



De La Salle-College of Saint Benilde

**Library Management System (LMS)**

*A Project Documentation for  
Ignacio B. Villamor Senior High School*

PROJECT MANAGEMENT (PROJMGMT) - TI001  
School of Management and Information Technology  
Information Systems Program

Academic Year 2019-2020

2nd Trimester

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## CHAPTER I

### 1. COMPANY PROFILE

The Company Profile introduces the institution's background, values and its mission and vision. This chapter also presents the analysis of the school's strengths, weaknesses, opportunities and threats.

#### 1.1. COMPANY BACKGROUND

Evident in their values and principles, Ignacio B. Villamor Senior High School (IBVSHS) embodies the core values of the Department of Education (DepEd) and its mission to promote access to quality education among stakeholders of all socioeconomic and cultural backgrounds. Since its separation from Ignacio Villamor High School (IVHS) in 2016, the school has brought about various steps to develop moral values, social responsibility, and academic performance towards excellence for global competitiveness. The school has shown exceptional commitment to their mission - to maintain well-trained, committed, caring facilitators and stakeholders and equip every learner with productive participation competencies in a fast changing environment, cultivate a climate of shared responsibility that will enhance empathy, sensitivity, and synergy, which are essential towards excellence.

According to the school records from 2009 and prior, the institution was formerly known as Araullo High School, Sta. Ana Annex before its independence. With the help of the late Councilor **Angel Linao**, the school gained its independence last February 7, 1958 under the name Sta. Ana High School. Seven months later, the school's name was changed to Villamor High School in honor of Justice Ignancio Borbon Villamor, the first Filipino president of the University



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of the Philippines, an executive secretary of the Philippine Commission at the time of his election and one of the first Filipino who had established a worldwide feat in implementing laws and jurisprudence.

Last 2016, Villamor High School opened the pioneer year of Senior High School, a new curriculum by the Department of Education headed by principal Dr. Maria Elena C. Serquina. Currently, the school has eighteen (18) competent professional teachers who are doctoral graduates, doctoral students, and masteral graduate with national certificate holders.

Their previous logo traces its roots on its mother institution, Araullo High School which comprises of a book, torch and a laurel leaf together with the school's official colors, pink and brown. Moreover, the new school brand logo retains essential elements of both its mother institution and IBVSHS. The modern interpretation is a testament of the 21st Century to K to 12 Education. The overall concept is both abstract and geometric; a reflection of constructivist learning principles over a strong foundation of tradition. Cayenne red and tungsten gray are the new school colors in which red symbolizes leadership and determination as the gray symbolizes sophistication and timelessness. The logo's new layout includes Haribon Phoenix, symbolizing Villamor's commitment to active and purposeful learning; the Flame, symbolizes passion for excellence and drive to success; The geometric patterns that are seen at the lower half of the logo, symbolizing the mountains and challenges that a Villamor High School graduate may overcome; Three overlapping squares, a modern interpretation of Villamor's Book, which symbolizes knowledge and wisdom in the modern world.



## 1.2. ORGANIZATIONAL CHART

The organizational chart illustrates or displays the relationship hierarchy of the organization.

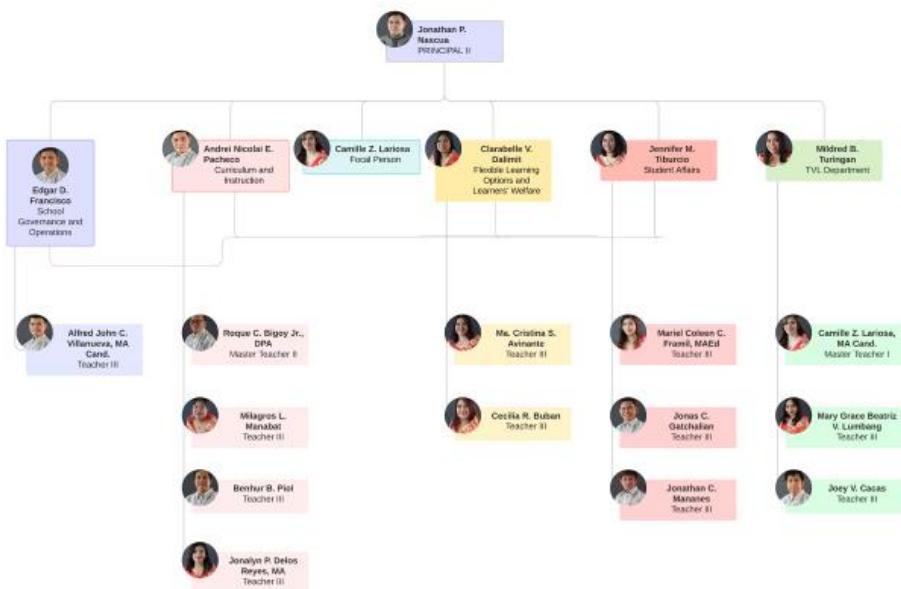


Figure 1. Organizational Chart



### 1.3. INTERNAL ISSUES

Aaker and McLoughlin (2009) defines the process of internal analysis as the identification of an organization's strengths, weaknesses and limitations to develop effective strategies. As such, the four aspects of an internal analysis will be scrutinized against the school, namely its financial performance, current and future profitability, analysis of strengths and weaknesses, and the identification of threats and opportunities.

Issues encountered by the school will also be analyzed in this section.

#### 1.3.1. FINANCIAL PERFORMANCE

In an interview with IVSHS' Partnership and Research Mobilization Coordinator Mariel Framil (2019), the group was able to assimilate the school's current and past performances, as well as the problems that the school had and needs to address.

Firstly, Framil explained that the school's sole official source of funds is the Department of Education (DepEd). DepEd determines the amount to be allocated to IVSHS based on the number of enrollees in the upcoming academic year. Throughout the interview, Framil stresses the fact that the amount allotted to the school annually has since been proven insufficient to cover all costs and expenses in running the school. This issue has urged the faculty staff to spend out-of-pocket money for the sake of the school. Framil also states that there were times when the school has failed to pay for utilities on time as well, and the principal had



to seek the help of congresswoman Amanda Christina Bagatsing and other possible partners.

According to Framil, IVSHS received a total of Php 300,000.00 funding from DepEd from the previous year. However, the amount given wasn't enough to cover expenses then, as the number of enrollees submitted to the government department was erroneous; hence, the budget was less than it was supposed to be. This resulted in major funding problems that lead to teachers and the principal contributing even greater out-of-pocket money.

Therefore, the group concludes that Ignacio Villamor Senior High School is in a substandard position in terms of financial performance. After analyzing the incident involving the erroneous data that lead to insufficient funding, the group infers that this is due to human error that could have been avoided if the school had used an automated system.

### **1.3.2. CURRENT AND FUTURE PROFITABILITY**

This aspect of the internal analysis comprises of customer's satisfaction, product quality, brand association, relative cost, products, and employee capability.

Among its programs, what makes IBVSHS unique is its Alternative Delivery Mode program for students with special needs. These students may range from Persons with Disabilities, working students, senior citizens, to those who are geographically inhibited. However, due to the lack of resources, the technology used to implement this program is not entirely appropriate for educational purposes.



The school's primary mode of communication with students is through social media (Facebook) only, which makes it nearly impossible to monitor and track a student's progress.

The staff of the institution prides itself on being innovative and strategic forward thinkers; however, improvement upon the school is inhibited by insufficient funding and resources. Framil lists the following information systems that are currently nonexistent in-campus but seeks to establish one in the future:

#### **1.3.2.1. AUTOMATED ENROLLMENT SYSTEM**

While their enrollment system is indeed digitized through Google Sheets, they have yet to have an actual database server to store student records, and retrieve specific data. This has been proven to be a problem, as a mistake in the data sent to DepEd caused them to receive insufficient funding. The problem lies in the manner of documenting data (like the number of enrollees for that specific school year) as it is handwritten; thus, raises the possibility of human error.

#### **1.3.2.2. LIBRARY MANAGEMENT SYSTEM**

Whereas carrying out library tasks and services through information and communication technology (ICT) have become a commonality across various institutions, almost half of the public schools in the Philippines have yet to adapt a library system of their own, as stated by Analee Mayo (2016) in her study of library systems for Philippine public schools. Considering the fact that Ignacio Villamor's



own library appears to be on the smaller side of the spectrum-- comprising an estimate of no more than 200 books, implementing a computerized library management system has not been on the school's top priorities for innovation. In spite of this, Framil presses on having a proper automated library system sometime in the near future. With an improved and computerized library management system, the school's library will have a better chance of acquiring and managing more reading resources to cater to the students' needs.

#### **1.3.2.3. DOCUMENT MANAGEMENT SYSTEM**

Related to the first system, a way to easily store and retrieve documents through the use of computers is also nonexistent within IVSHS. All their paper documents are kept and stored away in file drawers. Framil also expresses how much a document management system would help the efficiency and productivity of the operations within the school's offices.



#### 1.4. IDENTIFICATION OF STRENGTHS AND WEAKNESSES

As per Davies and Ellison's book on Strategic Directions and Development of Schools (2003), strengths and weaknesses are associated with internal factors that may affect the performance of the school. The two suggest the following provisions to be covered by the data gathering process of internal factors: curriculum, learning and teaching, assessment and results, discipline and appearance, financial resources, premises, staffing, staff skills and abilities, governors, and the school's ethos or culture.

In accordance to this, the researchers have gathered the following data about Ignacio Villamor High School as per their website and the interview with Framil, and categorized them between strengths and weaknesses.

	STRENGTHS	WEAKNESSES
CURRICULUM	<ul style="list-style-type: none"><li>★ ICT-assisted curriculum</li><li>★ Work immersion where students are exposed to a work environment focused on their field of specialization</li><li>★ Only school in NCR Offering the Alternative Delivery Mode (ADM) special program</li></ul>	<ul style="list-style-type: none"><li>★ Limited Senior High School strands, offering only Accounting and Business Management (ABM), Humanities and Social Sciences (HUMSS), and Home Economics (TVL-HE)</li><li>★ The ADM special program is still in its experimental phase</li></ul>



	<p>★ A standalone Senior High School</p>	
<b>LEARNING AND TEACHING</b>	<p>★ Alternative schooling for working students</p> <p>★ Alternative Delivery Mode (ADM) program</p>	<p>★ Access to learning materials and teaching paraphernalia.</p> <p>★ Little control and monitoring of ADM students</p> <p>★ No library management system</p>
<b>PREMISES / MEDIA</b>	<p>★ Dep-Ed upgraded school facilities</p> <p>★ Up-to-date and modern-looking website with a good amount of information about the school</p> <p>★ An active social media page that covers school events and post announcements</p>	<p>★ Incompetent/lacking of technology to handle operations (mostly are paper-based)</p> <p>★ No database servers to digitally store documents and records</p>
<b>STAFFING, STAFF SKILLS AND ABILITIES</b>	<p>★ The staff are committed, dedicated and passionate about their duties as</p>	<p>★ The older staff have difficulties when it comes to learning and using technology</p>



	<p>educators</p> <ul style="list-style-type: none"><li>★ Resilient and positive for the betterment of the school</li><li>★ Make use of various strategies for school improvement</li></ul>	
<b>ETHOS/CULTURE</b>	<ul style="list-style-type: none"><li>★ Their programs follow their core principle: No children left behind</li><li>★ Aid working students and students who have difficulties</li><li>★ They remain positive amidst challenges</li></ul>	
<b>GOVERNORS</b>	<ul style="list-style-type: none"><li>★ Commitment to Transparency</li></ul>	
<b>MANAGEMENT</b>	<ul style="list-style-type: none"><li>★ Principal is active in developing and improving the school's services and operations</li></ul>	<p>Dependent on Facebook</p> <p>Dependent on google forms, drive and manual encoding for student records</p> <p>Lack of information management systems</p>



Table 1. Ignacio Villamor High School Strengths and Weaknesses

### 1.5. IDENTIFICATION OF THREATS AND OPPORTUNITIES

In contrast to strengths and weaknesses, Davies and Ellison recognizes threats and opportunities as factors associated with the school's external environment. In order to identify them, the researchers must look into the school's political, legal and economic factors, educational changes, demographic and socio-cultural trends, employment trends, technology, and customers.

	OPPORTUNITIES	THREATS
POLITICAL, LEGAL AND ECONOMIC FACTORS	<ul style="list-style-type: none"><li>★ Educate, as well as socialize children, giving them the resources that they need to grow, thrive and become productive adults.</li><li>★ Provide a safe environment to practice interpersonal social skills, that may mimic adult life at work, and in the community.</li></ul>	<ul style="list-style-type: none"><li>★ Subject to government control (Related to the nature of government having power over schools in their ability to enact, and enforce. relevant legislation.)</li><li>★ Annual funding provided by DepEd is insufficient</li></ul>
EDUCATIONAL	<ul style="list-style-type: none"><li>★ Future implementation of</li></ul>	<ul style="list-style-type: none"><li>★ Possibility of Senior High School</li></ul>



<b>CHANGES</b>	other Senior High School strands  ★ Future support and resources for ADM program	being withdrawn
<b>DEMOGRAPHIC AND SOCIO-CULTURAL TRENDS</b>	★ In touch with multiple partners like the Red Cross, Ayala Foundation, DLS-CSB, and DENR  ★ A junior high school nearby (IVHS)  ★ IVHS can easily apply and enroll to IVSHS  ★ DENR providing plants to beautify the school to make students want to go to school	
<b>TECHNOLOGY</b>	★ Alternative delivery modes through technology for students with special needs	★ Digital Divide  ★ Training is not offered on all new technologies put in place.  ★ Many teachers are uncomfortable moving from the way they have



		<p>always taught to bring in new ways to teach lessons.</p> <p>★ Expenditures on e-learning educational services are not as small as they seem. There are broad categories of expenditures, such as expenditures on new technology (covering the degree of novelty incorporated into services, transmission of information in the network, maintenance of equipment, production of materials) (Dobre, 2010).</p>
<b>CUSTOMERS</b>	<ul style="list-style-type: none"><li>★ Parent involvement and community networks available to improve communication</li><li>★ PWD and working students looking for a school</li><li>★ Increasing amount of SHS students enrolling</li></ul>	<ul style="list-style-type: none"><li>★ Participation</li></ul>



Table 2. Ignacio Villamore High School Opportunities and Threats

### 1.6. ANALYSIS CONCLUSION

In conclusion, Ignacio Villamor High School has the potential of becoming a well valuable public school in Manila. The school may suffer from several setbacks such as its online system, academic offers, and lack of technology, however with the right resources given, Villamor High School may further improve upon its facility and curriculum. The research and analysis on the institution allowed the researchers to conclude that the school has greater strengths compared to its difficulties, it follows excellence when it comes to academic performance following their vision and mission although its difficulties concern the wellness and supervision of their students.



## CHAPTER II

### 2. THE PROBLEM AREA AND ITS BACKGROUND

This chapter presents the background or the root cause of the identified problem/s at the institution and the proposed solutions.

#### 2.1. PROBLEM DEFINITION

IBVSHS' reliance on traditional and manual record keeping for their library processes poses different threats that can potentially affect the institution. As stated by **Patrick Nadol**, a U.S Doctor of Philosophy in his research, although the traditional paper-based processes are cheaper to implement and maintain, an electronic management system can save time on recording keeping and data accuracy and confidentiality are increased.

Due to this, the Library Management System (LMS) aims to eradicate or minimize the traditional and manual paper-based processes of the school's library and to make the institution's library management more efficient, organized and convenient for its users. Overall, the system improves the library management process of the institution and helps minimize any cases of unmonitored books as well as maximizing the use of technology in managing library transactions. The system also makes borrowing, returning and finding books easier, faster, and more efficient for library users. Furthermore, LMS helps the librarians easily track book lists, availability and transactions.



## 2.2. FISHBONE DIAGRAM

Shelly and Rosenblatt (2009) describes the Fishbone Diagram, otherwise known as the Ishikawa Diagram, as an analysis tool that illustrates the possible causes of a problem in a graphical outline.

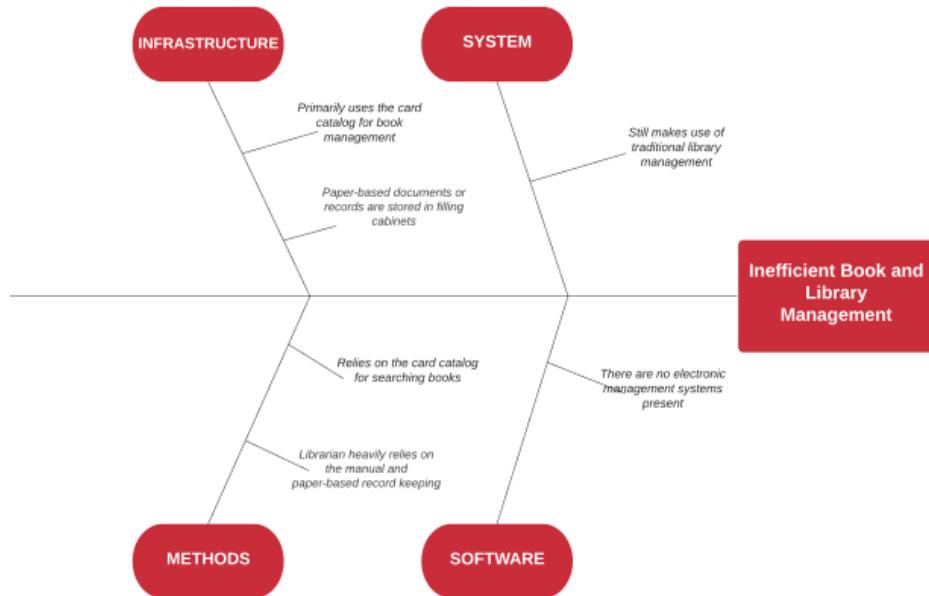


Diagram 1. Fishbone Diagram



## CHAPTER III

### 3. SYSTEM DESIGN

This section presents the system's objectives, scope and limitations and the target users.

This chapter also introduces the functions and features for each user.

#### 3.1. OBJECTIVES OF THE SYSTEM

Due to the problems identified, LMS aims to digitize the manual and traditional library processes. With this, the system allows the librarian to track library transaction records and the availability of books in a more convenient way.

#### 3.2. SCOPE AND LIMITATIONS

This section presents the functions and features of LMS. It also provides descriptions and limitations of what the system can do for the different users of the system.

##### 3.2.1 PATRONS (STUDENTS or TEACHERS)

- They are the people who benefit from the library
- They do not have to log in to use the system
- Students and Teachers can make a Digital Library Card (patron record) with the help of the librarian. This allows them to borrow books from the library.

###### 3.2.1.1 ACCESSIBLE FEATURES



- **View All Books**- Patrons can view all book records
- **Search books** - Patrons can search for a book by keyword or through the use of filters
- **View Book Details** - Patrons can view a page of a specific book that contains all information about that book, including status (availability)
- **Check availability**- Patrons can know if the book is available for reading or borrowing, or if it's currently being borrowed
- **View library record** - Patrons can check all the books they have borrowed and returned, currently borrowing, and overdue.

### 3.2.2 LIBRARIAN

- The person who manages the library and helps patrons find the information or book that they need.
- The **primary user** of the Library Management System

#### 3.2.2.1 ACCESSIBLE FEATURES

- **Requires log in** to access the following features:
- **View All Books**- The librarian can view all book records
- **Search books** - By keyword, filters or barcode
- **Display Books by status** - The system can display all available books only, or all the books that are currently being borrowed, or all the books that have exceeded its borrowing time



- **View Transaction Records**- View records of books that have and had been borrowed along with the borrower (patron), when it was borrowed, due date, when it was returned, and status (borrowed, returned, overdue).
- **Display Books by condition** - The system can display all books in good condition, missing, or damaged.
- **Issuing of books** - The librarian can create a borrowing record including the patron (borrower), when it was borrowed, due date (can be configured in settings), date of when it was returned, and status (borrowed, returned, overdue).
- **View Transaction Records** - The librarian can view records of when a book was borrowed, its due date, date of when it was returned, the patron who borrowed it, and its status (borrowed, returned, overdue).
- **Returning of issued books** - The librarian can update the borrowing record's status (returned) and date of when it was returned.
- **Create Damage Report** - Creates a record of a damaged book
- **Manage books** - The librarian can create, update, or remove a book record.
- **Manage Digital Library Cards (Patrons)** - A student or teacher can get a digital library card (patron record) with the help of the librarian, as well as update information or deactivating a library card.

### 3.2.3 SYSTEM ADMINISTRATOR



- The person who manages, maintains, and updates the system.
- A person with a background in system administration, they deal with the technical side
- Requires log in to access the following features:

### 3.2.3.1 ACCESSIBLE FEATURES

- **Manage user accounts** - The system administrator can view, create, update, or deactivate user accounts (Librarian/System Administrator)
- **Manage patron records** - The system administrator can view, create, update, or deactivate patron records (Teachers/students)
- **View Audit Logs** - The system administrator can view books, users, and patron audit logs or transaction records. An audit log includes the actor (user who performed the action), the action (what was done), timestamp, and all the fields of that particular table to monitor changes.
- **View Transaction Records** - The system administrator can view records of when a book was borrowed, its due date, date of when it was returned, the patron who borrowed it, and its status (borrowed, returned, overdue).

### 3.3. FUNCTIONAL DECOMPOSITION DIAGRAM



The Functional Decomposition Diagram (FDD) illustrates the system's breakdown of functions and its hierarchical relationship among each other. It also provides graphical information on how functions are logically divided.

