, ang public library, so hindi kami naga-require ng fee's(Christiana: opo!) pwera nalang kung, Example, gagawa ng library card, so parang merong gastos doon, o they² require or we require them to² pay for library ID card fee kasi yung gastos sa printing, yung card, so minimal fee lang siya (Christiana: ahh!) So, sa mga fellow, uh, our association, fee's (inaudible...) government, the agency, the government, so much. And the public library. So, more on voluntary talaga yung membership jan.

Christiana: Tapos si ma'am lang po ang sa clubs, kayo ma'am, hindi niyo po hina-Handle?

Ma'am Madelyn: Hindi, Kasi ano man, More on supervision (Christiana: ah! hindi niyo na hawak ang data ng mga members, ah hindi na.

Ma'am Madelyn: Kasi may naka-assign man.

Christiana: hmm!, Tapos sa events ma'am, paano yung, paano magka-event ma'am?

Ma'am Madelyn: like yung mga activities namin?

Christiana: opo, like mga open house, paano po sila naaano?

Ma'am Madelyn: Nagme meeting lang kami, mag plan kami, pero meron kaming yearly calendar activities, pinaplot na yan namin, pag may mga activities lang (Christiana: opo!) I-coconduct na yan namin for the year, tapos manyari, ngayong March meron kaming ico-conduct na activity or events so, Mag me-meeting yan kami kung ano yung mga kailangan, tapos ano din yung mga working committee (Christiana: opo!) naka-assign na to sa kanya kung anong gagawin.

Christiana: Yung mga working committee ma'am, sino yan?

Ma'am Madelyn: Kami lang!, Kami-kami lang, Kaya we are looking for some volunteers to assist us. Especially kung merong community outreach, malakihan na yung community outreach chum punk din yung activities namin So, meron siyang like parang medical mission, consultation, Meron kaming Marami! Maraming activities in one day, One whole day yun So, our simultaneous yung activities namin.

Christiana: Tapos ma'am nagco-collect kayo data from that event?

Ma'am Madelyn: Meron kami, meron kaming ano o registration. (Christiana: ah!) tsaka ano din, Uh, Meron din kaming online registration, tapos on the day of the, uh, Our online registration is when we conduct Seminar, or webinar, or digital interacy training so mag o-online lang yan kami, or mga contest, ico-conduct na contest, Free registration siya para malaman namin kung ilan ang mag pa-participate and aside from that, meron din kaming registration or attendance on the day of the event.

Christiana: So, ma'am, the other, for example, other organization, gusto nilang gumawa ng event dito sa library, okay lang ba yun ma'am?

Ma'am Madelyn: partner kami.

Christiana: Ah, so, possible yun?

Ma'am Madelyn: Yes. pag other organization, like, there's a lot of people, it's fine, but it depends on the agenda.

Christiana: Ah, it depends sa agenda pero, nangyari na yan ma'am?

Ma'am Madelyn: Depende sa event, open naman kami sa ganon, kaya lang ngayon di lang kami nag accommodate because of our recent condition.

Christiana: hmm², pero pag okay ma'am?

Ma'am Madelyn: oo! (inaudible).

Christiana:For free din ma'am?

Ma'am Madelyn: Free! (Coughing) Mass call meetings, Group discussion pwede rin! (Cough) pwede siya like seminars or training, pwede man din

Christiana: Ah, pwede mag seminar dito, ma'am?

Ma'am Madelyn: Nag co-conduct kami ng seminars, Webinar...

Fred: May question ako ma'am, like if may seminar? may certificate sila mare-receive? (Ma'am Madelyn: hmm! Meron pa silang kit, Meron pa silang meryenda, Free pa yun!

Fred: Do you want ma'am, sa system is, mag include kami ng mag upload lang po kayo ng certificate tapos automatic na siya mag fill-up ng names na para print, bigay na lang?

Ma'am Madelyn: hmm²! yun na nga, yun din mas maganda kung meron tayo sa registration yung automatic na...

Fred: ah yes ma'am! like yung attendance namin ma'am di na yung sa section pero doon lang po sa mismong event, like parang ano sila, mag Signup for events, clubs, so you need, so need man talaga mag attend talaga sila, yung attendance nila online nalang, or scan nalang kung attend man so present sila sa event na to (Ma'am Madelyn: hmm!) So, ayun...