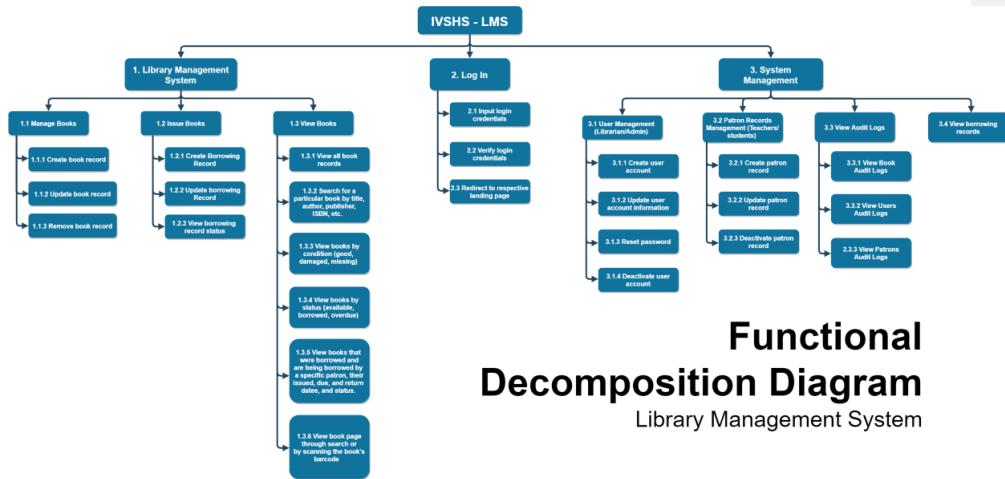


Diagram 2.1. Functional Decomposition Diagram

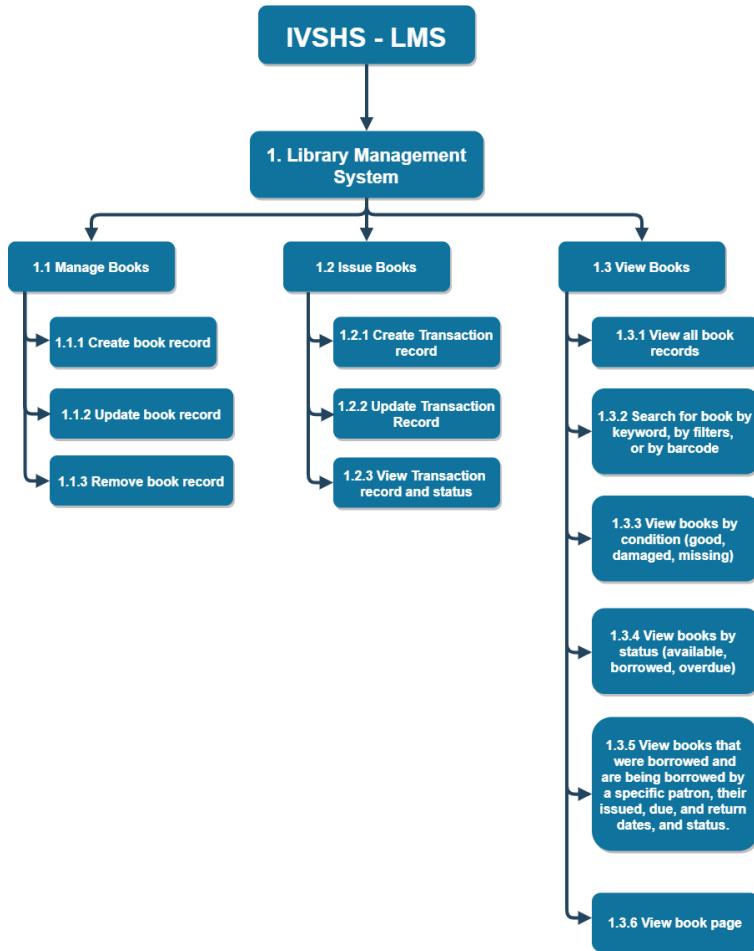


Diagram 2.2. FDD - Library Management System

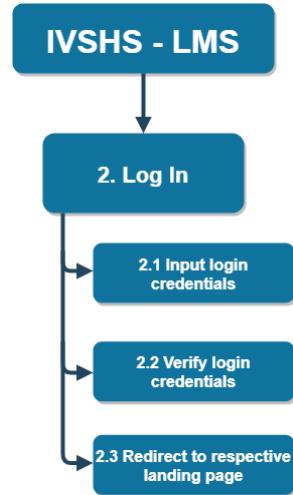


Diagram 2.3. FDD - Log In

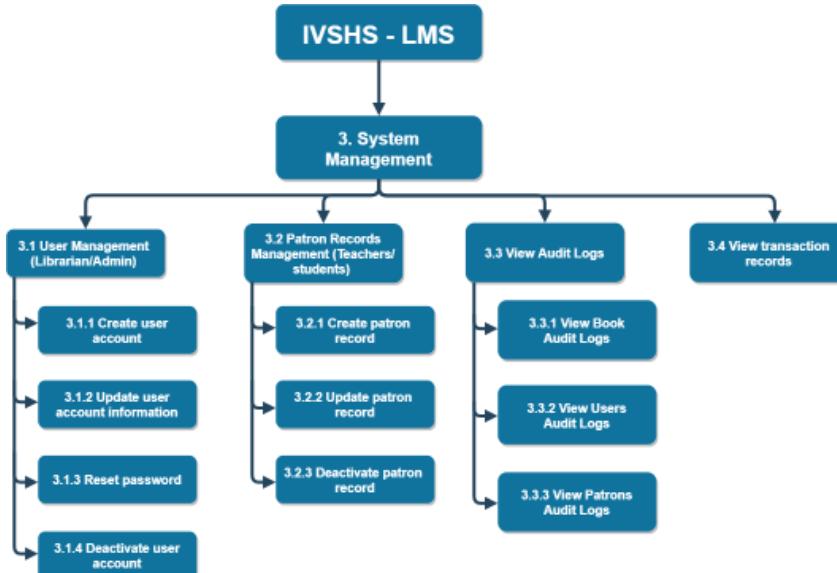


Diagram 2.4. FDD - System Management

### 3.4. DATA FLOW DIAGRAM



The Data Flow Diagram (DFD) illustrates the visual representation of the process in the system that includes the inputs and outputs through the data storage.

## Context Diagram

Focus: Book

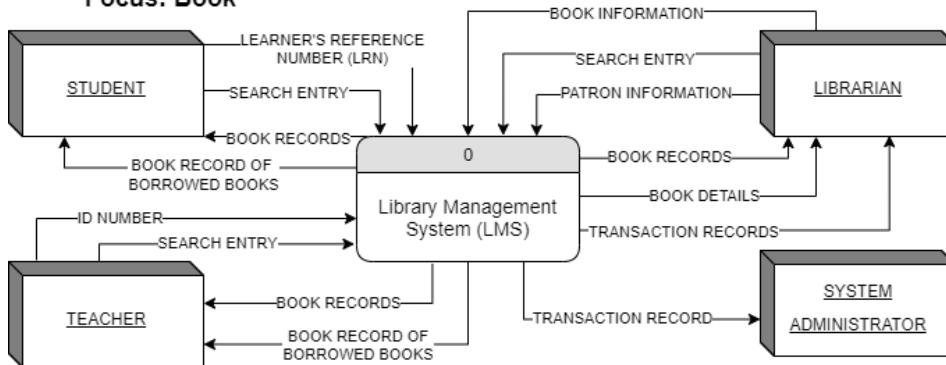


Diagram 3.1. Context Diagram - Book Focus

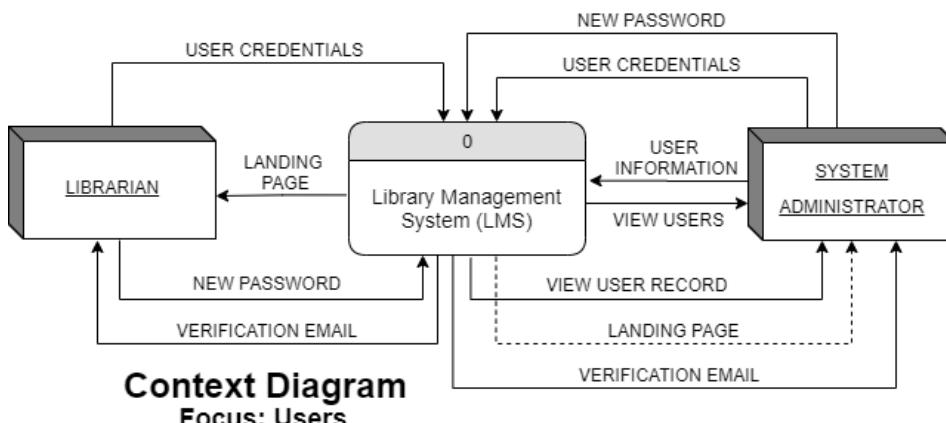


Diagram 3.2. Context Diagram - Users Focus

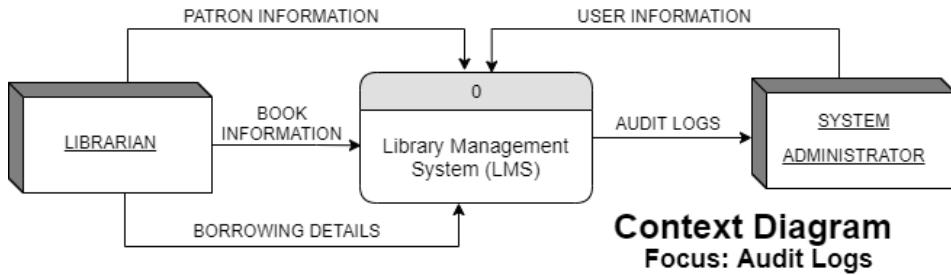


Diagram 3.3. Context Diagram - Audit Logs

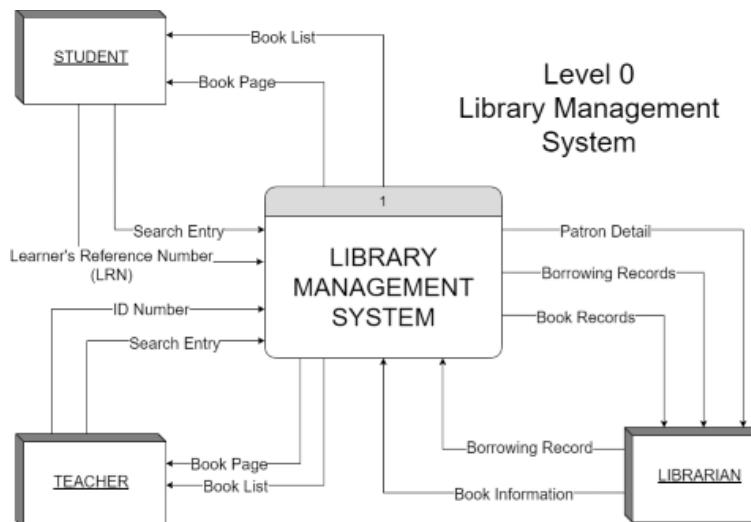


Diagram 4.1. Library Management System - Level 0

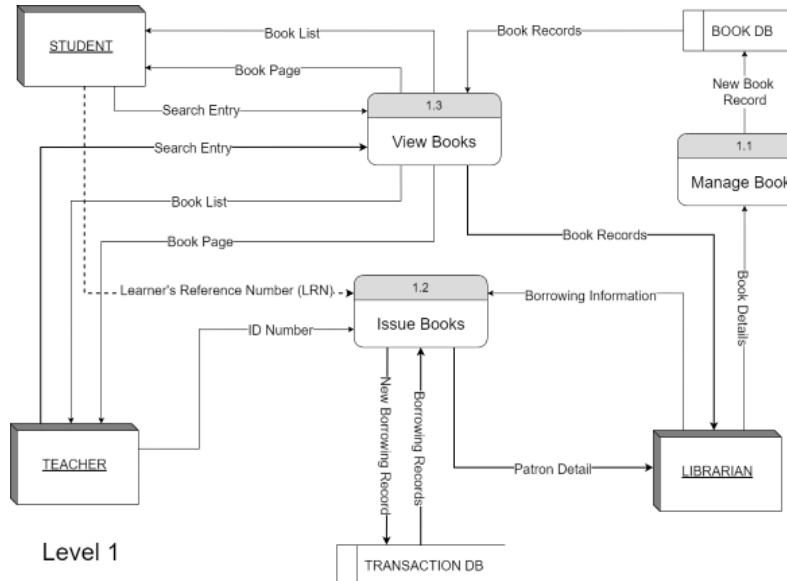


Diagram 4.2. Library Management System - Level 1

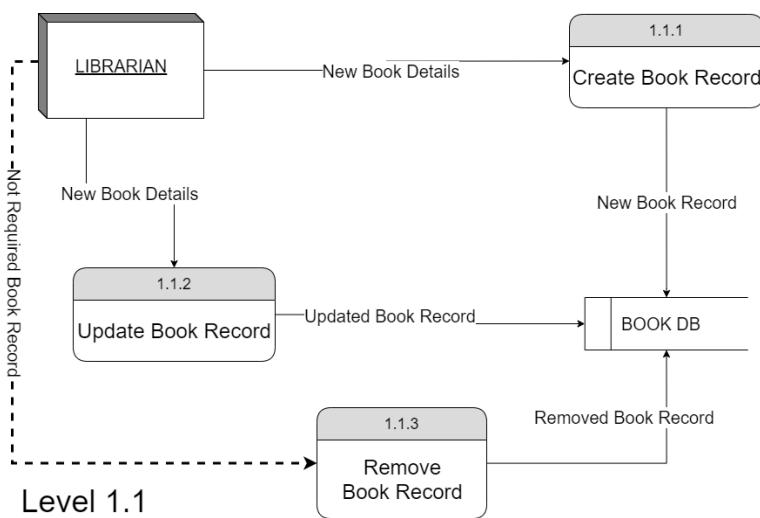
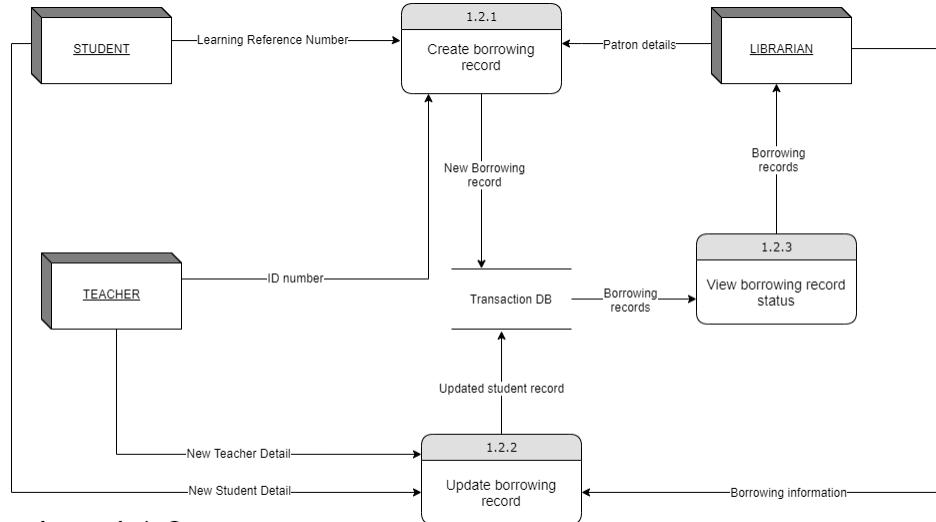


Diagram 4.3. Library Management System - Level 1.1



## Level 1.2

Diagram 4.4. Library Management System - Level 1.2



Level 1.3

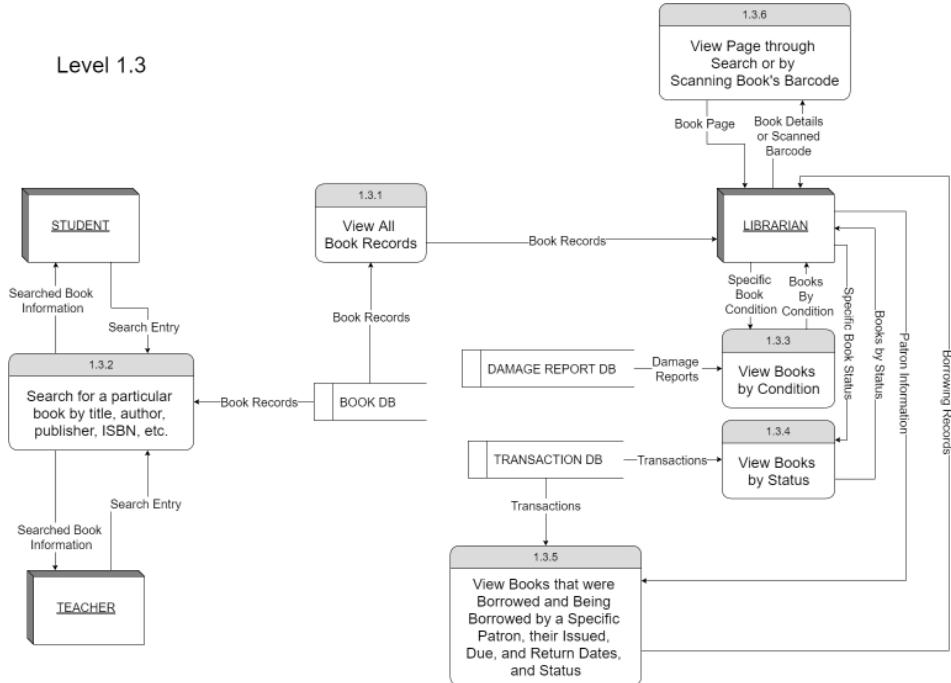
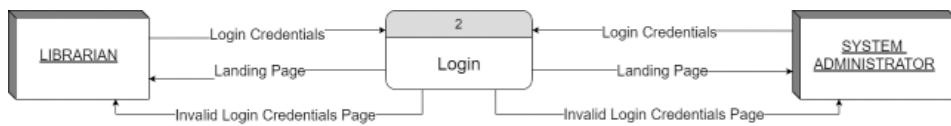


Diagram 4.5. Library Management System - Level 1.3



Level 0

Diagram 5.1. Login - Level 0

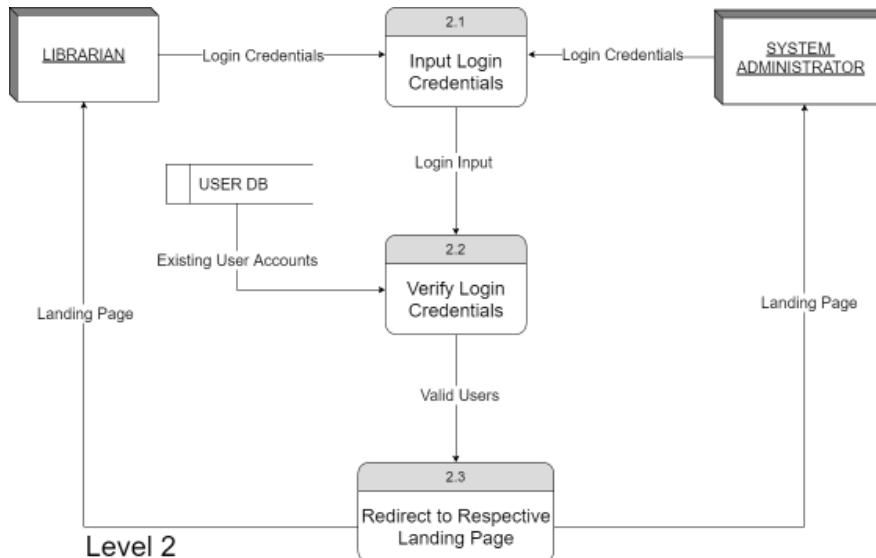


Diagram 5.2. Login - Level 2

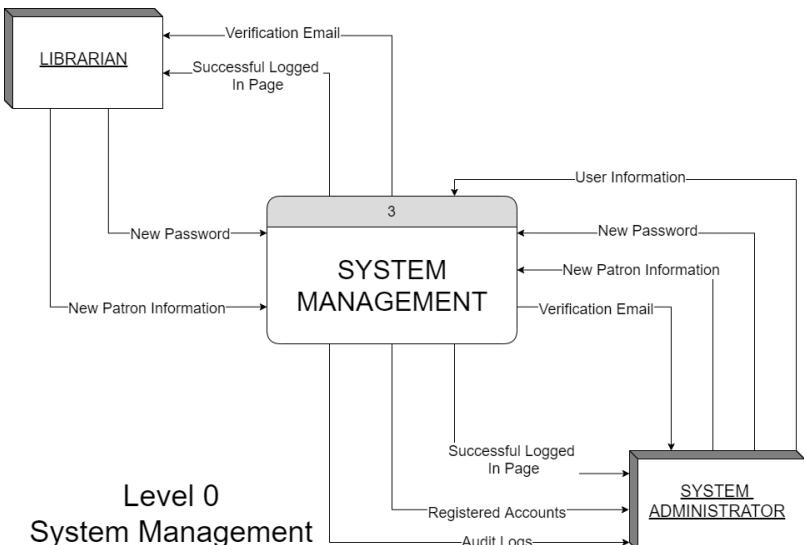
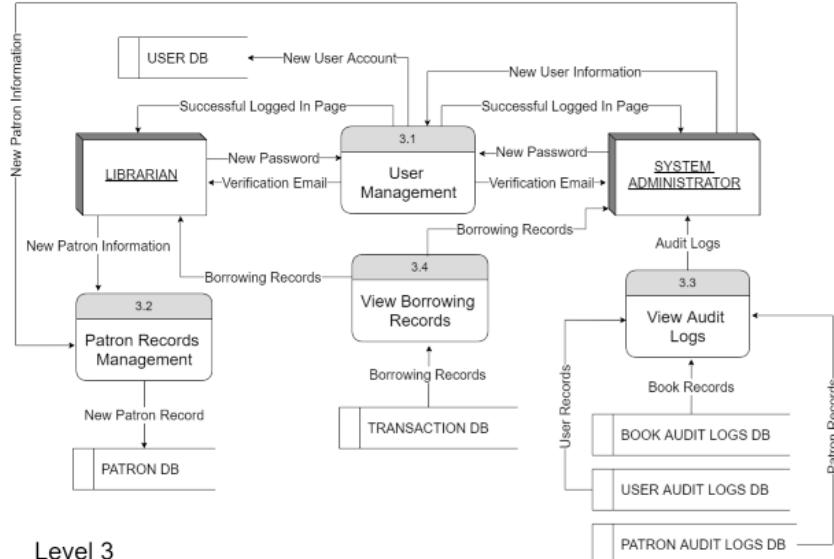
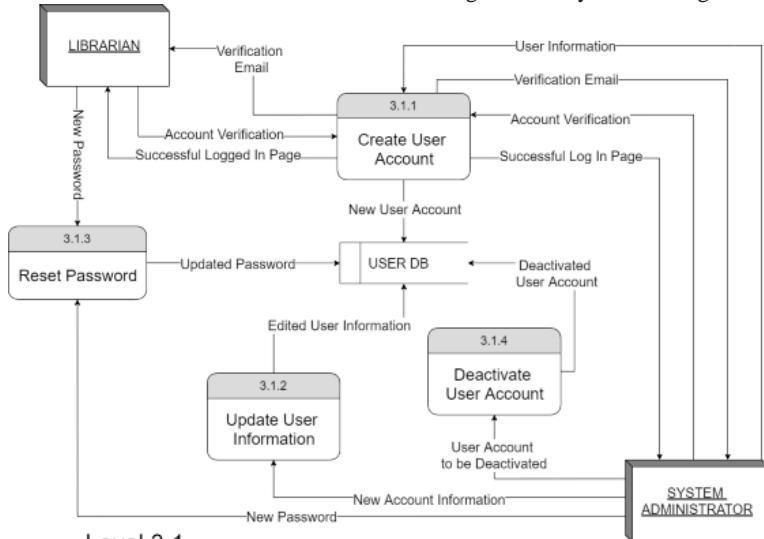


Diagram 6.1. System Management - Level 0



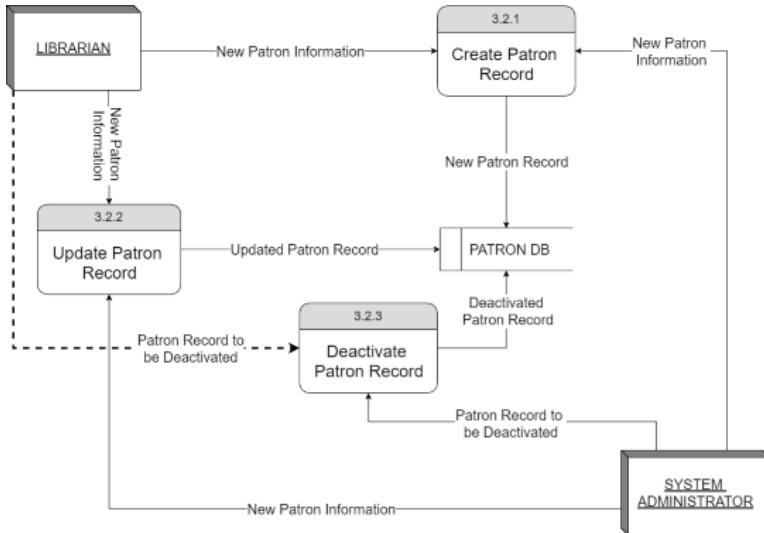
Level 3

Diagram 6.2. System Management - Level 3



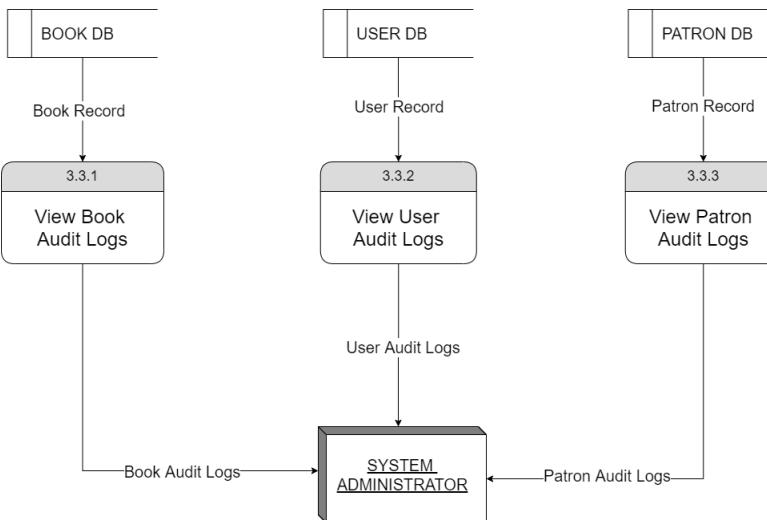
Level 3.1

Diagram 6.3. System Management - Level 3.1



Level 3.2

Diagram 6.4. System Management - Level 3.2



Level 3.3

Diagram 6.5. System Management - Level 3.3



### 3.5. USE CASE DIAGRAM

The diagram illustrates the program's execution sequence for every user type in LMS. It also presents the user's interaction with the system.

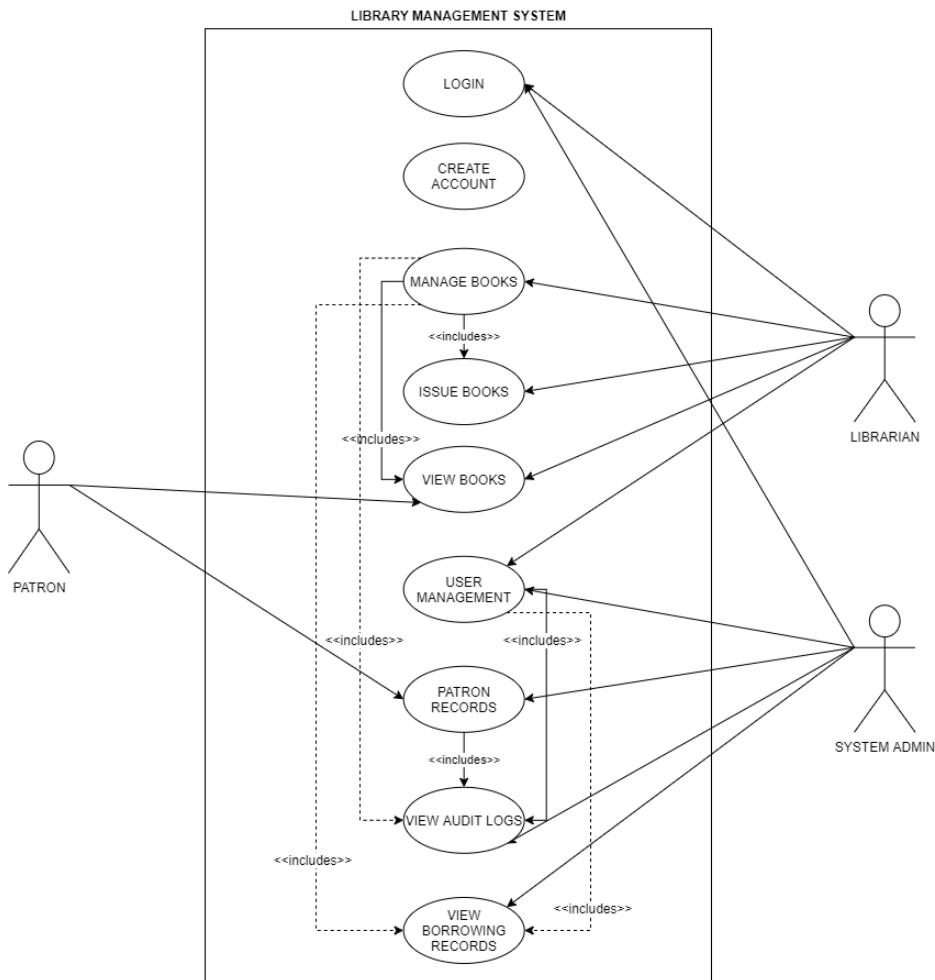


Diagram 7. Use Case Diagram



### 3.6. ACTIVITY DIAGRAM

The activity diagram illustrates the step by step flow of operation of the system.