Ma'am Madelyn: Mas maganda yun, di na nila kailangan mag line pa kasi nung last open house namin, ang haba ng line para mag register, so mas madali pag...

Fred: QR na? ...

Christiana: Tapos ma'am, Paano nila malaman if may webinar/Seminar ganyan na mangyari?

Ma'am Madelyn: Sa FB page man...

Christiana: Ah sa FB...

Ma'am Madelyn: Pino-post yan namin, depende rin sa target participants namin kung participants namin are, mga grade level students, mga lower, elementary students (Christiana: Opo!) So, it's either mag se-send kami ng communication sa, sa isang school na mag padala sila ng learners dito sa amin (Christiana: opo!) hmm... ano yan, elementary, High School and senior high, ganon ang ginagawa namin, Pag for professionals, Nah, nag se-send din kami by school ng mga communications, pwede din sa emails, sa Facebook page, or sa messenger, kasi pag kilala na ng mga, kunwari target participants namin ay librarians or librarista, so meron na kaming circle of friends sa Fb, sine-send out yan namin, Or Pino-post din namin sa FB page namin(Christiana:opo!)

Christiana: Tapos ma'am, diba sabi niyo ma'am na pumupunta kayo sa ibang malayong Barangay, like paano niyo po sine-set up yung venue like paano niyo yun inaano ma'am?

Ma'am Madelyn: Ahh! ano, pupunta kami sa ano, before the event yun na mag paplanning na kami no? by working committee, mag aasign ako ng mga library staff...

Christiana: ah! kayo mag assign ma'am?

Ma'am Madelyn: oo! ako mag assign ng trabaho niya, san siya assign, sa communication, sa designing ng mga certificates at tsaka program, may invitation, sino gagawa ng letter... kunwari si ma'am neneng, sa storytelling ka, Si ma'am anna sa ano ka, proper hand washing, sa health and hygiene, kunwari may mga experts din kami galing sa mental awareness, invite kami ng speakers...

Christiana: Kayo din mag-design ng ano niyo ma'am?

Ma'am Madelyn: oo! kunwari this December, meron kaming pina-plot na schedule ngayong December, doon kami sa likomo, so, ano-anong activities ang igaganap namin doon? so, depende rin sa activities pero usually activities namin storytelling so mag coordinate na kami doon sa Barangay, prior day of our event, mag coordinate kami doon sa Barangay , send out kami ng letter communication, tapos after the, if possible, pupuntahan talaga namin ang Barangay, tapos kausapin si Barangay Chairman, na ganito ang gagawin namin, so we need, Dependere rin sa activities namin, so example meron kaming house consultation, uh, medical consultation so meron kami ... galing sa department of health or city health, tapos may mga medicines din, so coordinate kami sa Barangay, sa mga social, uh, ano ba yun? Barangay social health workers para mag assist, so we need or we have to inform your community na meron kaming ganito na kung sino magpa Checkup, dito sila... storytelling, mga bata din ang participants, uh, rural farming, so mga out of school youth, pwede mga nanay ganon, mental health awareness, pwede mga youth, lahat, mga estudyante, mga youth, lahat na by sector kami.

Christiana: Meron kayo kino-consider na factor na para yun na piliin niyo na lugar, para doon kayo mag conduct or (Ma'am Madelyn: Parang requirement?) opo!

Ma'am Madelyn: oo!

Christiana: Ano-ano ma'am?

Ma'am Madelyn: Ang kino-consider naming, ang prina-prioritize talaga namin parang kung Barangay is yung maraming indigent (Christiana: ah!) maraming, yung nangangailangan talaga

Christiana: Doon niyo i-base?

Ma'am Madelyn: Oo! Kase alangan naman pupunta kami sa mga mayayaman, tetuan mayayaman se although mayayaman naman sila ...

Fred: indigent..

Ma'am Madelyn: Oo! Meron din sila mga ah parang isang ano, location doon ... doon!, Na yung mga maraming mayaman ...

Christiana:

Ma'am Madelyn: Yung mga ano talaga, they need Assurances... (Christiana: hmm!) pero ang inaano namin ngayon, yung project na kailangan namin, susustain talaga hindi yung parang pang ano lang, short-term, iniisip namin yung mga pang long-term na impact sa kanila, pwedeng maadopt... sustain din, kasi pag bigay² lang kami paano sila matuto, ganon din ang inaano namin na community outreach ... turuan sila paano mamuhay, ... Rural farming ... mahal na ang mga bilihin, bili ka ng gulay jan, 20 pesos na yung gulay e dati 5 or 10 lang naman yon, so what if turuan namin sila mag farm...