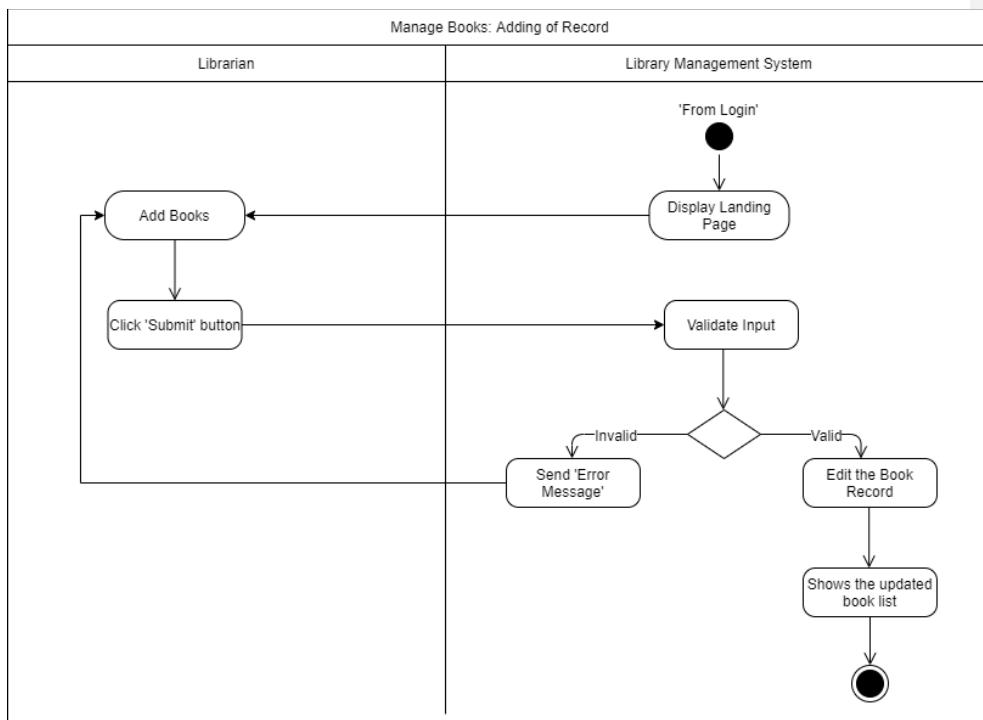


Diagram 8.1. Manage Books - Adding of Record

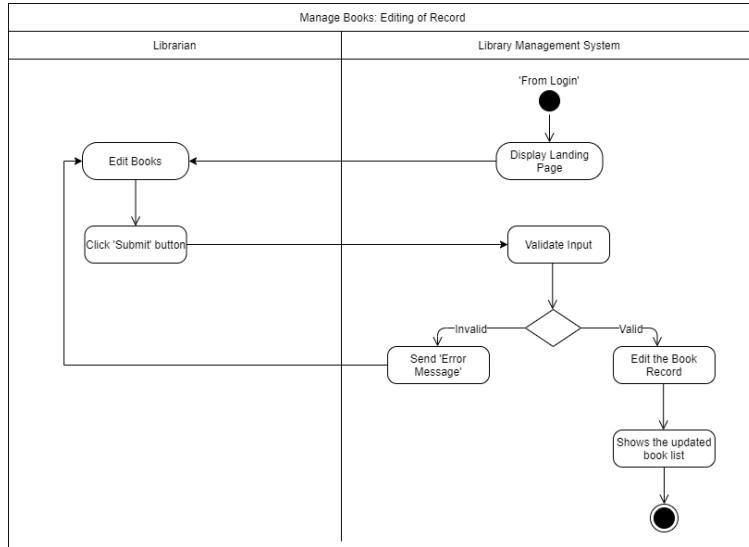


Diagram 8.2. Manage Books - Editing of Record

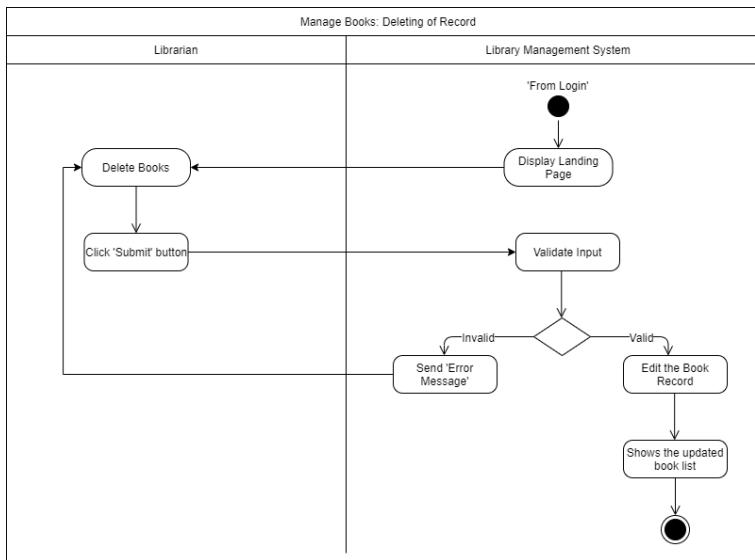


Diagram 8.3. Manage Books - Deleting of Record

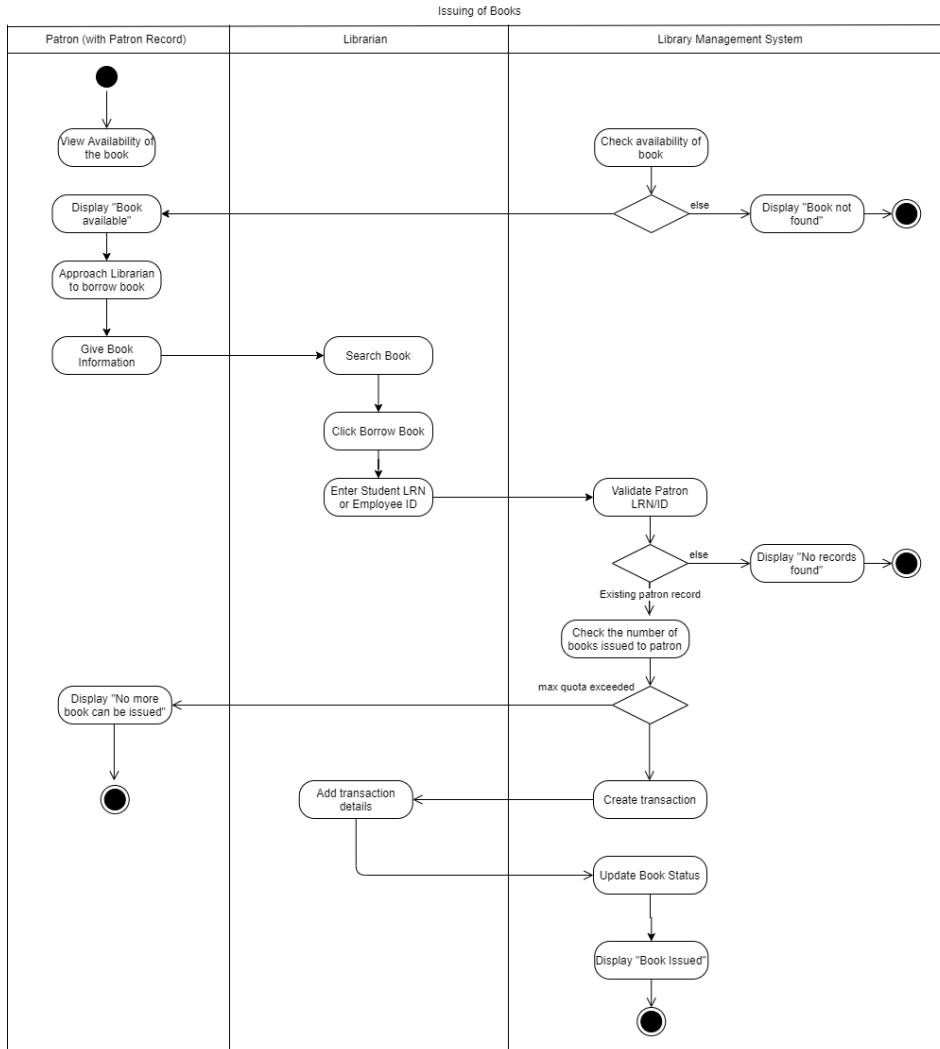


Diagram 9. Issuing of Books

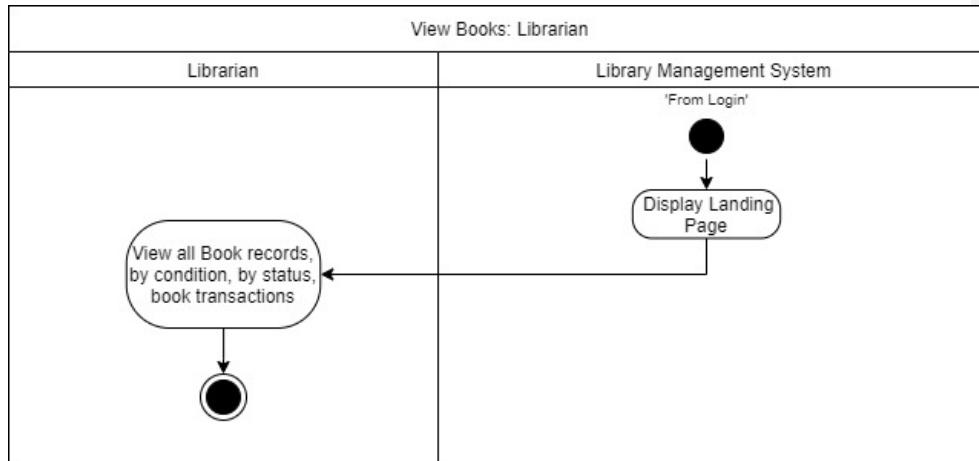


Diagram 10.1. View Books: Librarian

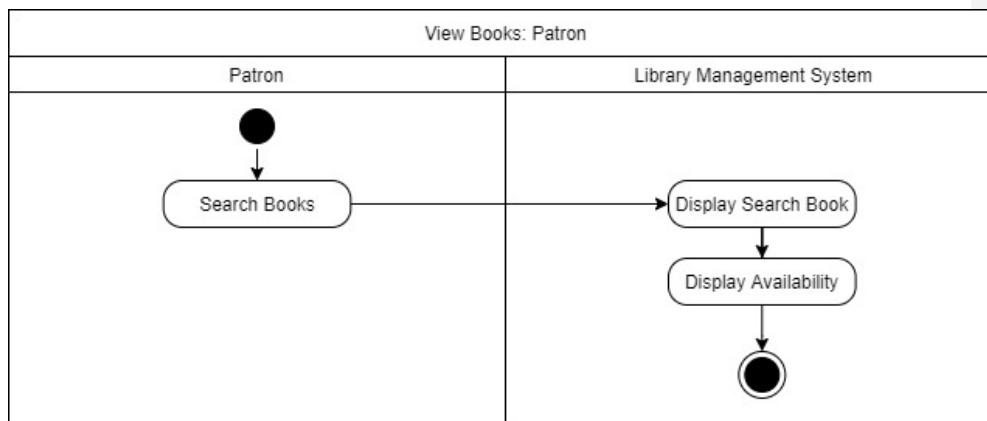


Diagram 10.2. View Books: Patron

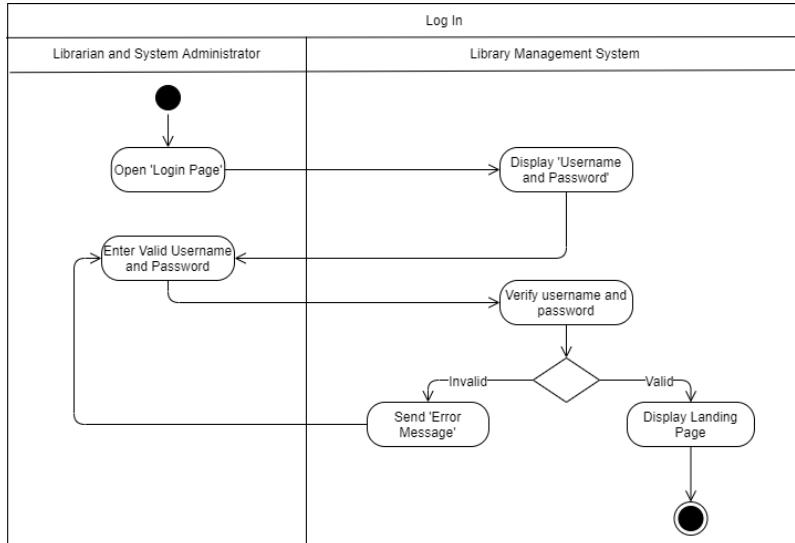


Diagram 11. Login

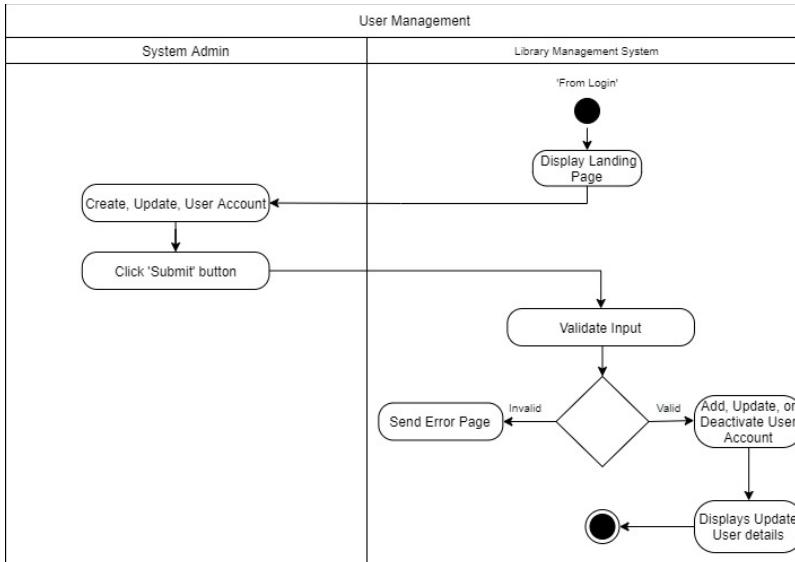


Diagram 12. User Management

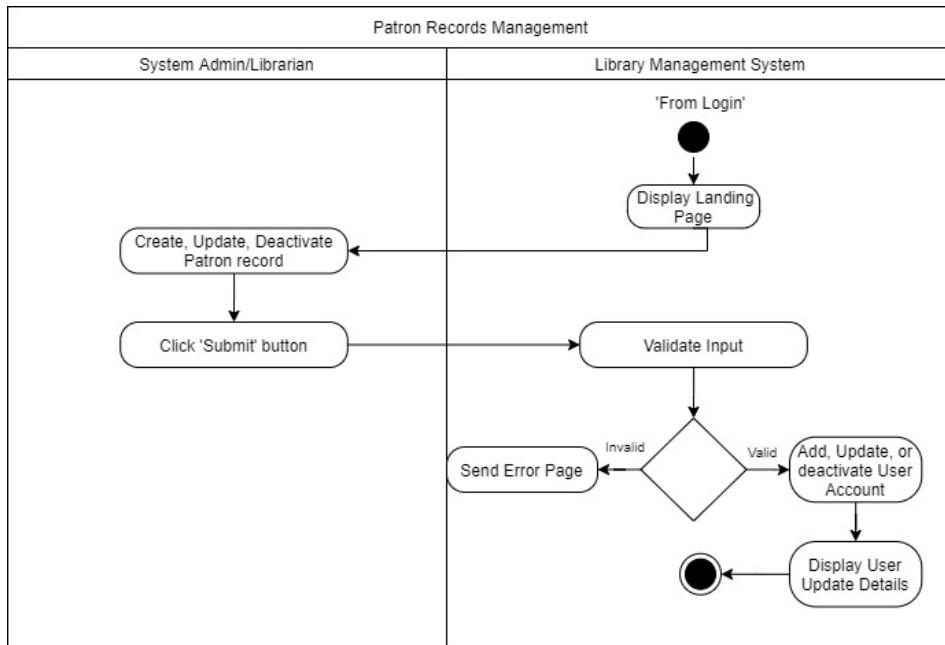


Diagram 13. Patron Record Management

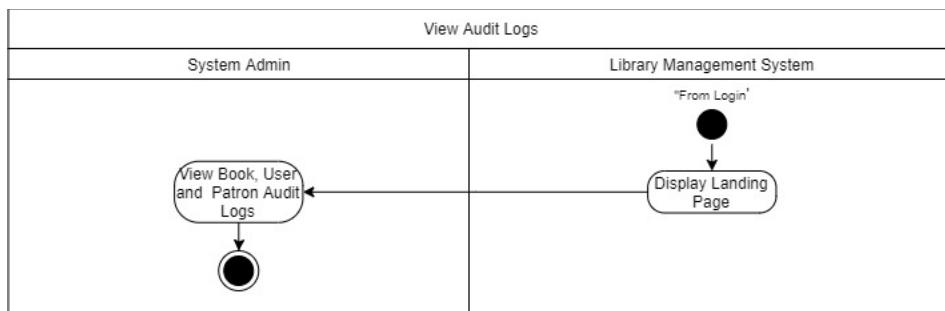


Diagram 14. View Audit Logs

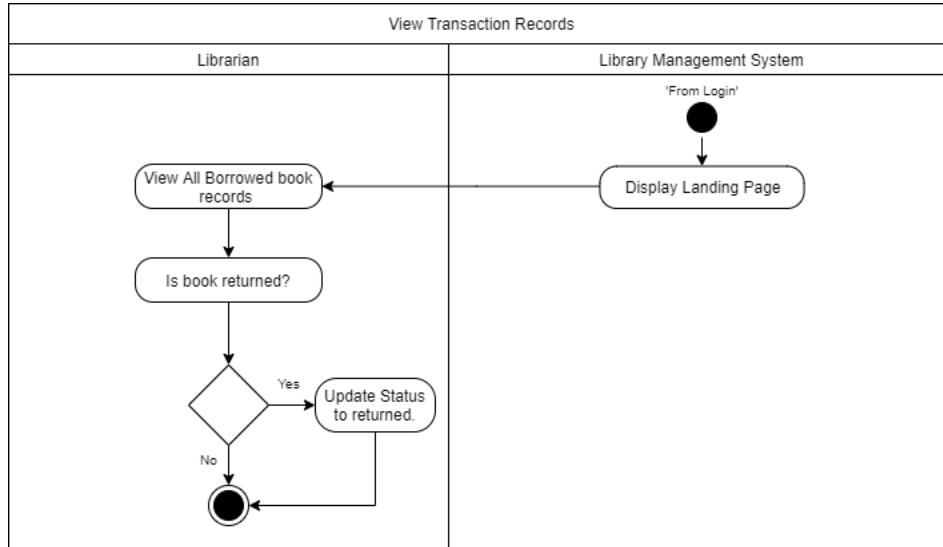


Diagram 15. View Transaction Record

### 3.7. USER INTERFACE DESIGN

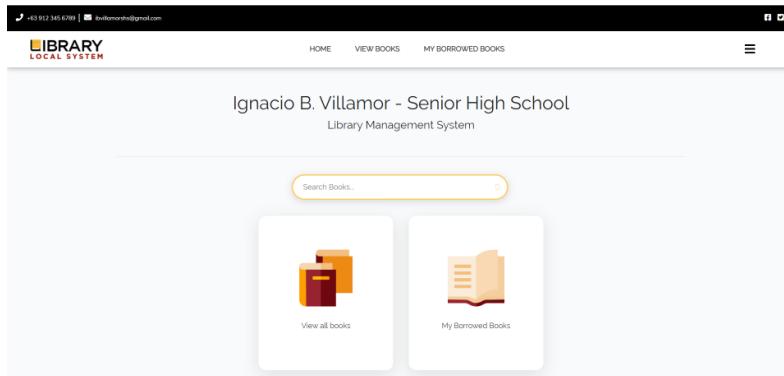


Figure 2. Landing Page

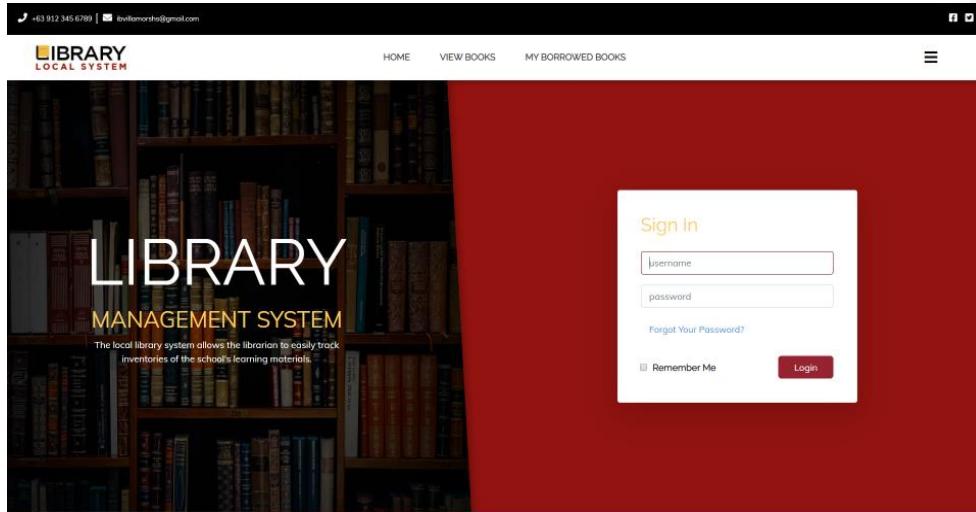


Figure 3. Login Page

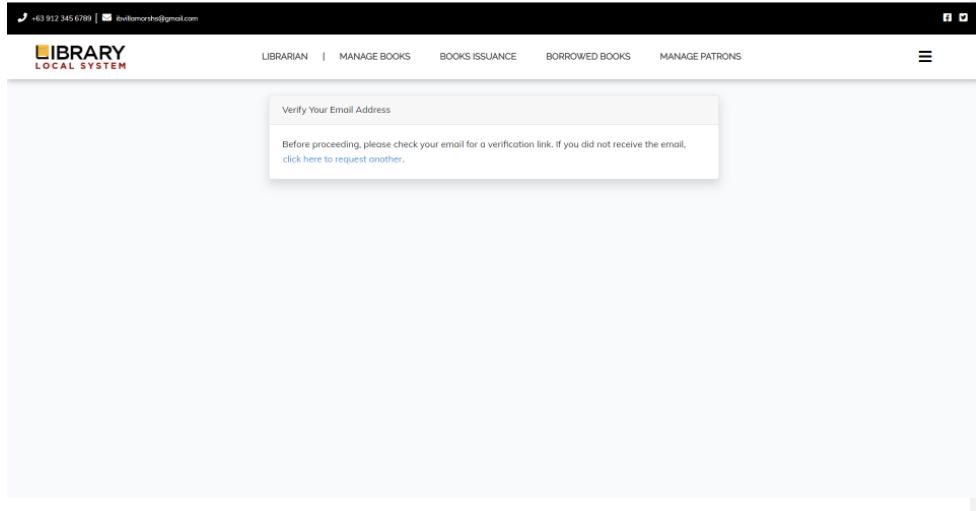


Figure 4. Email Address Verification



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The screenshot shows a web page titled "Verify Your Email Address". A green success message box contains the text: "A fresh verification link has been sent to your email address." Below it, a smaller note says: "Before proceeding, please check your email for a verification link. If you did not receive the email, click here to request another." The top navigation bar includes links for LIBRARIAN, MANAGE BOOKS, BOOKS ISSUANCE, BORROWED BOOKS, and MANAGE PATRONS.

Figure 5. Request of Another Verification Link

The screenshot shows a "View All Books" page. At the top, there are tabs for All Books, Available Books, and Unavailable Books. A search bar is on the right. Below, a book entry for "test" by "test" is displayed. The book details are: ISBN: 978-3-16-148410-0, Publisher: cengage, Volume: 1, Edition: 1, Condition: Fine, Year Published: 2010, Status: Available. A note at the bottom says "Held by Ignacio B. Villamor Senior High School". The top navigation bar includes links for HOME, VIEW BOOKS, MY BORROWED BOOKS, and a menu icon.

Figure 6. View All Books



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The screenshot shows a web-based application interface for managing library accounts. At the top, there is a header bar with contact information (+63 912 345 6789, ibvillamorales@gmail.com) and navigation links for LIBRARIAN, MANAGE BOOKS, BOOKS ISSUANCE, BORROWED BOOKS, and MANAGE PATRONS. Below the header is a title "Change Password". A form titled "Account Details" contains fields for Old Password, New Password, and Confirm Password, each with a corresponding input box. A "Update" button is located at the bottom right of the form area.

Figure 7. Change Password

The screenshot shows a web-based application interface for managing library books. At the top, there is a header bar with contact information (+63 912 345 6789, ibvillamorales@gmail.com) and navigation links for LIBRARIAN, MANAGE BOOKS, BOOKS ISSUANCE, BORROWED BOOKS, and MANAGE PATRONS. Below the header is a title "Books" with a "+ Add Book" button. A toolbar below the title includes "Print" and "CSV" options. The main content area displays a table of book entries. The table has columns for ID, Title, Author, Barcode Number, Condition, Status, and Actions. One entry is listed: ID 1, Title test, Author test, Barcode Number 136537089, Condition Fine, Status Available. At the bottom of the table, it says "Showing 1 to 1 of 1 entries" and includes "Previous" and "Next" navigation buttons.

ID	Title	Author	Barcode Number	Condition	Status	Actions
1	test	test	136537089	Fine	Available	

Figure 8. Librarian - Manage Books



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+63 912 345 6789 | bvlitomorts@gmail.com

LIBRARY LOCAL SYSTEM

LIBRARIAN | MANAGE BOOKS | BOOKS ISSUANCE | BORROWED BOOKS | MANAGE PATRONS

Create a Book

Add a new book record

**Book Details**

Call Number	Year Published
Call Number	e.g. 2015
Title	Publisher
Title	Publisher
Author	Genre
Author	Genre
ISBN	Condition
ISBN	Fine
Volume	Status
Volume	Available
Edition	Book Image
Edition	Choose File   No file chosen

**Book** **Submit**

Figure 9. Librarian - Create Book Record

+63 912 345 6789 | bvlitomorts@gmail.com

LIBRARY LOCAL SYSTEM

LIBRARIAN | MANAGE BOOKS | BOOKS ISSUANCE | BORROWED BOOKS | MANAGE PATRONS

Issue a Book

Issue a book to a students or teachers with an existing Library Record

If student or teacher does not have an existing record with the library, [Create a Patron Record](#) first.

Borrower:

Book:

Return Date:

**Issue Book**

Figure 10. Librarian - Issue Book



+63 912 345 6789 | [libinfo@smits.edu.ph](mailto:libinfo@smits.edu.ph)

LIBRARY  
LOCAL SYSTEM

LIBRARIAN | MANAGE BOOKS BOOKS ISSUANCE BORROWED BOOKS MANAGE PATRONS

Borrowed Books

Print CSV

Show 10 entries Search:

ID	Patron	Book	Status	Actions
No data available in table				

Showing 0 to 0 of 0 entries Previous Next

Figure 11. Librarian - Borrowed Books

+63 912 345 6789 | [libinfo@smits.edu.ph](mailto:libinfo@smits.edu.ph)

LIBRARY  
LOCAL SYSTEM

LIBRARIAN | MANAGE BOOKS BOOKS ISSUANCE BORROWED BOOKS MANAGE PATRONS

Patrons Add Patron

Print CSV

Show 10 entries Search:

ID	Name	Email	Role	Status	Actions
No data available in table					

Showing 0 to 0 of 0 entries Previous Next

Figure 12. Librarian - Manage Patron Records



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LIBRARY LOCAL SYSTEM

LIBRARIAN | MANAGE BOOKS | BOOKS ISSUANCE | BORROWED BOOKS | MANAGE PATRONS

≡

### Create a Patron Record

Add a Library Patron record to the system.

A person must have a Library Patron record in order to borrow books from the IBVSHS Library.

Library Patron Details

Role	Select Role...
First Name	<input type="text"/>
Middle Name	<input type="text"/>
Last Name	<input type="text"/>
Contact Number	<input type="text"/>
E-Mail Address	<input type="text"/>
LRN/Employee ID	<input type="text"/>

[Back to List](#) [Create Patron](#)

Figure 13. Librarian - Create Patron Record

+63 912 345 6789 | ibvshs@gmail.com

LIBRARY LOCAL SYSTEM

ADMIN | MANAGE USERS | USER LOGS | BOOK AUDIT LOGS | PATRON LOGS

≡

WELCOME.

# ADMIN

Only the admin (you) can manage accounts of library users, authenticate registered accounts, and view books as well as all the transaction records.

USER ACCOUNTS

Add users  
Manage users

INFORMATION

View Book Logs  
View User Logs  
View Patron Logs  
View Transactions

CONTACT INFORMATION

1009 Pasig Line St. Atc  
Manila, Philippines  
ibvshs@gmail.com  
+63 123 456 7890

Figure 14. Admin - Landing Page



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The screenshot shows a table titled "Users" with four entries. The columns are ID, Name, Email, Role, Status, and Actions. The entries are:

ID	Name	Email	Role	Status	Actions
1	Admin, Admin	gelgamoras@gmail.com	Admin	Active	[Edit]
2	De Guzman, Kyle	kyle.deguzman@benilde.edu.ph	Librarian	Active	[Edit]
3	Vellyusa, Ronyella Mae	ronyellamae.vellyusa@benilde.edu.ph	Librarian	Active	[Edit]
4	Gamoras, Gabrielle Angela Sabiaga	gabrielleangela.gamoras@benilde.edu.ph	Librarian	Active	[Edit]

Below the table, it says "Showing 1 to 4 of 4 entries".

Figure 15. Admin - Manage Users

The screenshot shows a form titled "Create a User" with the sub-instruction "Add a new user account". The form has a section titled "Account Details" with fields for Role (a dropdown menu), First Name, Middle Name, Last Name, Username, Contact Number, E-Mail Address, Password, and Confirm Password. At the bottom is a "Create User" button.

Figure 16. Admin - Create User



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The screenshot shows the 'User Logs' section of the library management system. At the top, there are 'Print' and 'CSV' buttons. Below is a search bar and a dropdown for selecting the number of entries to show (set to 10). A table lists four entries, each with columns for ID, Issued By, Action, User ID, and Created At. The entries are:

ID	Issued By	Action	User ID	Created At	Actions
1	1   admin	Create Account	1   admin	2020-03-28 18:50:17	
2	1   admin	Create Account	2   kyledeguzman	2020-03-28 18:51:15	
3	1   admin	Create Account	3   ronellamaevellyusa	2020-03-28 18:52:13	
4	1   admin	Create Account	4   gelgamoras	2020-03-28 18:55:40	

At the bottom, it says 'Showing 1 to 4 of 4 entries' and has 'Previous' and 'Next' buttons.

Figure 17. Admin - User Logs

The screenshot shows the 'Book Logs' section of the library management system. At the top, there are 'Print' and 'CSV' buttons. Below is a search bar and a dropdown for selecting the number of entries to show (set to 10). A table lists one entry, with columns for ID, Issued By, Action, Book ID, Title, ISBN, Status, Barcode No, and Created At. The entry is:

ID	Issued By	Action	Book ID	Title	ISBN	Status	Barcode No	Created At	Actions
1	4   gelgamoras	Add Book	1	test	978-3-16-148410-0	Available	136537089	2020-03-29 17:47:43	

At the bottom, it says 'Showing 1 to 1 of 1 entries' and has 'Previous' and 'Next' buttons.

Figure 18. Admin - Book Logs



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The screenshot shows a web-based administrative interface for managing patron logs. At the top, there are links for ADMIN, MANAGE USERS, USER LOGS, BOOK AUDIT LOGS, and PATRON LOGS. Below this is a search bar and a table header titled "Patron Logs". The table has columns for ID, Issued By, Action, Role, Patron ID, Status, Created At, and Actions. A message indicates "No data available in table". At the bottom, it says "Showing 0 to 0 of 0 entries" and includes Previous and Next buttons.

Figure 19. Admin - Patron Logs



### 3.8. DATABASE DIAGRAM (ERD)

The Database Diagram illustrates all of the tables in the system and its relationship to each other.

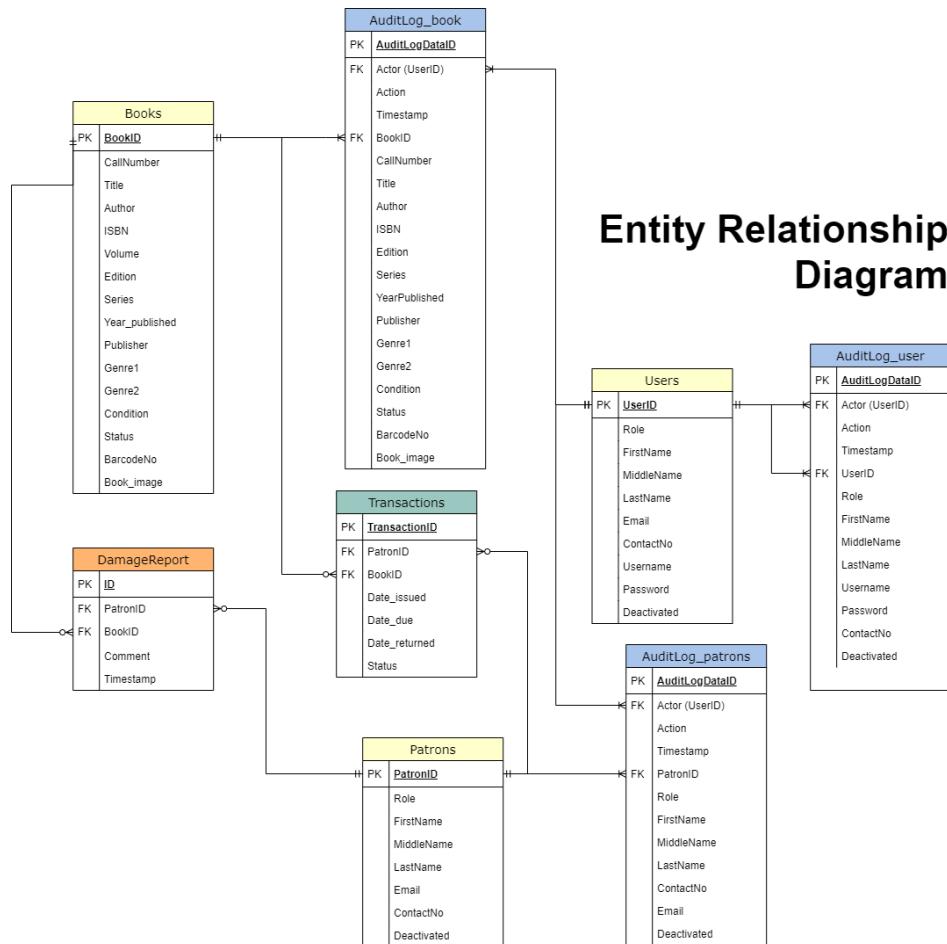


Diagram 16. Entity Relationship Diagram



## CHAPTER V

### 4. PROJECT ORGANIZATION

This chapter presents the hierarchical structure of the whole team and their roles and responsibilities. The Project Organization also discusses the project implementation of the system.

#### 4.1. ORGANIZATIONAL STRUCTURE

The project organization shows how the individual teams coordinate with one another during the development cycle of the entire project. It also shows the relationship and tasks of each individual team and their members.

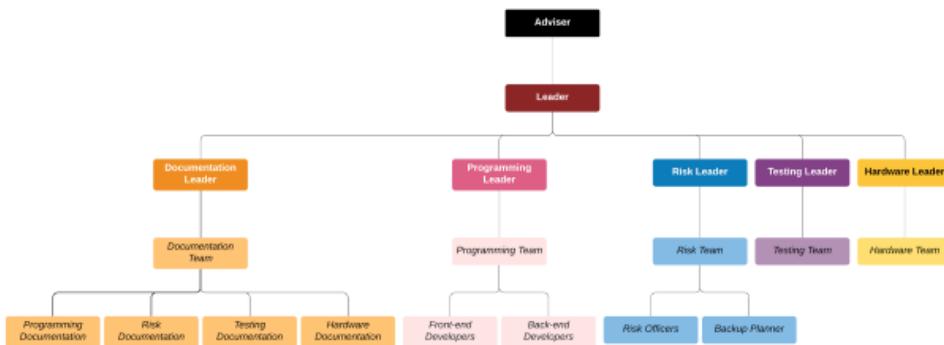


Figure 20.1. Organizational Structure



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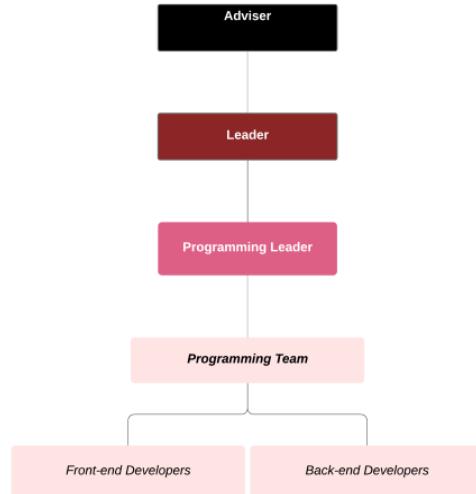


Figure 20.2 Organizational Structure - Programming

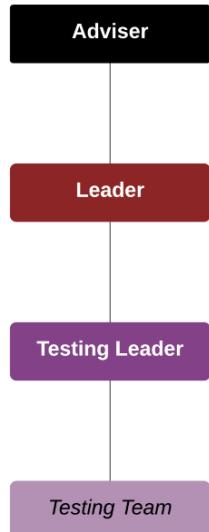


Figure 20.3. Organizational Structure - Testing

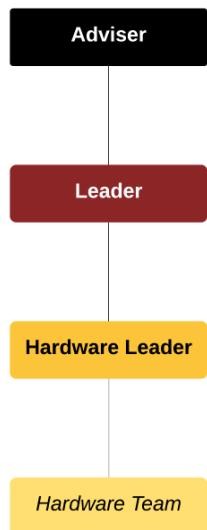


Figure 20.4. Organizational Structure - Hardware



Figure 20.5. Organizational Structure - Risk

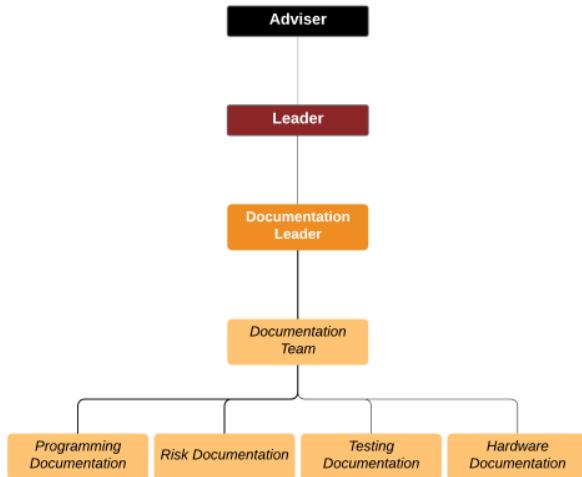


Figure 20.6. Organizational Structure - Documentation

#### 4.2. ROLES AND RESPONSIBILITIES

The roles and responsibility table shows the tasks undertaken by each position and displays which member is under such a role.

##### 4.2.1. LEADER

POSITION	ROLE AND RESPONSIBILITY	PERSON
LEADER	The overall leader supervises every sub-team's processes and ensures that every group is doing their respective tasks correctly.	Gamoras, Gabrielle Angela



	<p>She is also responsible for updating the subject adviser about the group's actions, decisions and progress.</p>	
--	--------------------------------------------------------------------------------------------------------------------	--

Table 3.1. Roles and Responsibilities - Leader

#### 4.2.2. PROGRAMMING TEAM

PROGRAMMING TEAM	ROLE AND RESPONSIBILITY	
	POSITION	PERSON
LEADER	<p>The programming leader ensures that the program or system will be delivered according to the proposed project requirements. He is also tasked to combine the outputs of the front-end and back-end teams.</p>	Obeles, Ryan Jandrick
FRONT-END DEVELOPERS	<p>Determine and plan the design of the program or system. The team is also in-charge of making the program easy to use and interactive for its users.</p>	De Leon, Xander Gabriel Matias, John Kenneth Teng, Franchesca



<b>BACKEND DEVELOPERS</b>	Integrates the front-end design with the server side or business logic. They will be working closely with the testing team to avoid bugs and errors in the deployment of the system.	Aizon, Mary Louise Estrella, Zach Gabriel Macatangay, Jairus Reccion, Bernard Guiller Ureta, Miguel Blanco
---------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------

Table 3.2. Roles and Responsibilities - Programming

#### 4.2.3. TESTING TEAM

TESTING TEAM	ROLE AND RESPONSIBILITY	PERSON
POSITION	ROLE AND RESPONSIBILITY	PERSON
LEADER	The leader makes sure that the program or system is working successfully according to the system requirements.  Any error/s or possible future error/s, the team identifies, the leader leads the team in proposing solutions and guarantees that the system will be error-free upon deployment.	Villanueva, Pierre Benedict



<b>TESTING TEAM</b>	Checks and inspects the program or system if there are errors and bugs, and logs it. The team also monitors the system if it's correctly functioning until the deployment of the project.	Cerrer, Reeno Miguel Dayego, Raymond Paulo Garcia, Jose Gabriel Ladriza, Jericho Andrei Panes, Mirko Lawrence Pasno, John Darel Perez, Joaquin Jose Wang, John Aldrin
---------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Table 3.3. Roles and Responsibilities - Testing

#### 4.2.4. HARDWARE TEAM

HARDWARE TEAM	Members ensure that the hardware or resources needed for the system are up and running.	
POSITION	ROLE AND RESPONSIBILITY	PERSON
LEADER	The leader monitors and guides the team to correctly accomplish their assigned tasks. He also makes sure that the equipment needed for the system is working.	De Guzman, Kyle



<b>HARDWARE TEAM</b>	The members check the equipment needed is appropriate to use for the system.	Pena, Chablis Angela Pinpin, Paulo Luis
----------------------	------------------------------------------------------------------------------	--------------------------------------------

Table 3.4. Roles and Responsibilities - Hardware

#### 4.2.5. RISK TEAM

RISK TEAM	ROLE AND RESPONSIBILITY	PERSON
LEADER	The risk team leader is responsible for approving the proposed contingency plans of the risk team before distributing to the other teams.	Avellaneda, Yule Tao Pax



<b>RISK OFFICERS</b>	<p>The risk officers are assigned to every team to closely observe and monitor them. They oversee the possible threats and risks that might prevent the group from successfully delivering the project.</p> <p>The team is tasked to propose solutions to lessen the probability of possible future risks from occurring during the making of the project. They also need to update the risk leader about the current situation of the team they are monitoring.</p>	Dahilig, Ralph Lance Lontoc, Paul Leonard Meer, Allyssa Beatrice Nocom, John Mark
<b>BACK-UP PLANNER</b>	Responsible for coming up with preventive actions or solutions for possible risks that the team might encounter during the production of the system.	Corpuz, Ann Marie Garces, Bryan Singh, Gabrielle

Table 3.5. Roles and Responsibilities - Risk



#### 4.2.6. DOCUMENTATION TEAM

DOCUMENTATION TEAM	Throughout the production of the system, the documentation team is tasked to record each team's progress and compile it in a document. They are also responsible for storing and updating the project documentation until the completion of the project.	
POSITION	ROLE AND RESPONSIBILITY	PERSON
LEADER	The leader guides and ensures that every member of the team is doing their assigned tasks. She is also responsible for editing, revising, and compiling the project documentation before passing it to the leader.	Veliyusa, Ronyella Mae
PROGRAMMING DOCUMENTATION	Members of the programming documentation are tasked to document information from the programming team. The members of the team should also report to the documentation leader about the programming team's current situation.	Anecito, Sherly Lu, Erika Louise Wee, Bryan Andrew



<b>RISK DOCUMENTATION</b>	The risk documentation team is responsible for tracking and documenting the risk team's progress until the end of the project. They are also mandated to report to the documentation leader about the current situation of the risk team.	Palquiran, Mikah Polinag, Anika Marie
<b>TESTING DOCUMENTATION</b>	Testing documentation members are responsible for recording the testing team's progress. The team is also mandated to update the documentation leader about the situation of the testing team.	Dela Cruz, Michail Joaquin Morada, Jose Antonio Macalinao, Patrick Joseph
<b>HARDWARE DOCUMENTATION</b>	Records the hardware team's progress. The members should report to the documentation leader about the hardware team's whereabouts.	Yermo, Euson Jhon

Table 3.6. Roles and Responsibilities - Documentation



#### 4.3. PROJECT PLAN STRUCTURE (AGILE PROJECT MANAGEMENT)

Task	Duration (in Days)	Dependency
<b>1. Building the Organization</b>		
1.1 Defining the structure	1	
1.2 Electing the Project Manager and Leaders of each team	1	1.1
1.3 Assignment of members for each team	1	1.2
<b>2. Planning (Creation of Project Plan and Charter)</b>		
2.1 Selecting the project	1	1.2
2.2 Stakeholder Analysis	2	2.1
2.3 Defining Scope and Limitations	12	2.1
2.4 Defining Work Breakdown Structure	3	2.3
2.5 Defining Project Timeline	4	2.4
2.6 Defining Costs	1	2.3
2.7 Quality Planning	2	2.5
2.8 Task Assignments and Process Flows	6	2.5
<b>3. Programming Training Sessions</b>		
3.1 Room Reservation/Software Installation	6	2.8
3.2 Training Sessions	6	3.1
<b>4. Project Charter Sign Off</b>		
4.1 Schedule Sign Off Meeting with IBVSHS	5	2



4.2 Sign Off Meeting with IBVSHS	1	3.1
4.3 Project Plan and Charter Sign Off	1	3.2
4.4 Schedule Testing dates	1	3.3

Table 4.1 Project Plan Structure sprint

## Sprints

AGILE Scrum Project Management allows the team to embrace changes in requirements, goals, and situations that the project may encounter overtime. With Scrum, a product is built in a series of iterations called Sprints that break down big, complex projects into bite-sized pieces. This makes projects more manageable, allows teams to ship high quality work faster and frequently, and gives them more flexibility to adapt to change. Sprints make it possible to reduce risk and costs, get fast feedback from users, increase speed to market, and seed value quicker.

For this project, a Sprint is equivalent to the period between testing sessions, which is done every Friday.

Task	Duration (in Days)	Dependency
<b>5. Sprints (Iterative)</b>		
5.1 Sprint Planning		
5.1.1 Review Product Backlog	1	3.4, 4.6
5.1.2 Sprint Backlog	2	4.1.1
5.2 Software Development	5	4.1.2
5.3 Modular Testing		
5.3.1 Testing Team	3	4.2
5.3.2 With IBVSHS	1	4.3.1



5.4 Module Sign Off	1	4.3.2
5.5 Risk Assessment	3	4.4
5.6 Update Project Plan (if needed)	2	4.6
<b>6. Project Sign Off</b>	1	4
<b>7. Documentation</b>		
7.1 Updated Project Plan (to be given to next batch)	5	5
7.2 User Manual	5	5
7.3 Photo and Video Documentation	5	5

Table 4.2 Project Plan Structure

#### 4.4. NETWORK DIAGRAM

The network diagram illustrates the inter-relationship between the activities in the project.

##### 1. Building the Organization

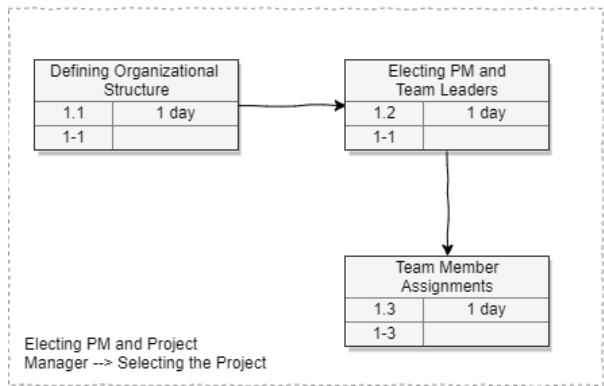


Figure 21.1. Project Network - Building the Organization



#### 2. Planning (Creation of Project Plan and Charter documents)

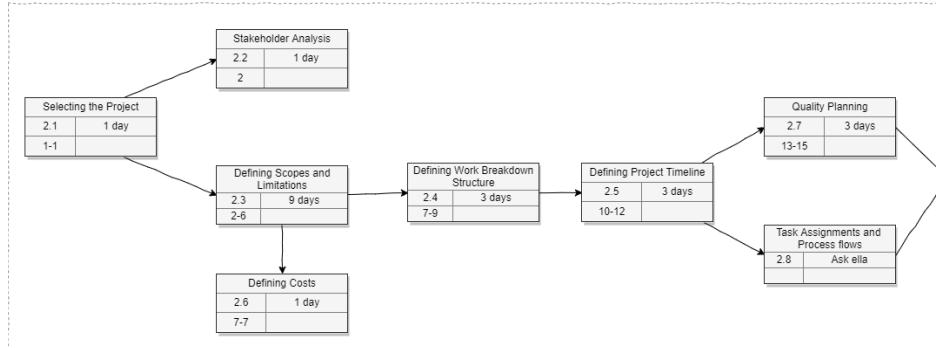


Figure 21.2. Project Network - Planning (Creation of Project Plan and Charter Documents)

#### 3. Programming Training Sessions

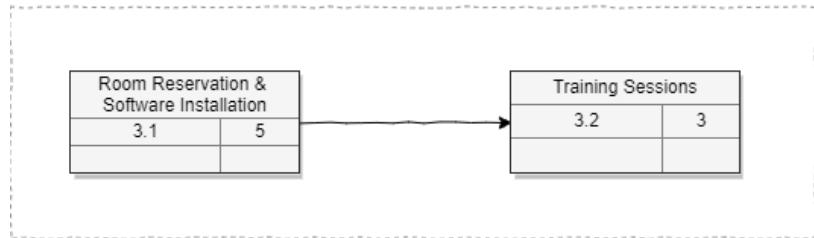


Figure 21.3. Project Network - Programming Training Sessions

#### 4. Project Charter Sign Off

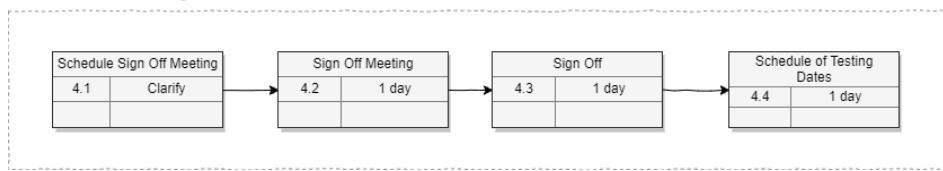


Figure 21.4. Project Network - Project Charter Sign Off



5. Sprint (x weeks, x testing sessions)

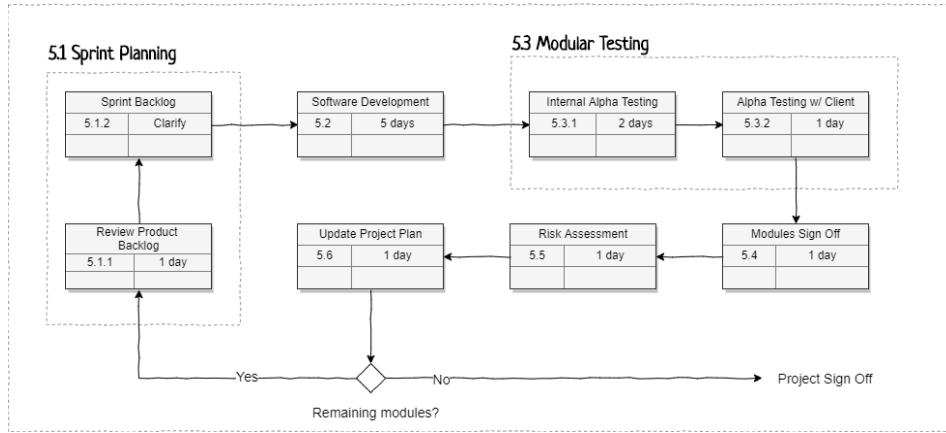
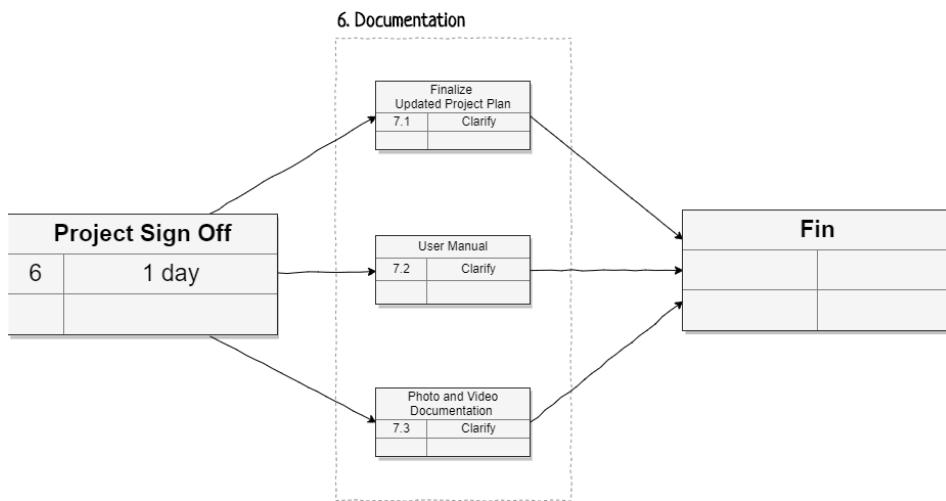


Figure 21.5. Project Network - Sprint



Commented [1]: to be replaced

Figure 21.6. Project Network - Documentation



#### 4.5. GANTT CHART

Gantt Chart illustrates the project's tasks, its progress and the allotted time to complete the tasks.

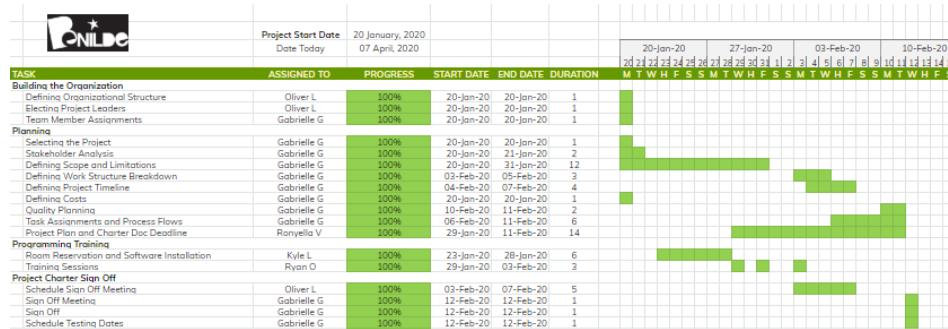


Figure 22.1 Gantt Chart - The Organization, Planning, Training and Sign Off

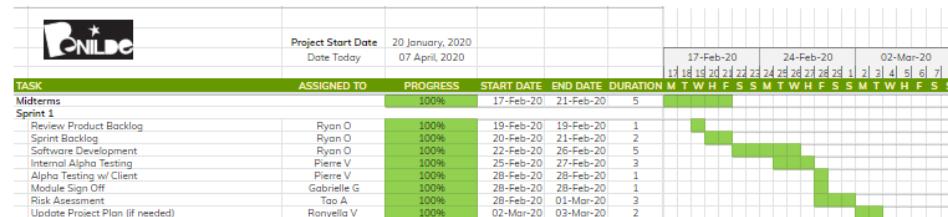


Figure 22.2 Gantt Chart - Sprint 1



Figure 22.3 Gantt Chart - Sprint 2



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INFORMATION SYSTEMS DEPARTMENT**



Figure 22.4 Gantt Chart - Sprint 3

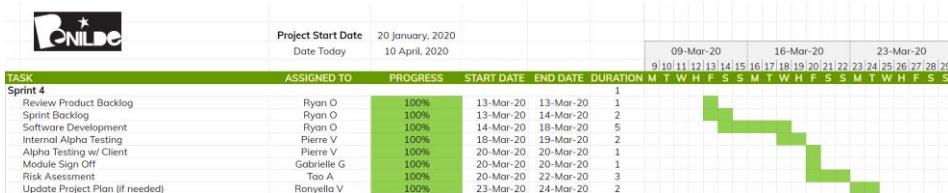


Figure 22.5 - Gantt Chart - Sprint 4



Figure 22.6 - Gantt Chart - Sprint 5

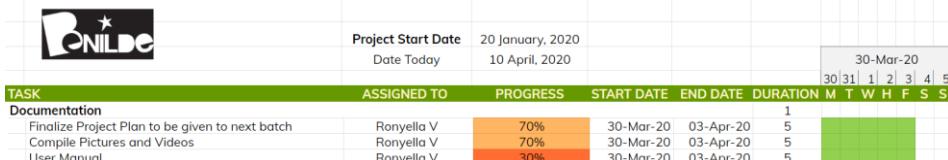


Figure 22.7 - Gantt Chart - Documentation



## CHAPTER VI

### 5. SOFTWARE DEVELOPMENT

This chapter includes the programming team's process flows and the function and features assigned to each member,

#### 5.1. TASK ASSIGNMENTS

Task assignment table presents the tasks or assignments assigned to a member of the team. These tasks are also aligned to the roles and responsibilities mentioned above.

##### 5.1.1. GENERAL USER

GENERAL USER						
Function	Feature	Front-end	Logic	Tester	Reqs Person	Risk
Navigation Bar	Helps the user navigate functions easily.	Gel Gamoras	Ryan Obeles	Mirks Panes	Jaja Morada	Ralph Dahilig

Table 5. General User

##### 5.1.2. PATRON

PATRON						
Function	Feature	Front end	Logic	Tester	Reqs Person	Risk
View All Books	A list of all the books in the library	Xander De Leon	Mary Aizon	Mirks Panes	Patrick Macalinao	Ralph Dahilig
Search books	Search bar (search by keyword), Filters (search by filter)	Xander De Leon	Mary Aizon	Mirks Panes	Patrick Macalinao	Ralph Dahilig



<b>View Book Details</b>	A book page containing all information about the book, including status (available, borrowed) and condition (missing, damaged, good condition)	Xander De Leon	Mary Aizon	Gabriel Garcia	Anika Polinag	Ralph Dahilig
<b>View Library Record</b>	A page containing public information about the patron, and the books they have borrowed and returned, currently borrowing, and over due	Xander De Leon	Mary Aizon	Gabriel Garcia	Anika Polinag	Ralph Dahilig
<b>Patron or General Landing Page</b>		Xander De Leon	Mary Aizon	Gabriel Garcia	Jaja Morada	Ralph Dahilig

Table 6. Patron

### 5.1.3. LIBRARIAN

LIBRARIAN						
Function	Feature	Front end	Logic	Tester	Reqs Person	Risk
<b>View All Books</b>	A list of all the books in the library	Xander De Leon	Mary Aizon	Joaquin Perez	Patrick Macalinao	John Mark Nocom
<b>Search books</b>	Search bar (by keyword), Filters (by filter), Barcode (using barcode scanner)	Xander De Leon	Mary Aizon	Pierre Villanueva	Euson Yermo	John Mark Nocom
<b>View Book Details</b>	A book page containing all information about the book, including status (available, borrowed) and condition (missing, damaged, good condition)	Xander De Leon	Mary Aizon	Pierre Villanueva	Euson Yermo	John Mark Nocom
<b>Display Books by Status</b>	Display all available, all borrowed, or all over due books	Cheska Teng	Bernard Reccion	Joaquin Perez	Erika Lu	John Mark Nocom



<b>Display Books by Condition</b>	Display all in good condition, all missing, or all damaged	Cheska Teng	Bernard Reccion	Miguel Cerrer	Erika Lu	John Mark Nocom
<b>View Transaction Records</b>	View records of books that have and had been borrowed along with the borrower(patron), when it was borrowed, due date, when it was returned, and status (borrowed, returned, overdue).	Kenneth Matias	Zach Estrella	Pierre Villanueva	Euson Yermo	John Mark Nocom
<b>Issuing of Books</b>	Create and update a transaction record	Cheska Teng	Jairus Macatangay	Pierre Villanueva	Euson Yermo	John Mark Nocom
<b>Returning of Issued Books</b>	Update transaction status to 'returned' and add return date	Cheska Teng	Jairus Macatangay	Joaquin Perez	Euson Yermo	John Mark Nocom
<b>Report Damage</b>	Create a damage report with date, who damaged it (optional), book damaged, and comment	Cheska Teng	Zach Estrella	Joaquin Perez	Sherly Anecito	John Mark Nocom
<b>Add Books</b>	Create a book record	Cheska Teng	Jairus Macatangay	Pierre Villanueva	Patrick Macalinao	John Mark Nocom
<b>Update Books</b>	Update book record information	Cheska Teng	Jairus Macatangay	Pierre Villanueva	Anika Polinag	John Mark Nocom
<b>Mark book as missing</b>	Update book condition to missing	Cheska Teng	Jairus Macatangay	Miguel Cerrer	Mikah Palquiran	John Mark Nocom
<b>Mark book as good condition</b>	Update book condition to good condition	Cheska Teng	Mary Aizon	Miguel Cerrer	Mikah Palquiran	John Mark Nocom
<b>Mark book as available</b>	Update book status to available	Cheska Teng	Jairus Macatangay	Miguel Cerrer	Mikah Palquiran	John Mark Nocom



<b>Mark book as borrowed</b>	Update book status to borrowed	Cheska Teng	Jairus Macatangay	Miguel Cerrer	Mikah Palquiran	John Mark Nocom
<b>Add patron</b>	Create a patron record	Zach Estrella	Mico Ureta	Jericho Ladriza	Chail Dela Cruz	John Mark Nocom
<b>Update patron</b>	Update patron record information	Zach Estrella	Mico Ureta	Jericho Ladriza	Chail Dela Cruz	John Mark Nocom
<b>Deactivate patron</b>	Mark patron as inactive/deactivated	Zach Estrella	Mico Ureta	Jericho Ladriza	Chail Dela Cruz	John Mark Nocom
<b>View Patrons</b>	View list of patrons	Zach Estrella	Mico Ureta	Jericho Ladriza	Chail Dela Cruz	John Mark Nocom
<b>Search patrons</b>	Search patrons by name	Zach Estrella	Mico Ureta	Jericho Ladriza	Chail Dela Cruz	John Mark Nocom
<b>Librarian Landing Page</b>		Cheska Teng	Mary Aizon	Gabriel Garcia	Mikah Palquiran	John Mark Nocom
<b>Register</b>	Register to have a valid login credential.	Xander De Leon	Ryan Obeles	Mirks Panes	Sherly Anecito	John Mark Nocom
<b>Log in</b>	Login to use function and features.	Kenneth Matias	Ryan Obeles	Mirks Panes	Sherly Anecito	John Mark Nocom

Table 7. Librarian

#### 5.1.4. SYSTEM ADMINISTRATOR

SYSTEM ADMINISTRATOR						
Function	Feature	Front end	Logic	Tester	Reqs Person	Risk
<b>Add user</b>	Create user account/record	Kenneth Matias	Ryan	Paolo Dayego	Bryan Wee	Paul Leonard Lontoc
<b>Update user account</b>	Update user information	Kenneth Matias	Ryan	Darel Pasno	Bryan Wee	Paul Leonard Lontoc
<b>Reset password</b>	Reset a user's password	Kenneth Matias	Ryan	Aldrin Wang	Sherly Anecito	Paul Leonard Lontoc



<b>Deactivate user</b>	Mark user as inactive/deactivated	Kenneth Matias	Ryan	Paolo Dayego	Bryan Wee	Paul Leonard Lontoc
<b>Add patron</b>	Create a patron record	Zach Estrella	Mico Ureta	Aldrin Wang	Anika Polinag	Paul Leonard Lontoc
<b>Update patron</b>	Update patron record information	Zach Estrella	Mico Ureta	Darel Pasno	Anika Polinag	Paul Leonard Lontoc
<b>Deactivate patron</b>	Mark patron as inactive/deactivated	Zach Estrella	Mico Ureta	Aldrin Wang	Bryan Wee	Paul Leonard Lontoc
<b>View Transaction Records</b>	View records of when books have been borrowed, returned, due date, borrower (patron), and status	Kenneth Matias	Zach Estrella	Darel Pasno	Bryan Wee	Paul Leonard Lontoc
<b>View Books Transaction logs</b>	View records of who initiated the transaction	Kenneth Matias	Bernard Reccion	Paolo Dayego	Erika Lu	Paul Leonard Lontoc
<b>View Books audit logs</b>	View records of every time a book has been added, updated, or removed	Kenneth Matias	Bernard Reccion	Paolo Dayego	Erika Lu	Paul Leonard Lontoc
<b>View Patrons audit logs</b>	View records of every time a patron has been created, updated, or marked inactive	Kenneth Matias	Bernard Reccion	Aldrin Wang	Erika Lu	Paul Leonard Lontoc
<b>View User audit logs</b>	View records of every time a user has been created, updated, or deactivated	Kenneth Matias	Bernard Reccion	Darel Pasno	Erika Lu	Paul Leonard Lontoc
<b>Register</b>	Register to have a valid login credential.	Xander De Leon	Ryan Obeles	Mirks Panes	Sherly Anecito	John Mark Nocom
<b>Log in</b>	Login to use function and features.	Kenneth Matias	Ryan Obeles	Mirks Panes	Sherly Anecito	John Mark Nocom
<b>Landing Page</b>		Kenneth Matias	-	Gabriel Garcia	Jaja Morada	Paul Leonard Lontoc