Christiana: Tapos ma'am yung mga data makuha niyo from that event ma'am, Sa inyo lang yon or i-send niyo po sa national library?

Ma'am Madelyn: Oo! Sine-send yan namin!

Christiana: Iba rin yung monthly reports?

Ma'am Madelyn: yun na yung sa monthly reports, Tapos, pag mag apply kami ng mga awards, kailangan din ng mga data before namin ibibigay doon sa kanila... (Ma'am Madelyn talking to other library staff regarding their meryenda)

Christiana: Yung sa monthly reports ma'am about sa events, ano-ano yun ma'am?

Ma'am Madelyn: Nah! Kailangan nila, gusto nila may activity kami sa God, meron kaming activity before sa senior high, sa persons PDL, mga PESO, yan, dapat kailangan namin mag conduct mga ganon, activities para sa mga children, activities para sa mga single parent, Sa mga youth...

digital literacy training .. by sector... conduct kami mga ganong activity... pwede kami mag apply, so, mga data din namin, By age, ilan ang nag attend, anong klaseng activity to?, mga pictures niyan, nanghihingi ng mga pictures, attendance, mga evidences, mga documentations niyan, kailangan ng mga data sa documentation process mag submit sa kanila, so, monthly yon, tapos doon sila kumukuha ng data, parang yung award na ibibigay nila sa amin, doon sila kukuha ng mga data.

Christiana: Pwede mag ano ma'am, mag tingin ng examples record? report?

Ma'am Madelyn: ... Naprint ko ba yun? tingnan ko muna kung naprint ko... Balik lang kayo ah?

Christiana: Osige ma'am! When po kayo available ma'am?

Ma'am Madelyn: Bukas nalang...

Christiana: Maaga po ba ma'am? ... yun lang ma'am.

Ma'am Madelyn: Yun sana gusto namin, eto o para di na kami mag manual

Christiana: Ah yung ano...

Ma'am Madelyn: Yung statistics ba...

Christiana: Yung attendance?

Ma'am Madelyn: Oo! Baka pwede niyong yung gagawin ninyong ano o, yung output ninyo, pwede din iapply dito o, Attendance lang naman kailangan...

Fred: Di na by sections ma'am? Kasi pag by sections daw, need daw ng books diba?

Christiana: Hmm²!

Ma'am Madelyn: If by sections, ano daw?

Fred: Need daw ng book catalog if mag attendance...

Ma'am Madelyn: Hinde, yung attendance lang naman kailangan namin...

Fred: If mag attendance kayo(by sections) Need daw po talaga yung books...

Ma'am Madelyn: May books talaga?

Christiana: Opo! Kailangan!

Fred: So, Iba daw yun, ibang system daw yun

Ma'am Madelyn: Ganon? kasi yun lang din kailangan namin sa entrance

Fred: Sa entrance nalang?

Ma'am Madelyn: Oo! kahit hindi na yung books kasi for our ano... na attendance din, Overall lang para malaman namin kung ilan talaga ang pumapasok (sa library accurately) everyday, meron kaming average number of students or researcher who are coming from the library, mamonitor namin kaagad na ganito pala kadami, so anong... Pinaka-maramin ang pumupunta dito, ani yung peak season namin dito?

Fred: Pero yung by sections ...

Ma'am Madelyn: Yung by sections, pwede nalang kahit walang by sections, kahit na dito nalang sa main entrance tapos cellphone ang gagamitin, para ano, mas, mas ano ba siya mas convenient (Christiana: Opo!) Convenient mag kuha ng data, mag generate ng report, convenient dun sa library users kasi madali sila... di na sila...

Christiana: Pero yung clubs niyo po, di niyo yan hayaan? or i-ano niyo talaga yan, i-push?..

Ma'am Madelyn: ah Oo! kasi, we're more on partnership, kasi jan kami nabubuhay sa partnership

Christiana: Partnership...

Ma'am Madelyn: Lalo na ngayon, 3 nalang kaming regular...

Christiana: Yung partnership po...