Table 8. System Administrator



## 5.2. PROCESS FLOWS

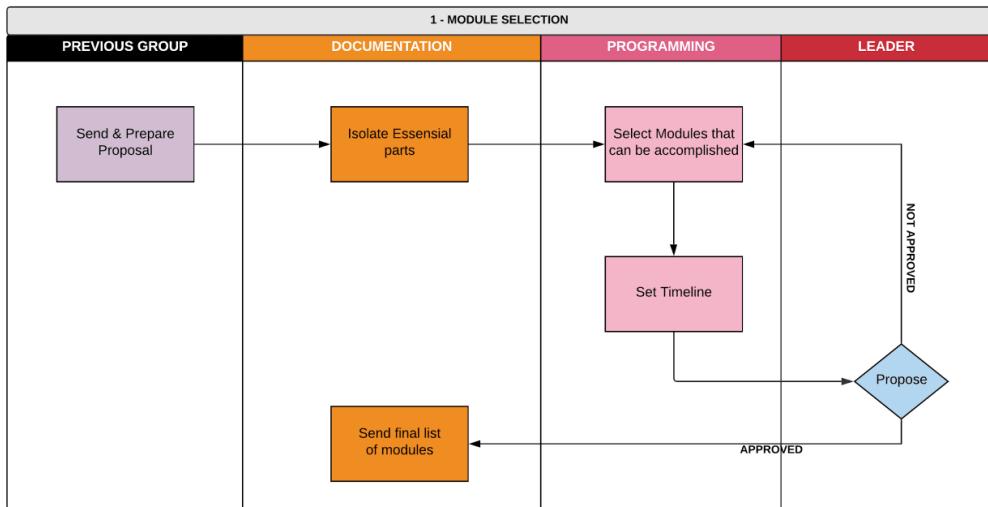


Figure 23. Module Selection

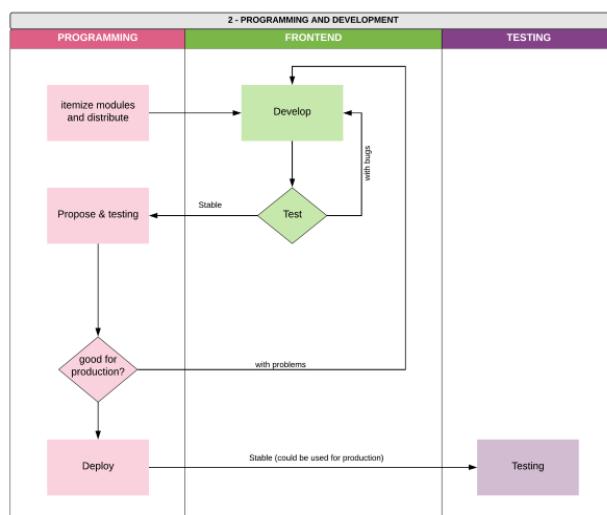


Figure 24. Programming and Development - Frontend

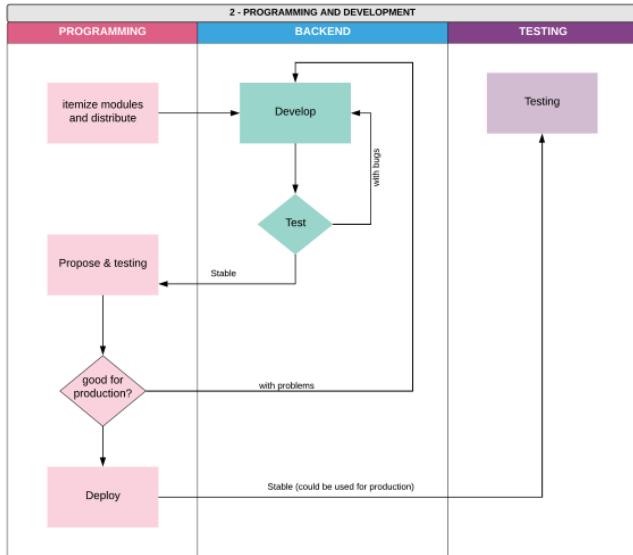


Figure 25. Programming and Development - Backend

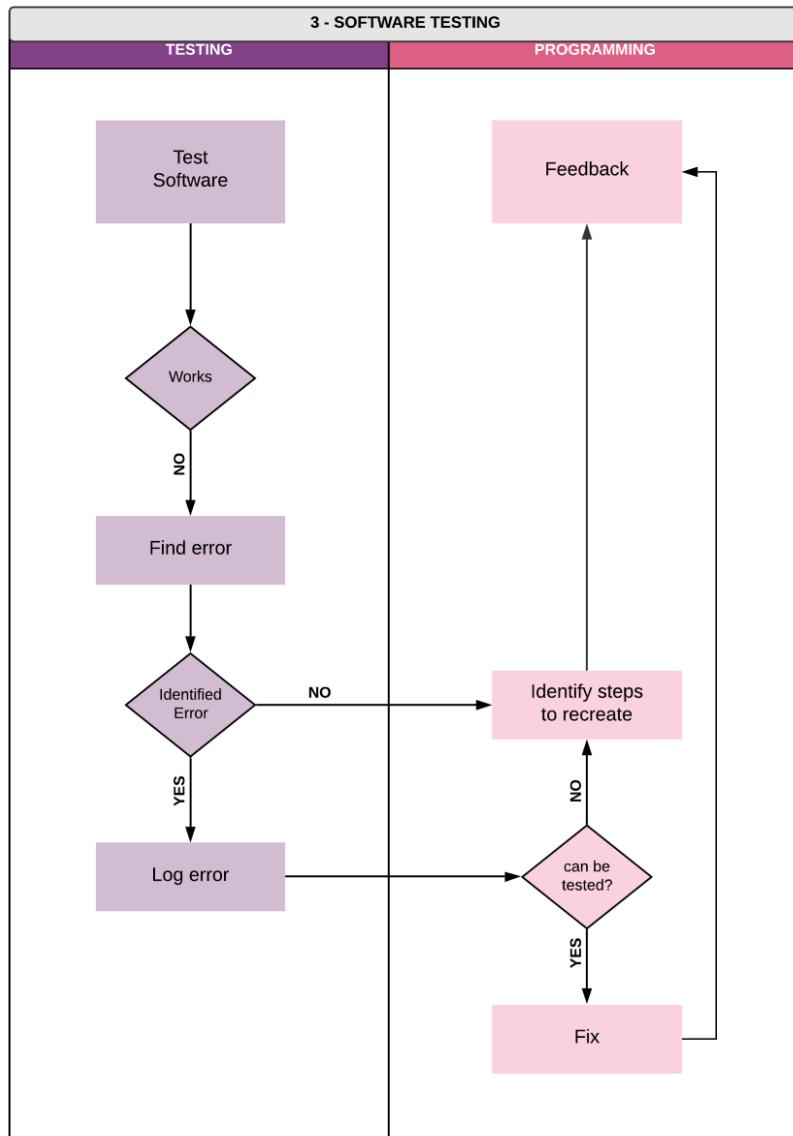


Figure 26. Software Testing

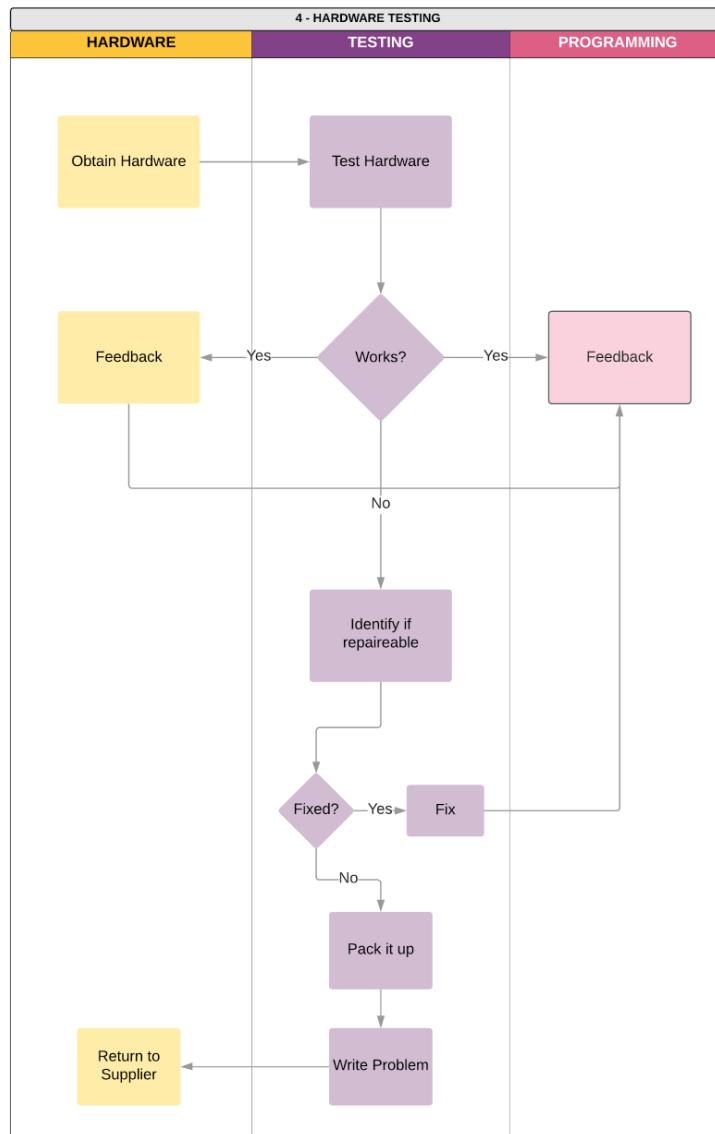


Figure 27. Hardware Testing

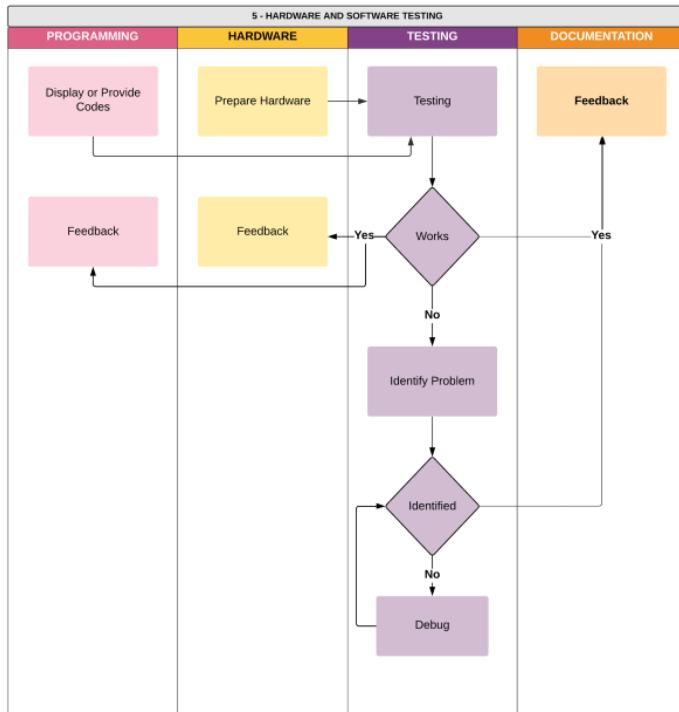


Figure 28. Hardware and Software Testing

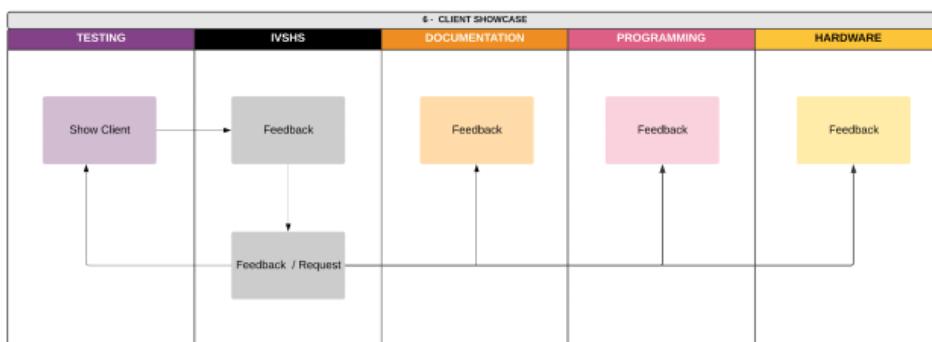


Figure 29. Client Showcase

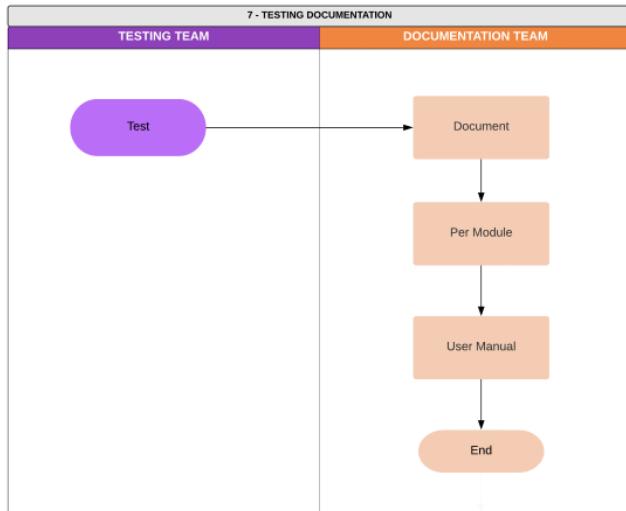


Figure 30. Testing Documentation

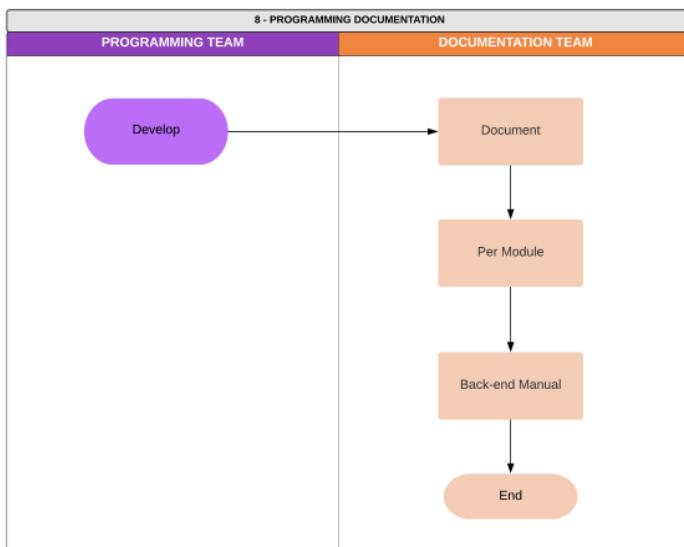


Figure 31. Programming Documentation



### 5.3. PROJECT QUALITY STANDARDS

This is to ensure that the entire project is to be submitted with little to no errors.

Standards are employed in order to reach such expectations for this project.

- Prototype has no bugs
- All essential functions needed are complete and functional
- 80% of the essential functions wanted are complete, functional and included in the prototype
- 70% of the essential functions that are nice to have are complete, functional and included in the prototype



## CHAPTER VII

### 6. HARDWARE

This chapter includes the hardware team's process flows and their roles and responsibilities.

#### 6.1. TASK ASSIGNMENTS

HARDWARE		
NAME	ROLE	TASK ASSIGNMENT
De Guzman, Kyle	Leader	Oversees and monitors the hardware team. He is also responsible for contacting the ITD and reserving laboratories if needed.
Pena, Chablis Angela	Assistant	Retrieval of Hardware/s from ITD
Pinpin, Paulo Luis	Assistant	Return of Borrowed Hardware/s to ITD

Table 9. Hardware Task Assignments



## 6.2. PROCESS FLOWS

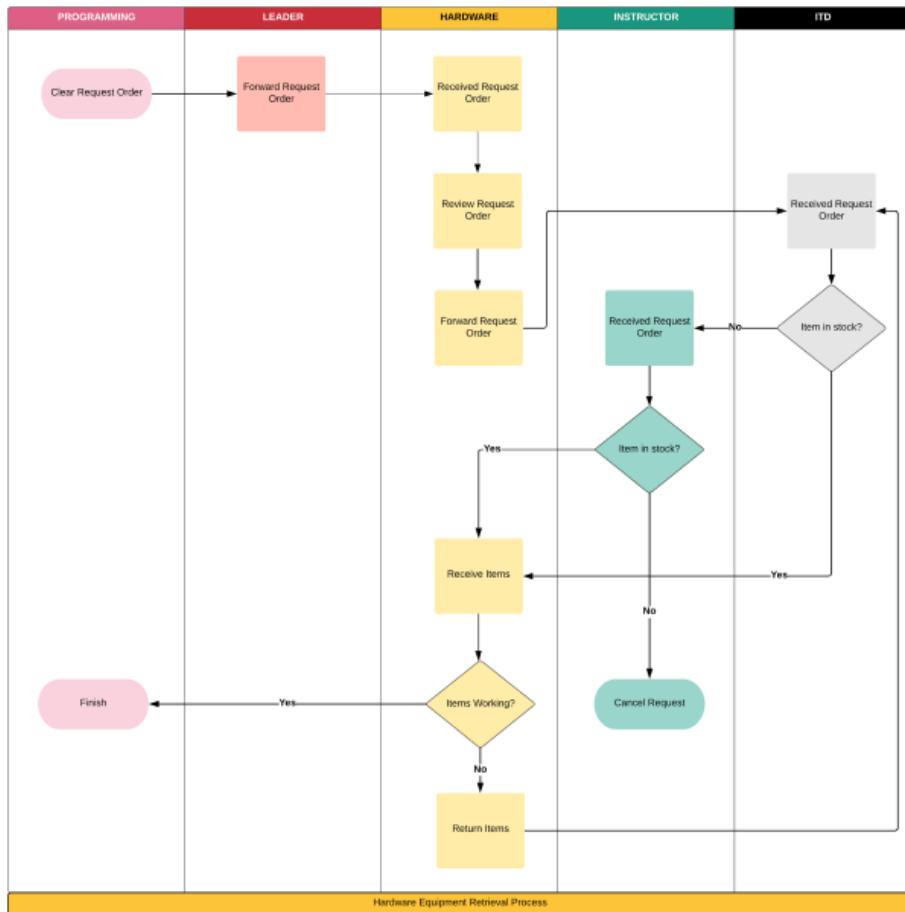


Figure 32. Hardware Equipment Retrieval

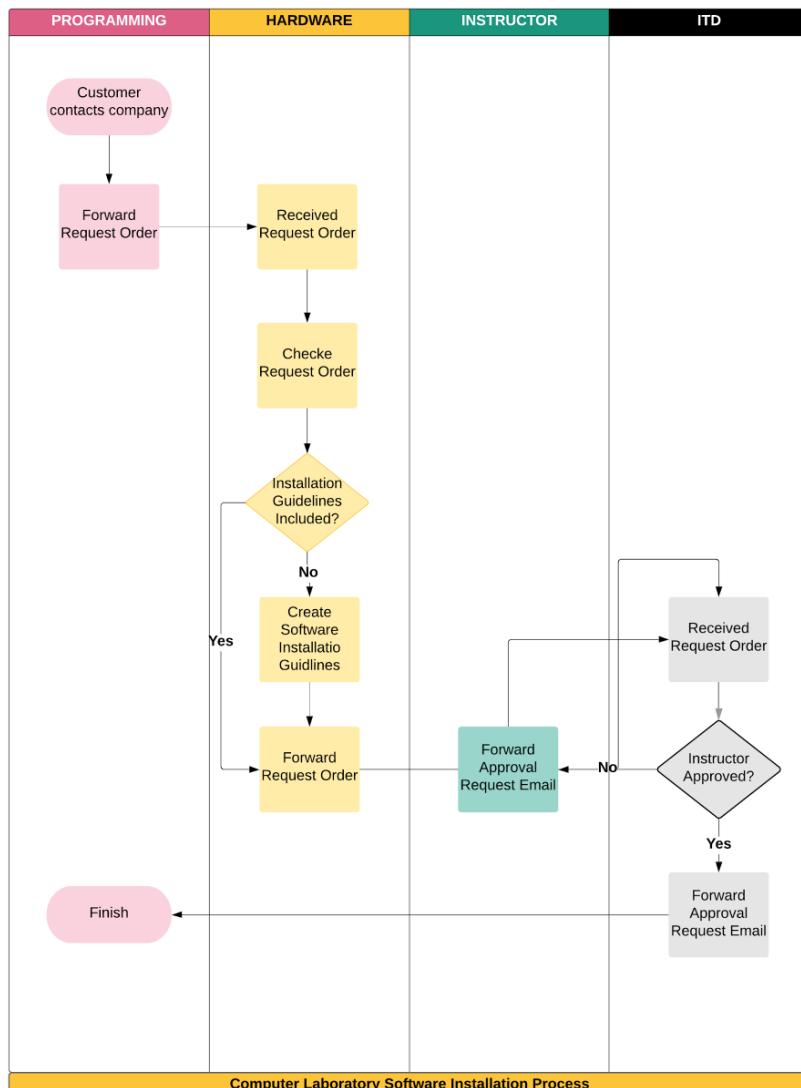


Figure 33. Computer Laboratory Software Installation Process

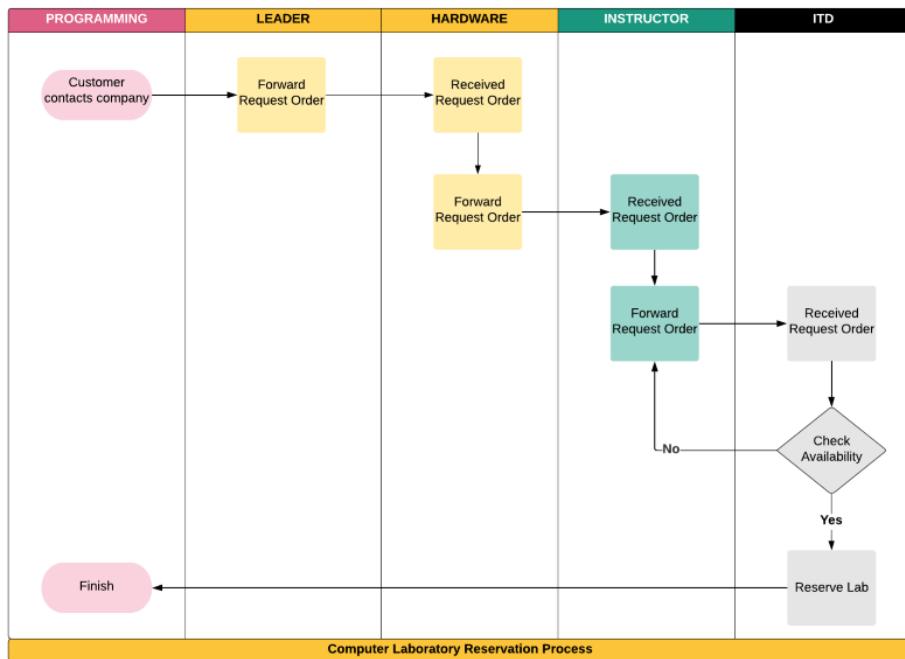


Figure 34. Computer Laboratory Reservation Process



## CHAPTER VIII

### 7. RISK MANAGEMENT

The Risk Management section presents the Risk team's process flows and their roles and responsibilities. This chapter also includes every team's risk register and their accompanying plans on how to solve them.

#### 7.1. TASK ASSIGNMENTS

RISK		
NAME	ROLE	TASK ASSIGNMENT
<b>Avellaneda, Tao</b>	Leader	Oversees and approves plans or solutions proposed by the risk members.
<b>Corpuz, Anne Marie</b>	Contingency Planner	Creates Contingency Plans based from the provided Risk Registry
<b>Dahilig, Ralph Lance</b>	Risk Officer - Hardware	Monitor Activities of Hardware Team
<b>Garces, Bryan</b>	Contingency Planner	Create Contingency Plans based from the provided Risk Registry
<b>Lontoc, Paul Leonard</b>	Risk Officer - Testing	Monitor Activities of Testing Team
<b>Meer, Allyssa Beatrice</b>	Risk Officer - Documentation	Monitor Activities of Documentation Team



<b>Nocom, John Mark</b>	Risk Officer - Programming	Monitor Activities of Programming Team
<b>Singh, Gabrielle</b>	Contingency Planner	Create Contingency Plans based from the provided Risk Registry

Table 10. Risk Task Assignments

## 7.2. RISK REGISTER

The risk register is the process where the project is heavily monitored and assessed for any potential risk that may arise during the project's life cycle. This is to help ensure that the project remains on track without any further delays to meet its end goal in delivering a working library management system to the client.

### QUALITATIVE DESCRIPTION

#### PROBABILITY

- 100% - Risk will definitely happen
- 80% - Risk will most likely happen
- 50% - Risk may or may not happen
- 20% - Risk will least likely to happen
- 0% - Risk will never happen

#### IMPACT



- 5 - Result to Non-Delivery of System
- 4 - Result to Delivery of Incomplete System with Bugs
- 3 - Result to Delivery of Complete System with Bugs
- 2 - Result to Delivery of Complete System without Bugs but with UI issues
- 1 - Result to Delivery of Awesome System

#### 7.2.1. PROGRAMMING TEAM RISK REGISTER

PROGRAMMING						Risk Officer : John Mark Nocom
Risk	Probability	Impact	Rank	Preventive Action	Person Responsible	
<b>Frontend has UI Issues</b>	50%	4	2	Check for responsiveness with different devices	Cheska Teng	
<b>Software cannot read barcode data</b>	20%	5	1	Identify what barcode format the scanner supports	Ryan Obeles	
<b>Different operating system versions/platforms</b>	50%	2	1	To make sure everyone has the same version of PHP	Mico Ureta	
<b>Apache/Nginx Configuration</b>	0%	2	0	Setup deployment server properly	Ryan Obeles	



<b>Unexpected errors/bugs during testing</b>	100%	1	1	Debug	Ryan Obeles
<b>Possible accidental push to the wrong branch</b>	100%	5	5	Remind Team about their respective branches	Ryan Obeles

Table 11. Programming Risk Register

#### 7.2.2. TESTING TEAM RISK REGISTER

TESTING				Risk Officer : Paul Leonard Lontoc	
Risk	Probability	Impact	Rank	Preventive Action	Person Responsible
<b>Test Scripts are not accurate</b>	80%	3	2.4	Create a Buddy System with counterpart programmer with mutual accountability	All Members
<b>Cramming</b>	50%	4	2	Programming team will create a schedule of when they can send the module, so that the testing can be done before the deadline given and to create time for revisions	All members



<b>Testers did not fully accomplish their Testing Task</b>	50%	3	1.5	Tie up Performance Review to Grades using Performance Matrix	Pierre Villanueva
<b>Errors found are not described properly by Tester</b>	50%	2	1	Create a policy of testers giving a screenshot of errors with written description.	All members
<b>Chosen programming language has not been completely learned yet</b>	80%	1	0.8	Members will do advanced reading about the programming language	All members
<b>Programming team sends code that is difficult to read</b>	50%	1	0.5	Programming team will comment the purpose of the module	Programming Team
<b>Loss of data</b>	20%	2	0.4	Create backups of codes on a regular basis	All members
<b>Miscommunication with the</b>	20%	2	0.4	Detailed discussions regarding the module that	Programming and Testing Team



<b>Programming Team</b>				should be sent	
<b>Conflicts in schedules</b>	0%	1	0	Members will be grouped according to their schedules	Pierre Villanueva
<b>IDE's used are not uniform</b>	0%	0	0	Both programming team and testing team will download the same version and the same IDE	Programming and Testing Team

Table 12. Testing Risk Register

### 7.2.3. HARDWARE TEAM RISK REGISTER

HARDWARE			Risk Officer : Ralph Lance Dahilig		
Risk	Probability	Impact	Rank	Preventive Action	Person Responsible
<b>No internet connection</b>	100%	5	5	Will require alternative ways to connect to the internet.	All members
<b>No members are present</b>	50%	5	2.5	Will requires members to submit early notice.	All members
<b>Malfunctioning hardware</b>	50%	5	2.5	Will ask assistance from ITD or Available Technician.	Kyle L. De Guzman



<b>No available rooms for Programming Leader to teach</b>	50%	3	1.5	Require members to bring their own laptop and locate an alternative location or ways to connect to the internet.	Kyle L. De Guzman
<b>Human error resulting in loss or damage of equipment.</b>	20%	5	1	Will require two to three members for assistance.	All members
<b>No available Hardware</b>	20%	5	1	Will ask help from 3rd party to lend us their equipment	All members
<b>There are problems with regards to drivers of the hardware</b>	20%	1	0.2	Will ask assistance from ITD or Available Technician.	All members
<b>If ITD is closed</b>	0%	5	0	Will require programming team to request their equipment as early as 3 days before use	Kyle L. De Guzman



<b>Late return of equipments</b>	20%	0	0	All must be aware and remind everyone if he/she isn't available upon day of returning the equipment	All members
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Table 13. Hardware Risk Register

#### 7.2.4. DOCUMENTATION TEAM RISK REGISTER

DOCUMENTATION				Risk Officer : Alyssa Beatrice Meer	
Risk	Probability	Impact	Rank	Preventive Action	Person Responsible
<b>Not following timelines, and deadlines</b>	80%	4	3.2	Set a reasonable deadline considering every team member's schedule, academic workload, organization's activities or own personal time.	All members
<b>Procrastination</b>	80%	3	2.4	Monitor the team's progress everyday.	All members
<b>Members depend on the leader or other teammates</b>	80%	3	2.4	Monitor every team member if they are working on their assigned task.	All members
<b>Indirect Communication</b> <i>(When a team leader</i>	80%	3	2.4	Communicate with each team to ensure that every information to be	Ronyella Veliyusa



<i>relays information to a member or the leader of the documentation team and passes the gathered information to another person, message can be passed as something else.)</i>				documented is correct and valid.	
<b>Other team's outputs do not match with the documentation</b>	50%	4	2	Communicate with every team to ensure that all teams have the same goal.	All members
<b>Members are not suitable in their assigned task</b>	50%	4	2	Guarantee that each member is assigned in a part they are good at and comfortable doing.	All members
<b>Lack of updates from other teams</b>	80%	2	1.6	Conduct weekly meetings with other teams to keep each other posted in every progress a team made.	Ronyella Veliyusa



<b>Lack of teamwork</b>	50%	2	1	Ensure that every member is comfortable with each other.	All members
<b>Improper citations</b>	80%	1	0.8	Before claiming something, ensure that every argument has a proper and verified citations.	All members
<b>Improper revisions</b>	50%	1	0.5	Save a copy of the document being edited.	Ronyella Veliyusa
<b>Conflict between team members</b>	50%	1	0.5	Make sure that every member is comfortable in their assigned task or partners.	All members
<b>Loss of data</b>	0%	1	0	Create or update the backup document every day.	All members
<b>Internet Connection</b>	20%	0	0	When editing a document, make sure that the internet connection is stable.	All members
<b>Class suspensions</b>	20%	0	0	Communicate online. If this method is used, ensure that internet connection is	All members



				stable.	
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Table 14. Documentation Risk Register

### 7.3. CONTINGENCY PLANS

#### 7.3.1. GENERAL RISKS AND THEIR ACCOMPANYING PLANS

This section presents the identified risks in the whole class and their accompanying plans.

RISK	ACCOMPANYING PLANS
Adding modules beyond paper	Ensure that the added modules are approved by the team leaders, the project manager and Mr. Oliver Liwanag. If not approved, the modules should not be added.
Procrastination	The leaders should monitor the members and the team's progress, and set a strict deadline. They should also constantly remind their members about the given deadline.
Members depend on the leader or other teammates	The members should bring the complaint to the project manager or one of the team leaders. If the problem is not yet resolved, the leaders should bring the concern to



	<p>Mr. Liwanag. After consulting the adviser and the problem still exists, the member can be moved into another team where he or she can maximize his or her potential. (If they won't work in the team they chose, then they can work in a team that needs members instead.)</p>
Indirect Communication (When a team leader relays information to a member or the leader of the documentation team and passes the gathered information to another person, a message can be passed as something else.)	<p>Ensure that the information is accurate before relaying the message to another person.</p>
Loss of data	<ol style="list-style-type: none"><li>Use version control.</li><li>Save and back-up regularly.</li></ol>
Bad or slow internet connection	<ol style="list-style-type: none"><li>Look for any relatives nearby with good internet and stay with them if you can.</li><li>If possible with a sufficient budget, use your phone's data.</li></ol>



	<ul style="list-style-type: none"><li>c. Provide a working mobile phone number or house number to your groupmates or the leader so can contact the member if necessary.</li><li>d. Find the best time to work where the internet isn't that bad.</li></ul>
Class suspensions	<ul style="list-style-type: none"><li>a. Delegate work so that everyone can do it from home despite the suspension.</li><li>b. If not, have people meet up in convenient locations.</li><li>c. If the situation is not favorable, the members can communicate online.</li></ul>
Conflict between team members	<ul style="list-style-type: none"><li>a. Set aside personal problems.</li><li>b. If the members keep fighting to the detriment of our project the leader should step in.</li><li>c. Separate the involved members during tasks, meetings or any work related assignments.</li><li>d. If the problem still persists, the leaders or the project manager can move them in a different group.</li></ul>



Members are not suitable in their assigned task	a. Give the members another task or assign the task to another member.  b. Guide the members on how to do the task.
Lack of teamwork	a. The leader should talk with groupmates and ensure that the members are comfortable with each other.  b. Scroll up to number 8 for ,”Conflict between members”
Not following timelines, and deadlines	a. Ask the member what is happening.  b. Talk about the impact of the delayed outputs.
No members are present	Give tasks that can be done online.
Adding Modules beyond paper (Client requests)	a. Check if the request can be done within the team’s given deadline.  b. If the request cannot be done, explain to the client the reason behind the decision.
Accidentally Deleting files or Misplaced files	a. If the file is accidentally deleted, it can be retrieved from the recycle bin.



	<p>b. If the file is misplaced, it can be searched through the file explorer.</p>
Delayed Module Submission	<p>Try to move more people to the assigned group to speed up the module creation and adjust the due date.</p>
Conflict of schedules	<p>a. Try to do things through online sites such as <i>Google Docs</i> so that the members can do their jobs when it is convenient for them.</p> <p>b. For things that really need meetings, the leaders can set meetings during the college break.</p> <p>c. If the members have conflicting schedules,</p> <ol style="list-style-type: none"><li>i. Make sure to handle time wisely and if the member/s can't do it because of previous school work or others, just tell your leader and ask to split the job or give it to someone else.</li><li>ii. Use a planner or organization application to keep track of schoolwork or other activities.</li><li>iii. Do schoolworks before the due date to avoid procrastination.</li></ol>



Cannot communicate nor get hold of members	a. Collect all the numbers of each member (Home and personal) and call them when the members are not reachable online.  b. Collect everyone's schedules and look for them at school when needed.
Cramming	a. If another member finishes his or her tasks ahead of the deadline, he or she can help other members to avoid cramming.  b. The leaders should give an adequate time to accomplish the task.
Testers did not fully accomplish their testing task	The testing leader should talk to the members and try to adjust the deadline.
The teacher was temporarily replaced due to health reasons.	The team should update the substitute teacher about the team's progress.
Suspension of classes due to COVID-19	Contact everyone with their devices. (As it has been identified that everyone has laptops or at least, phones.)
Subpar equipment	a. Notify the team leader about this problem.



	<p>b. Look for relatives nearby with better equipment.</p> <p>c. Work patiently.</p>
Broken keyboard	<p>a. Try borrowing from neighbouring friends and classmates.</p> <p>b. If the member ordered online, he or she should not rely on the delivery of the new keyboard due to the travel ban implemented during the quarantine.</p>
Difficulty in Collaboration	<p>Maximize the use of online platforms such as <i>Google Suite</i> and <i>GitHub</i> to increase productivity if reliable connection is available.</p> <p>Set reasonable deadlines with the member's situation taken into consideration. Leaders should always check the status of their members whenever they have difficulty with the task assigned to each member.</p> <p>Set a common time for each member of the group to discuss the work in progress. Make sure that someone in the discussion is taking minutes of the meeting. The minutes taken should be sent out in the</p>



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	<p>team's respective group chats so that unavailable members can have it as a reference.</p> <p>Leaders have the liberty to re-assign tasks if the initially assigned member is declared with the inability to deliver due to the given limitations.</p>
--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Table 15. General Risks



### 7.3.2. SPECIFIC RISKS AND THEIR ACCOMPANYING PLANS

This section presents the risks identified per team and their accompanying plans.

#### 7.3.2.1. PROGRAMMING TEAM

PROGRAMMING TEAM	
PROBLEM	CONTINGENCY
Frontend has UI issues.	Talk to the leader and try to work it out together. If it still doesn't work, ask for help from the backend team.
Software cannot read barcode data.	<ol style="list-style-type: none"><li>i. Try to get both backend and frontend to figure it out.</li><li>ii. System has only an input feature instead.</li></ol>
Different operating system versions or platforms	<ol style="list-style-type: none"><li>i. The team should pick the widely used platform for the system. If the team has extra time, they can make the other versions.</li></ol>
Apache or Nginx Configuration	Have people copy and use the same one.
Unexpected errors or bugs during testing	Use version control to find the one without the bug and figure out what the bug exactly is.
Possible accidental push to the wrong branch	Use version control to undo the pushed data and adjust the due dates.

Table 16. Specific Risks - Programming



#### 7.3.2.2. TESTING TEAM

TESTING TEAM	
PROBLEM	CONTINGENCY
Test Scripts are not accurate	Tell the Programming Team and adjust due dates.
Errors found are not described properly by Tester	Have testers have a meeting and compile a list of the problems so they can check that the others have explained the problem well.
IDE's used are not uniform	Have the group pick a common IDE to use.
Miscommunication with the programming team	<ol style="list-style-type: none"><li>i. Double-check you understood each other well before starting.</li><li>ii. Always communicate through mediums wherein you're sure you guys can understand each other.(AKA don't pass info through people.)</li></ol>
Programming team sends code that is difficult to read	Ask them to explain the code to you.
Chosen programming language has not been completely learned yet	<ol style="list-style-type: none"><li>i. Practice the language</li><li>ii. Ask a fellow member to check your codes</li><li>iii. Work in groups with someone who knows the language well heading each one.</li></ol>

Table 17. Specific Risks - Testing



### 7.3.2.3. HARDWARE TEAM

HARDWARE TEAM	
PROBLEM	CONTINGENCY
Malfunctioning hardware	<ul style="list-style-type: none"><li>i. Inform the hardware leader about the problem and see if it can still be fixed.</li><li>ii. If the hardware cannot be fixed, it would be recommended to buy another one.</li></ul>
No available rooms for the programming leader to teach	Inform Mr. Liwanag to find or reserve a room for the programming team.
Human error resulting to lost or damage of equipment	<ul style="list-style-type: none"><li>i. For damaged equipment scroll up to read,"Malfunctioning Hardware".</li><li>ii. If an item is lost, the member who lost it should replace it.</li></ul>
No available hardware	Try to find an alternative or way that the hardware doesn't have to be used.
There are problems with regards to drivers of the hardware	<ul style="list-style-type: none"><li>i. Try installing the drivers in other computers and see if it works in someone else's.</li><li>ii. Ask the ITD.</li></ul>
If ITD is closed	Ask when it will be open and adjust sched so you guys can go at the earliest possible time.



Late return of equipment	Just remind the member not to do so again and employ a buddy reminder system.(Basically, remind each other to return the equipment.)
--------------------------	--------------------------------------------------------------------------------------------------------------------------------------

Table 18. Specific Risks - Hardware

#### 7.3.2.4. DOCUMENTATION TEAM

DOCUMENTATION TEAM	
PROBLEM	CONTINGENCY
Other team's outputs do not match with the documentation	Revise the documentation and ask the team leaders to check the outputs before passing it to the leader.
Improper citations	Groupmates should check each other's work before the given due dates to make sure the files given are all properly done. When the leader gets the files on the due dates, they should also double-check.
Improper revisions	Use version control to find the version that was still properly done.
Lack of updates from other teams	Send someone to go inquire about what's going on to each team that has been lost contact with.

Table 19. Specific Risks - Documentation



#### 7.4. PROCESS FLOWS

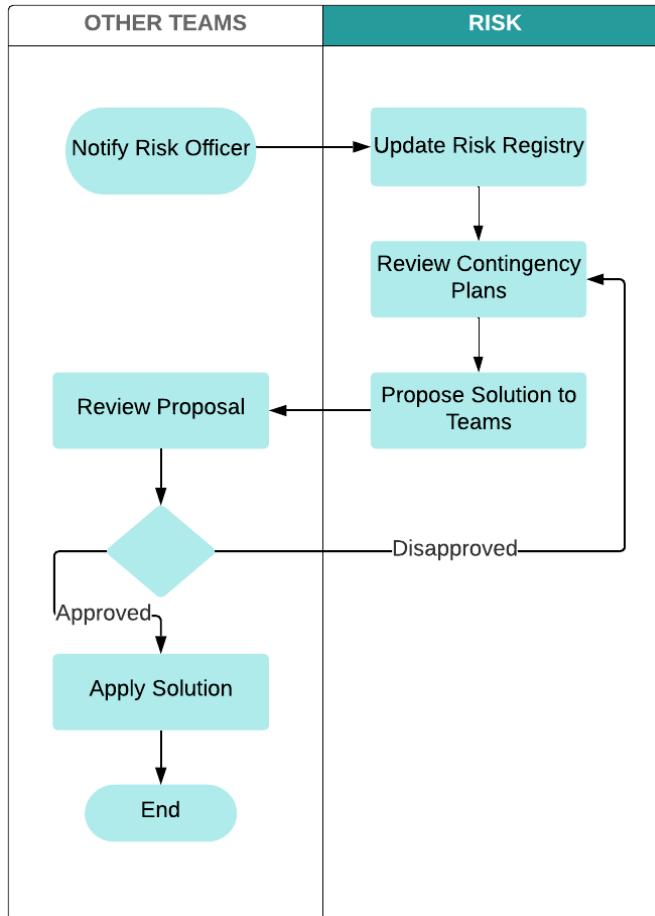


Figure 35. Encounter Problem

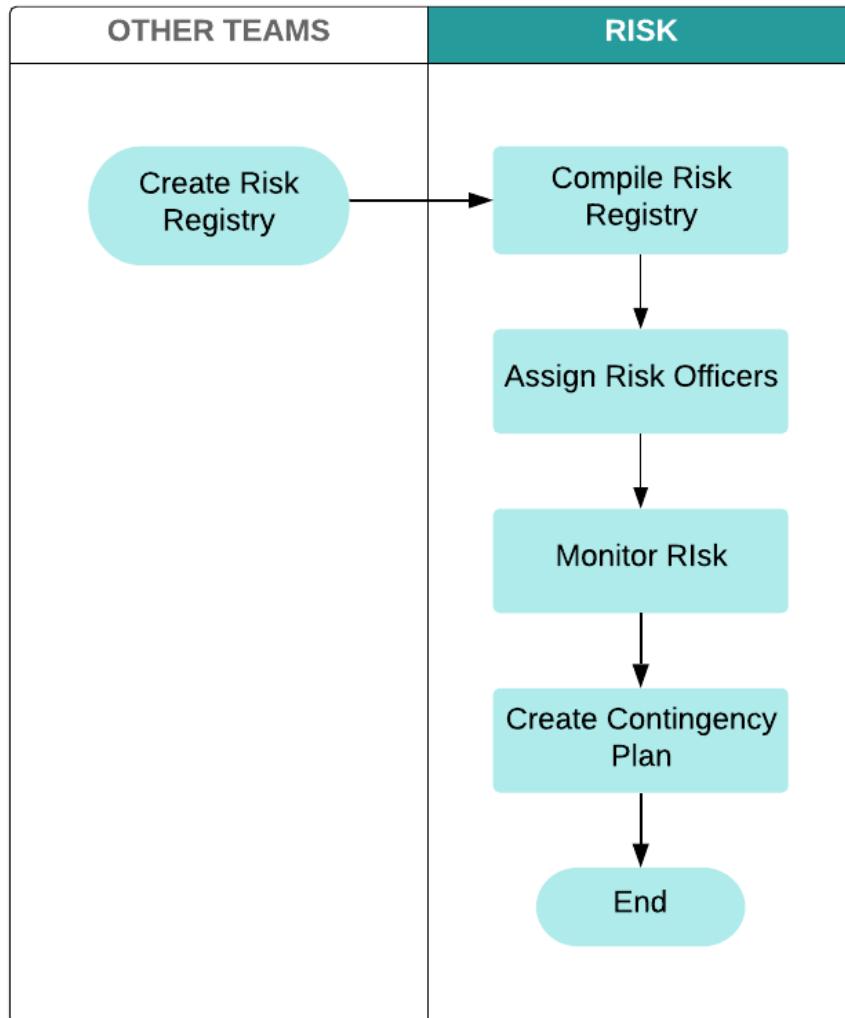


Figure 36. Risk Registry

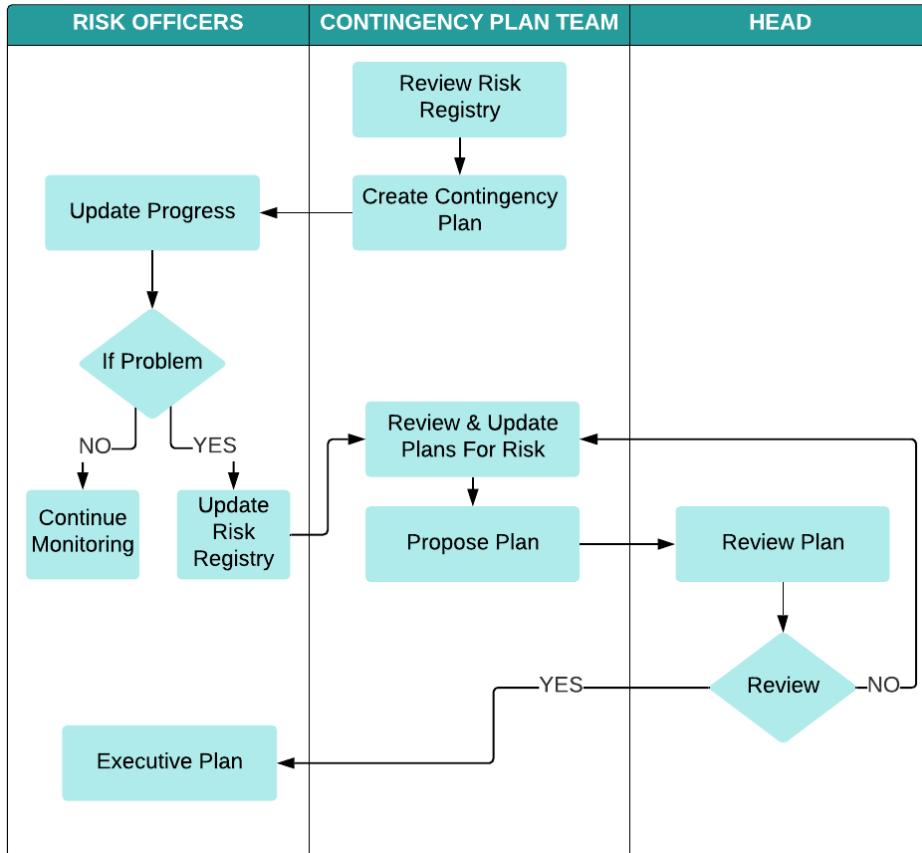


Figure 37. Contingency Plan

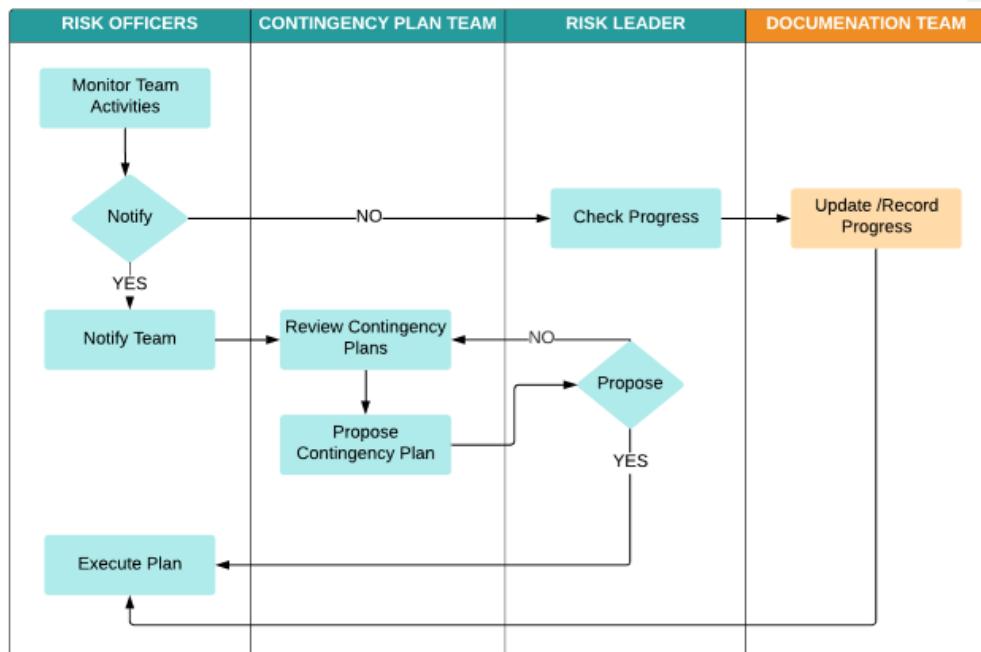


Figure 38. Monitoring



## CHAPTER IX

### 8. PROJECT DOCUMENTATION

This chapter includes the Documentation team's process flows and the member's roles and tasks.