Ma'am Madelyn: Meron kaming partnership with the individual, kasi may mga fonors kami, regular donors ng mga book, yan, partnership with the librarian...

Christiana: Sila ang mag help para ma-anong yung club?

Ma'am Madelyn: Oo! Dami namin, NGO's

Christiana: Iba-iba yun ma'am?

Ma'am Madelyn: Oo! Iba-iba... May NGO's, May association, meron din individual...

Christiana: Inaalnis niyo yan ma'am?

Ma'am Madelyn: Hindi, kasi nga jan kami nabubuhay sa partnership, yung mga activities namin, partnership din, kasi wala man kami pera, wala man kami fundings, yung mga partners namin ang nag po-provide, di kami ang nag babayad ng speaker, resource speaker namin, kasi probono yan silang lahat through partnership

Christiana: Ok po ma'am!

Ma'am Madelyn: Ok na??

Christiana: Thank You ma'am!! Balik lang po kami bukas ma'am!

Appendix F: Gantt Chart

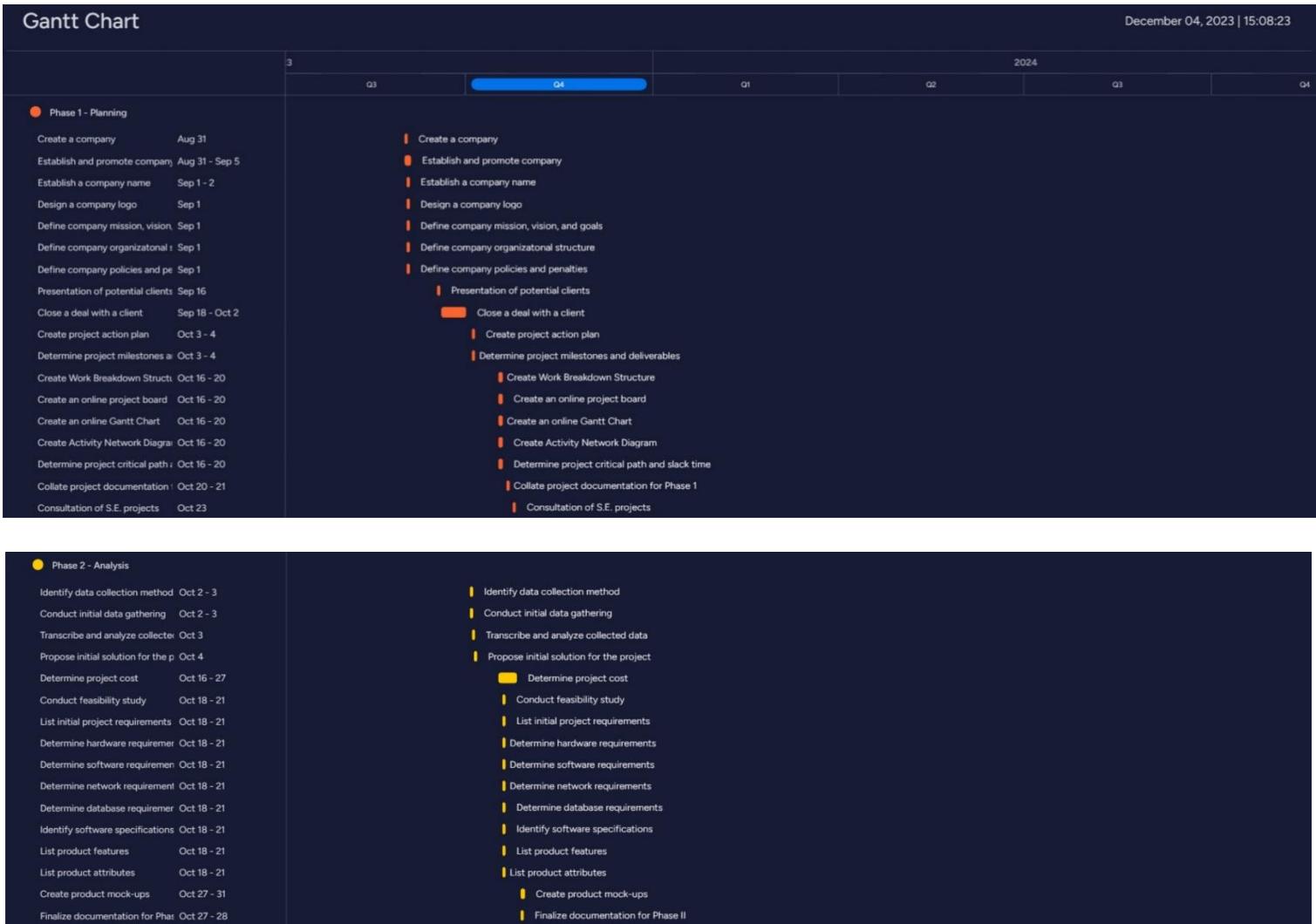




Figure 19. Gantt Chart

Appendix G: Feasibility Study

1. Candidate Solution Matrix

Characteristics	Zamboanga City Library: Event and Clubs Management System	GetTogether (Open Source)	Cvent (Commercial/ Paid Software)
Portion of System Computerized	Self-hosted and customizable system	Generic system and might not be fully customizable	Generic system and might not be fully customizable
Benefits	Takes months to implement	Takes several years to implement	Takes several years to implement
Servers and Workstations	Dedicated and scalable server	Dedicated and scalable server	Dedicated and scalable server
Software Tools Needed	PHP, MySQL, VS Code, frameworks, and APIs	Not applicable	Not applicable
Application Software	Custom Solution	Custom Solution	Package and generic solution
Method of Data Processing	Online, remote, and real time	Online, remote, and real time	Online, remote, and real time
Output Devices and Implications	Monitors, Printers	Monitors, Printers	Monitors, Printers
Input Devices and Implications	Keyboard and mouse	Keyboard and mouse	Keyboard and mouse
Storage Devices and Implications	MySQL and storage, scalable to meet user needs	Not applicable	Not applicable

Table 23. Candidate Solution Matrix

2. Technology Gap Analysis

Top Features or Characteristics	Zamboanga City Library: Event and Clubs Management System	GetTogether	Cvent
Ease of Use	Easy	Expert	Expert
Performance	5/5	4/5	4/5
Customizable	Yes	No	No
QR Code	Applicable	Not Applicable	Not Applicable
Events and Announcements	Applicable	Applicable	Applicable