#### 8.1. TASK ASSIGNMENTS

DOCUMENTATION		
NAME	ROLE	TASK
Veliyusa, Ronyella	Leader	Roles and Responsibilities
		Documentation Flowchart
		Data Flow Diagram
Anecito, Sherly	Programming	Programming and Testing Flowchart
	Documentation	Problem Definition
Dela Cruz, Michail Joaquin	Testing Documentation	Project Scope
		Project Statement
		Project Deliverables
		Data Flow Diagram
Lu, Erika Louise	Programming	Programming and Testing Flowchart
	Documentation	Program Flow



		Activity Diagram
Macalinao, Patrick Joseph	Testing Documentation	Programming and Testing Flowchart
		Fishbone Diagram
		Program Flow
Morada, Jose Antonio	Testing Documentation	Organization Structure
		Primary Users
		Scope and Limitations
Palquiran, Mikah	Risk Documentation	Risk Flowchart
		Activity Diagram
Polinag, Anika Marie	Risk Documentation	Roles and Responsibilities
		Risk Flowchart
		Data Flow Diagram
Wee, Bryan Andrew	Programming Documentation	Project Charter
		Data Flow Diagram
Yermo, Euson Jhon	Hardware Documentation	Hardware Flowchart
		Introduction
		Hardware to be Used



Table 20. Documentation - Task Assignments

## 8.2. PROCESS FLOWS

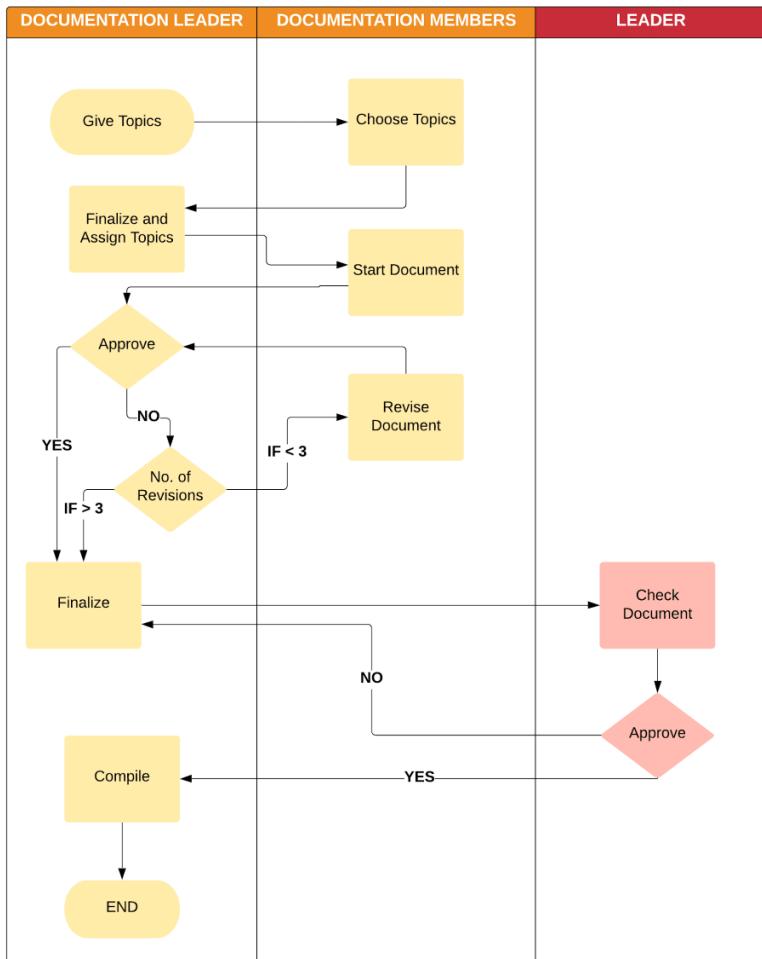


Figure 39. Documentation

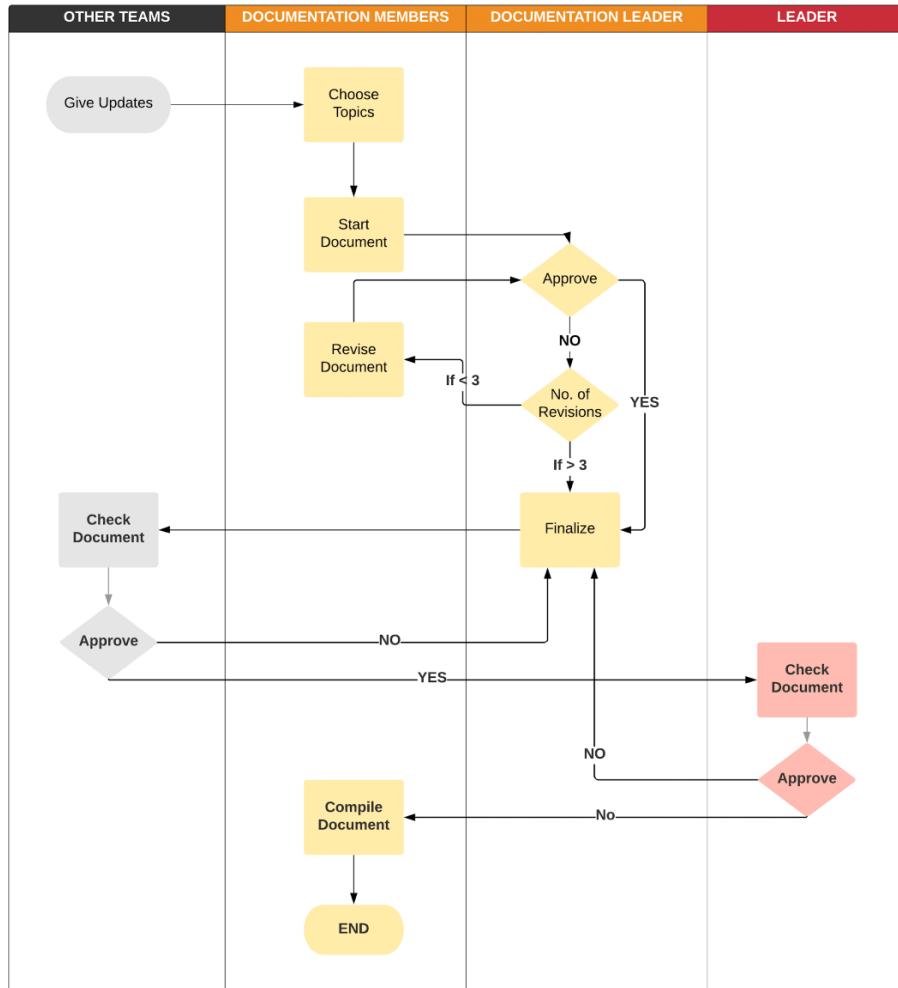


Figure 40. Updates From Other Teams



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# APPENDIX



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Name of Tester:

Hello User!, this usability testing is to ensure us that the system that you are going to use is up to your standards. Changes will be made in regards to going to different pages, but currently the navigation for pages will have to be done manually.

If at any point you get lost during the testing feel free to ask us questions.

Any suggestion you have will be taken into consideration depending on your needs, as well as our ability to create them. If you have an issue with a certain module, please write down your concerns in the box. If the module meets your requirements please write "OK."

Project Phoenix Admin Functions	Action	Put "OK" or a checkmark after it is verified, If there are concerns please write down the issue
Registration	Enter into URL: users/register	ok
	Fill out registration form	ok
Login	Enter into URL: users/login	ok
	Enter your username and password	ok
Manage users	Enter into URL: admin/users	
Add User	Fill out User form	ok
View Details	Verify the users information	
Edit Details	Change user information	ok

Figure 41.1 Test Script - Admin First Testing



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Deactivate User	Verify status of the user	ok
User Audit Logs	Enter into URL: /admin/logs/user	ok
	Verify Contents of the audit log	ok
Book Audit Logs	Enter into URL: /admin/logs/book	ok
	Verify Contents of the audit log	ok

Project Phoenix Librarian Functions	Action	Put "OK" or a checkmark after it is verified, If there are concerns please write down the issue
Login	Enter into URL: users/login	ok
	Enter your username and password	ok
Add Book	Enter into URL: librarian/books/create	ok
	Fill out the Add Book form	ok
Update Book	Enter into URL: librarian/books/1/edit	ok
	Update fields	ok
Book List	Enter into URL: librarian/books	ok

Please write down any suggestions you might have below:

Figure 41.2 Test Script - Admin First Testing



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SMIT 

Super Admin so that 1 person can edit all functions even without  
the librarian/admin.

View details for the librarian view is not yet available.  
ISBN auto format

  
MARY GRACE BEATRIZ V. LIMZAY  
Signature over printed name

Figure 41.3 Test Script - Admin First Testing



March 04, 2020  
Addressing Concerns from Testing #1

Suggestion (from IBVSHS)	Recommendation (from LMS Project Team)
Implementation of a Super Administrator (a user that can access everything)	<p>The creation of two separate sets of functionalities for the Administrator and Librarian would lose its purpose if this user were to be implemented.</p> <p>This would also introduce several security risks, as it would only take one Super Administrator to undermine the whole system. Unlike with the current infrastructure, the system would still work if something goes wrong with either one (Library or System Admin).</p> <p>To address the concern of the System Admin not being present all the time, we recommend having two System Administrators in the system. In this case, it can be the ICT coordinator and the Principal. The current system can have multiple administrators and librarians.</p>
ISBN Format	<p>There are currently two (2) types of ISBN format: ISBN10 and ISBN13. Furthermore, the way these two can vary per book, as such:</p> <p>ISBN 978-0-596-52068-7 ISBN-13: 978-0-596-52068-7 978 0 596 52068 7 9780596520687 ISBN-10 0-596-52068-9 0-596-52068-9</p> <p>To avoid conflict, rather than implementing a fixed pattern, we designed our system to accept the most common formats of ISBN.</p> <p>To counteract the problem that occurred during testing, we will make the error message more specific. For example: ISBN length must be 15.</p>
View Book Details	<p>The View Book Details module was not part of the features to be tested during the first session, however the client wanted to see the specifics of the book that they entered.</p>

Figure 42. Addressing Concerns from First Testing



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SMT 

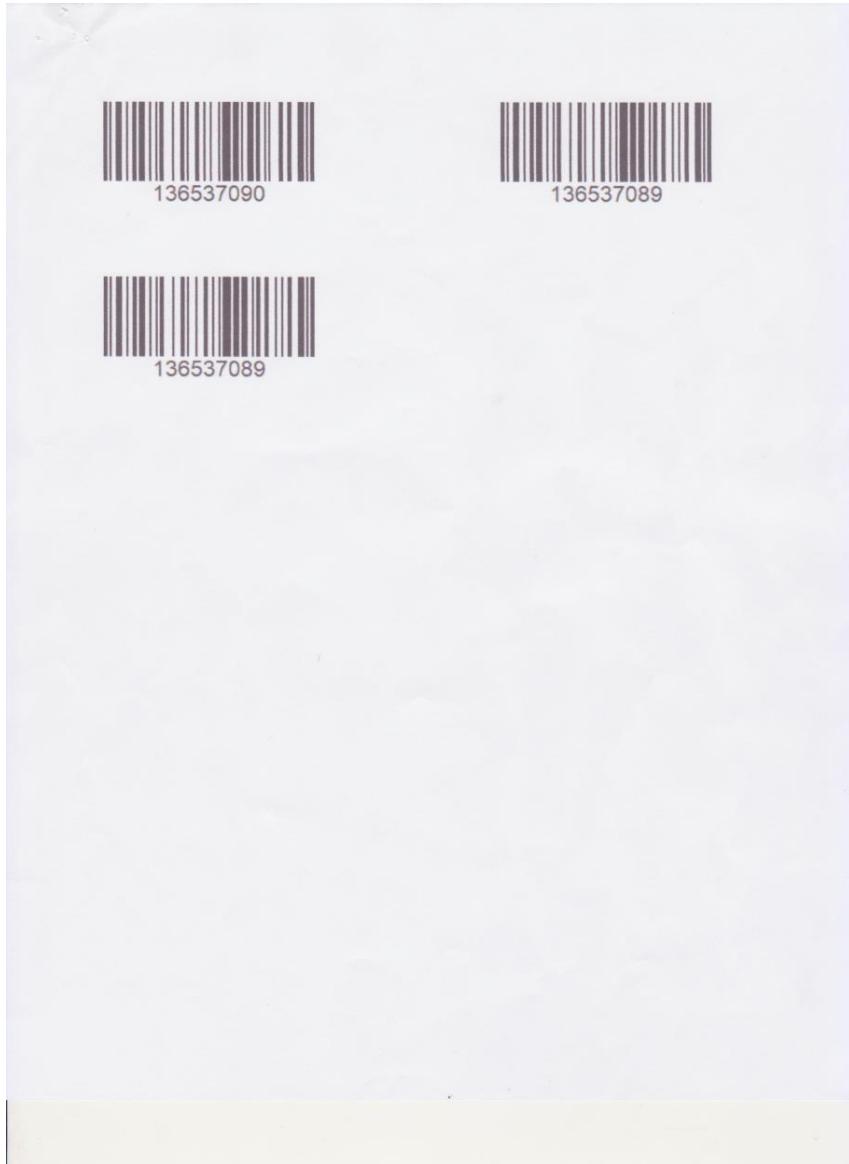


Figure 43. Sample Barcode



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Name of Tester: Mary Grace Beatriz V. Lumlang

Hello User!, this usability testing is to ensure us that the system that you are going to use is up to your standards. Changes will be made in regards to going to different pages, but currently the navigation for pages will have to be done manually.

If at any point you get lost during the testing feel free to ask us questions.

Any suggestion you have will be taken into consideration depending on your needs, as well as our ability to create them. If you have an issue with a certain module, please write down your concerns in the box. If the module meets your requirements please write "OK."

Project Phoenix Functions	Action	Put "OK" or a checkmark after it is verified, If there are concerns please write down the issue	User Sign Off
Login as Admin	Fill out registration from	ok	
Create New Librarian Account	Fill out Creation form	ok	
Logout	Log out of the admin account	ok	
Login as Librarian	Fill out login form	ok	
Verify Email	Open your email and verify your account  *Internet might be slow, so it may take some time	ok	
Patron List	Access the patron list with:  <a href="https://lms.ryanobelles.com/librarian/patrons">https://lms.ryanobelles.com/librarian/patrons</a>	ok	

Figure 44.1 Test Script - Admin Second Testing



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Add Patron	Fill out the patron creation form	ok	
	Verify the information displayed on the list	ok	
Deactivate Patron	Under Actions click the "... button and deactivate a patron	ok	
	Verify the information displayed on the list	ok	
Update Patron	Access the patron update page with: <a href="https://lms.ryanobelles.com/librarian/patrons/2/edit">https://lms.ryanobelles.com/librarian/patrons/2/edit</a>	ok	
	Update the information of the patron	ok	
	Verify the information displayed on the list	ok	
Change Password	On the menu on the top right click "Change password"	ok	
	Fill out Password form	ok	
	Logout		
	Login with new password	ok	
Reset Password	Logout, if currently Logged in	ok	
	Open Login Form	ok	
	Click "Forgot your password?"	ok	
	Enter email	ok	

Figure 44.2 Test Script - Admin Second Testing



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	Open your email, and click the "Reset Password" Link	ok	
	Fill out the new password form	ok	
	Login with your new password	ok	

Please write down any suggestions you might have below:

If you have no issues with any of the modules please sign below:

MARY GRACE BEATRIZ V. LUMBAN  
Signature over printed name

Figure 44.3 Test Script - Admin Second Testing



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gugudalaq09 / gugudalaq0901

Name of Tester: \_\_\_\_\_

Hello User!, this usability testing is to ensure us that the system that you are going to use is up to your standards. Changes will be made in regards to going to different pages, but currently the navigation for pages will have to be done manually.

If at any point you get lost during the testing feel free to ask us questions.

Any suggestion you have will be taken into consideration depending on your needs, as well as our ability to create them. If you have an issue with a certain module, please write down your concerns in the box. If the module meets your requirements please write "OK."

Project Phoenix Functions	Action	Put "OK" or a checkmark after it is verified, If there are concerns please write down the issue	User Sign Off
Login as Admin	Fill out registration from		
Create New Librarian Account	Fill out Creation form		
Logout	Log out of the admin account		
Login as Librarian	Fill out login form		
Verify Email	Open your email and verify your account  *Internet might be slow, so it may take some time		
Patron List	Access the patron list with:  <a href="https://lms.ryanobelles.com/librarian/patrons">https://lms.ryanobelles.com/librarian/patrons</a>	b   L	

Figure 45.1 Test Script - Librarian Second Testing



Add Patron	Fill out the patron creation form	ok	
	Verify the information displayed on the list	ok	
Deactivate Patron	Under Actions click the "... button and deactivate a patron	ok	
	Verify the information displayed on the list	ok	
Update Patron	Access the patron update page with: <a href="https://lms.ryanobelles.com/librarian/patrons/2/edit">https://lms.ryanobelles.com/librarian/patrons/2/edit</a>	ok	
	Update the information of the patron	ok	
	Verify the information displayed on the list	ok	
Change Password	On the menu on the top right click "Change password"	ok	
	Fill out Password form	ok	
	Logout	ok	
	Login with new password	ok	
Reset Password	Logout, if currently Logged in	ok	
	Open Login Form	ok	
	Click "Forgot your password?"	ok	
	Enter email	ok	

Figure 45.2 Test Script - Librarian Second Testing



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	Open your email, and click the "Reset Password" Link	ok	
	Fill out the new password form	ok	
	Login with your new password	ok	

Please write down any suggestions you might have below:

If you have no issues with any of the modules please sign below:

\_\_\_\_\_  
Marko Cesar Fumil  
Signature over printed name

Figure 45.3 Test Script - Librarian Second Testing



Name of Tester: MARY GRACE BEATRIZ V. LUMBANG

Hello User!, this usability testing is to ensure us that the system that you are going to use is up to your standards. Changes will be made in regards to going to different pages, but currently the navigation for pages will have to be done manually.

If at any point you get lost during the testing feel free to ask us questions.

Any suggestion you have will be taken into consideration depending on your needs, as well as our ability to create them. If you have an issue with a certain module, please write down your concerns in the box. If the module meets your requirements please write "OK."

Project Phoenix Functions	Action	Put "OK" or a checkmark after it is verified, If there are concerns please write down the issue	User Sign Off
Login as Librarian	Fill out login form	OK	
Create New book	Click "Manage books"	OK	
	Click "Add new Book"	OK	
	Fill out Book creation page	OK	
	Verify if information is correct	OK	
Create New Patron	Click "Manage Patrons"	OK	
	Click "Add new Patron"	OK	



	Fill out Patron Creation form	OK	
	Verify if information is correct	OK	
Issuance of Books	Click "Books Issuance"	OK	
	Fill out Borrowers' name	OK	
	Fill out the name of the book	OK	
	Select a return date	OK	
	"Click Issue Book"	OK	
Verify borrowed Book	Click "Borrowed Books"	OK	
	Verify the information of the borrower and the book	OK	
Verify book on Patron side	Logout	OK	
	Click "My Borrowed Books"	OK	
	Fill out the form	OK	
	Verify the information placed	OK	
View Books	Click "View Books"	OK	
	Verify the books that are currently present in the system	OK	
Return Book	Login as librarian	OK	
	Click "Borrowed Books"	OK	
	Mouse over the	OK	



	action of the book and click "Return Book"		
	Fill out information and make changes to the status of the book if needed		
View Logs	Logout	OK	
	Login as Admin	OK	
	Click "Book Audit Logs"	OK	
	Verify Information	OK	

Please write down any suggestions you might have below:

If you have no issues with any of the modules please sign below:

MARY GRACE BEATRIZ V. LUMBANG

\_\_\_\_\_  
Signature over printed name

Table 21. Test Script - Admin Online Third Testing



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2544 Taft Ave, Malate, Manila, 1004 Metro Manila  
(02) 8230 5100

07 April, 2020

## User Acceptance Sign Off Library Management System

This User Acceptance Sign Off acknowledges that the client (**Ignacio B. Villamor-Senior High School**) has reviewed and tested the **Library Management System** delivered by the class of **PROJMGMT-T1001** under the direction of **Sir Oliver Liwanag** as per the obligations outlined in the Project Charter used during the course of the project.

Testing Completion Date	Deliverables that were tested
28 February, 2020	<p><b>System Administrator Functions</b></p> <ul style="list-style-type: none"><li>❖ Registration and Login</li><li>❖ User Management (View, Add, Update, Deactivate)</li><li>❖ User Audit Logs</li><li>❖ Book Audit Logs</li></ul> <p><b>Librarian Functions</b></p> <ul style="list-style-type: none"><li>❖ Log In</li><li>❖ Add and update a book</li><li>❖ View list of books</li></ul> <p>All features were accepted and signed off.</p>
06 March, 2020	<p><b>System Administrator Functions</b></p> <ul style="list-style-type: none"><li>❖ Change Password</li><li>❖ Reset Password</li></ul> <p><b>Librarian Functions</b></p> <ul style="list-style-type: none"><li>❖ Patron Management (Add, Update, and Deactivate)</li></ul> <p>All features were accepted and signed off.</p>
27 March, 2020	<p><b>System Administrator Functions</b></p> <ul style="list-style-type: none"><li>❖ Patron Audit Logs</li></ul> <p><b>Librarian Functions</b></p> <ul style="list-style-type: none"><li>❖ Book Issuance</li><li>❖ View borrowed books</li><li>❖ Returning a book</li></ul> <p><b>Patron Functions</b></p> <ul style="list-style-type: none"><li>❖ View list of books</li><li>❖ View book page</li><li>❖ View My Borrowed Books</li></ul> <p>All features were accepted and signed off.</p>

Figure 46.1 User Acceptance Sign Off



DE LA SALLE-COLLEGE OF SAINT BENILDE  
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De La Salle-College of St. Benilde  
2544 Taft Ave, Malate, Manila, 1004 Metro Manila  
(02) 8230 5100

07 April, 2020

07 April, 202	<b>System Administrator Functions</b> ❖ Print and Download Audit Logs  All features were accepted and signed off.
---------------	----------------------------------------------------------------------------------------------------------------------------

#### Agreement Parties

Between	<b>Ignacio B. Villamor-Senior High School</b> 2118 San Andres Ext, San Andres Bukid, Manila, Metro Manila
And	<b>De La Salle-College of St. Benilde</b> 2544 Taft Ave, Malate, Manila, 1004 Metro Manila

#### Terms

The client is satisfied that all agreed work has been produced to a satisfactory standard and that all contractual obligations have been met to the client's expectation.

BY SIGNING THIS DOCUMENT, I  
ACKNOWLEDGE THAT I HAVE  
DELIVERED ALL STATED  
DELIVERABLES.

Gabrielle Angela S. Gamoras  
Project Leader  
De La Salle-College of St. Benilde

*Oliver M. Liwanag*

Oliver M. Liwanag  
PROJMGT Faculty  
De La Salle-College of St. Benilde

BY SIGNING THIS DOCUMENT, I  
ACKNOWLEDGE THAT I APPROVE OF  
ALL THE STATED DELIVERABLES.

Mary Grace Beatriz V. Lumbang  
Computer Systems Servicing  
Ignacio B. Villamor-Senior High School

Mariel Coleen C. Framil, MAEd  
School Partnerships Focal Person  
Ignacio B. Villamor-Senior High School

Figure 46.2 User Acceptance Sign Off