Monthly Reports	Fixed for easy documentation	No monthly reports	No monthly reports
Storage	Flexible	Fixed and simple	Fixed and simple
Security	Self-Hosted	Vendor Dependent	Vendor Dependent
Reliability	Self-Hosted	Vendor Dependent	Vendor Dependent

Table 24. Technology Gap Analysis

3. Feasibility Study

1) Operational

The implementation of this event and clubs management system in a city library will not only greatly benefit library users but also the staff. For staff, it streamlines event and clubs management, making it easier to efficiently organize, track, and facilitate a diverse range of activities within the library. The system allows staff to automate routine tasks such as event registration and membership processing. Staff can efficiently update users on upcoming events, organizations, and post announcements, while ensuring smooth operations. Moreover, since statistical reporting is not manually provided, library services are improved from its insights.

For users, the system offers a user-friendly and efficient way to register, engage, and stay informed within the club or event community. QR code integration simplifies user access and engagement with library services, enhancing the user experience. Additionally, the event and clubs management system improves staff productivity and provides a more convenient, informative, and engaging experience for users.

Success Factors:

- A user-friendly interface for efficient operation.
- Providing comprehensive training to library staff and users.
- Setting up an IT assistant or a support desk.
- Regularly updating and maintaining the event, club, and system data.
- Encouraging user engagement and gathering regular input from users.

2) Technical

Hardware Resources

- Development
 - Laptop/PC
 - Flashdrive/External Harddrive
- Deployment
 - Cloud Server for hosting
 - Workstations of Library Staffs (Librarians)
 - QR Scanners (Smartphones)
 - Backup and Storage Solutions

Software Resources

- Apache - Local Web Server
- MySQL 8.1.0 or higher - Latest version of SQL for database
- PHP 8.2 - Web development and server scripting.
- PHP Extensions - Extension needed in install script to complete.
- CSS and JavaScript - For custom code.
- monday.com - For task management, tracking, planning, visualization, and collaboration with team members.
- draw.io – For managing of diagrams and models.
- Github - Code Review, Collaborative Development, and Issue Tracking.
- Git - Version control and backup and restore of project version.

People Resources

Member	Functions
Bagotao, Christiana O. ZamboLib Team Leader	<ul style="list-style-type: none"> ● Prepare and document standard operating procedures and protocols for the ZamboLib Platform. ● Develop technical solutions and security tools to help mitigate and avoid security vulnerabilities in the ZamboLib Platform. ● Sets ZamboLib Guidelines and Policies and ensures its implementation in the city library. ● Identify and define ZamboLib security requirements. Also performs security checks for the ZamboLib Platform. ● Ensures the compliance of the ZamboLib Platform to the Data Privacy Act 2012 (RA 10173).
Yu, Fred Anthony D. ZamboLib Lead Developer	<ul style="list-style-type: none"> ● Responsible for directing the development team in the design, development, coding, testing, and debugging of the customized ZamboLib platform for remote learning in the city library.

	<ul style="list-style-type: none"> Coordinate the development team's schedule, and ensure effective communication between development team members and other IT functional areas. Provide feedback and suggestions for the ZamboLib process and improvement and act as a technical mentor. Responsible for technical choices, and monitor the work of the development team. Ensure the development of the ZamboLib adheres to the quality standards of the city library and work is done using best practices.
Annuarie, Moh. Qhadaff A. ZamboLib UI/UX Designer	<ul style="list-style-type: none"> Gather and evaluate user requirements for the ZamboLib Platform. Defines and analyzes system problems, as well as building and testing standards and solutions to meet computer system requirements. Illustrate design ideas using storyboards, process flows and sitemaps. Design graphic user interface elements, like menus, tabs and widgets. Create search fields and page navigation buttons. Develop UI mockups and prototypes that clearly illustrate how the ZamboLib functions and look like.
Elorde, Charlyn L. ZamboLib Network Engineer	<ul style="list-style-type: none"> Design the networking environment by coordinating system installation, defining, documenting, and enforcing system standards for the ZamboLib Platform. Monitor network performance, troubleshoot network faults and outages, and schedule upgrades to improve network performance for the ZamboLib Platform. Investigate data network faults in local and wide-area situations Give remote troubleshooting and fault discovery if issues occur upon initial installation.
Kim Badilles ZamboLib QA Engineer	<ul style="list-style-type: none"> Responsible for the quality of the ZamboLib development and deployment. Perform manual tests to ensure the ZamboLib customized by the development team is fit for the purpose. Collaborate with the development team with regards to the analysis of the ZamboLib platform, mitigate risk and prevent ZamboLib issues. Execute all levels of testing including system, integration, and regression testing. Report technical issues and provide support

	and documentation.
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Table 25. People Resources

3) Schedule

A long-term approach to the development of the Zamboanga City Library Management System: ZamboLib.

Refer to Figure 3. Work Breakdown Structure

6 Phases of the Development of ZamboLib

Phase 1: Planning

In this phase, the team will plan the development of ZamboLib and manage schedules or timeline of activities.

Activity 1 - Create a company

Activity 2 - Establish a company name

Activity 3 - Design a company logo

Activity 4 - Define company mission, vision, and goals

Activity 5 - Define company organizational structure

Activity 6 - Define company policies and penalties

Activity 7 - Establish and promote company

Activity 8 - Presentation of potential clients

Activity 9 - Consultation of S.E. projects

Activity 10 - Close a deal with a client

Activity 11 - Create project action plan

Activity 12 - Determine project milestones and deliverables

Activity 13 - Create Work Breakdown Structure

Activity 14 - Create an online project board

Activity 15 - Create an online Gantt Chart

Activity 16 - Create Activity Network Diagram

Activity 17 - Determine project critical path and slack time

Activity 18 - Collate project documentation for Activity 1

Phase 2: Analysis

In this phase, the team will analyze data needed to be collected for the system, identify requirements needed, and present system mockup.

Activity 1 - Identify data collection method

Activity 2 - Conduct initial data gathering

Activity 3 - Transcribe and analyze collected data

Activity 4 - Propose initial solution for the project

Activity 5 - Determine project cost

Activity 6 - Conduct feasibility study

Activity 7 - List initial project requirements

Activity 8 - Determine hardware requirements

Activity 9 - Determine software requirements

Activity 10 - Determine network requirements

Activity 11 - Determine database requirements

Activity 12 - Identify software specifications

Activity 13 - List product features

Activity 14 - List product attributes

Activity 15 - Create product mock-ups

Activity 16 - Finalize documentation for Activity II

Phase 3: Design

In this phase, the team will design the system's interface by creating a prototype and presenting it afterwards.

- Activity 1 - Determine system architecture
- Activity 2 - Create business use case
- Activity 3 - Create context and data flow diagram
- Activity 4 - Design system models
- Activity 5 - Design user interface
- Activity 6 - Create product prototype
- Activity 7 - Finalize documentation for Activity III

Phase 4: Coding

In this phase, the team will start coding for the system by module and then integrate them after. Consultation will also be done for any need of fixing the code.

- Activity 1 - Write System Module 1 – Events Management Module
- Activity 2 - Write System Module 1 – Clubs Management Module
- Activity 3 - Get feedback from a consultant 1
- Activity 4 - Debug, fix bugs, and update modules
- Activity 5 - Write System Module 3 – User Management Module
- Activity 6 - Write System Module 4 – Proposal Submission Module
- Activity 7 - Write System Module 5 – Reporting & Analytics Module
- Activity 8 - Integrate System Modules
- Activity 9 - Get feedback from a consultant 2
- Activity 10 - Debug, fix bugs, and update modules
- Activity 11 - Conduct unit testing
- Activity 12 - Finalize product design and coding

Phase 5: Testing

In this phase, the team will conduct testing and prepare deployment plans for the city library's use of ZamboLib.

- Activity 1 - Create testing plan
- Activity 2 - Create test cases
- Activity 3 - Conduct alpha testing
- Activity 4 - Conduct beta testing
- Activity 5 - Fix system errors
- Activity 6 - Conduct software/product attributes testing
- Activity 7 - Conduct user acceptance testing
- Activity 8 - Create migration plan
- Activity 9 - Deploy system/product to client's site

Phase 6: Maintenance

In this phase, the team will create a product manual and after performing of maintenance, it will be turned over to the client and close the project.

- Activity 1 - Create product manual
- Activity 2 - Gather and analyze customer feedback
- Activity 3 - Perform corrective maintenance

Activity 4 - Perform perfective maintenance
Activity 5 - Perform adaptive maintenance
Activity 6 - Finalize project documentation
Activity 7 - Turn-over project to client and close the project

Project Duration: 319 days

Success Factors:

- On-time procurement of hardware resources.
- On-time schedule of ZamboLib training and education.

4.) Economic

Refer to Chapter 4 - Project Costing.

5.) Cultural

The proposed Zamboanga City Library, ZamboLib, will be a robust system to support the event and clubs of the city library, making it more accessible to the community, promoting through the system-aided workplace.

Success Factors:

- Making it a user-friendly interface and accessible by any devices.
- Foster community engagement by organizing library events, clubs, workshops, organizations, and discussions.
- Promote productivity in system-aided workplaces, offer digital literacy programs and training sessions for community members who may not be tech-savvy.

6.) Legal

One of the foremost issues to consider is the safeguarding of data privacy. The utilization of the locally hosted Zamboanga City Library empowers both the management and the technical team to tackle this concern effectively. Additionally, a significant portion of the tools utilized in the implementation are open-source or available for free.

Success Factors:

- Implement strong data encryption and access control mechanisms to protect sensitive user data.
- Develop and communicate clear data privacy policies for library users, while also providing education and guidance on best practices.
- Conduct regular security audits and keep software and systems up to date to address potential vulnerabilities and risks.
- Conduct regular training and awareness programs for library staff and technical personnel to ensure they are well-versed in data privacy best practices.

4. Feasibility Analysis Matrix

Feasibility Criteria	Weight	Zamboanga City Library: Event and Clubs Management System	GetTogether	Cvent
Operational	30%	Fully supports LMS requirements	Most features support LMS requirements	Most features support LMS requirements
		90	85	85
Technical	10%	Comfortable in setting up from scratch	Vendor-dependent	Vendor-dependent
		88	80	85
Economic	30%	Cost for own server, domain, storage	Cost for own server, domain, storage	Can be expensive, cost per user
		85	80	75
Schedule	30%	Need asap, more or less than 3 months	6 to 9 months	6 months to 1 year, or more
		90	75	70
Ranking	100%	88.3	80	77.5

Table 26. Feasibility Analysis Matrix