Vault Management System

Project Documentation Submitted to the Faculty of the

School of Computing and Information Technologies

Asia Pacific College

In Partial Fulfillment of the Requirements for

Introduction to Systems and Design for CS/IT

MNTSDEV

By

John Keisuke Miyabe
John Emmanuel Piala
Heiro Usana
Kyla Amor Pantino

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I. Introduction

Burial is a method of interring a body of a person who passed away by placing it in a dug-out pit or a tomb. As time passes by people have made modern and space-efficient alternative for burial by cremating and storing the urn in columbarium. Columbarium offers a space saving solution for the storage and display of cremated remains. Some churches offer their own columbarium for fellow catholic people, they can be acquired through donations and passing specific documents.

Columbarium in churches is also important for religious people, many church goers find comfort in the idea of being interred within the sacred place of worship. Columbarium is not just a place for urns, it is a place for memorialization of the people that was once living which is one of the purposes of a columbarium. Nevertheless, most columbarium in churches are still doing manual processes to do handle donations and requirements. Starting from putting records into storage spaces, up to receiving required documents from applicants, there is big space for errors.

InnoVentures is required to develop columbarium vault management system for St. Alphonsus Mary de Liguori Parish Church which have no existing digital system. The system will help them store and manage requirements and records from applicants, track the progress of applicants in submitting requirements, and other additional features if necessary. Payment gateway will also be added for the church to have a digital gateway for payment.

1.1 Project Context

In the interview with the client, the member in charge of the columbarium Ceferino Ang explained that there are 2 phases of columbarium. As suggested, the target for the project is the phase 2 which is the newer part of the columbarium. The corporation secretary of the church also explained the process of flow of application for columbarium in St. Alphonsus Mary de Liguori Parish Church and the problems underlying in it. First, the whole process is takes 1 month according to the staff. The process starts when an applicant submits a letter of intent to the parish then it is followed by the reply of the parish priest. The contents of the reply contain schedule of when the applicant can choose vault and pictorial design of new vaults. Terms and condition regarding privilege to use is attached in the reply. The process continues when applicant submits pictorial design of the chosen vault indicating the preferred vault number then the parish approves the location of the vault.

Upon completion of the steps mentioned, the applicant is now required to submit the reservation form, followed by information data sheet and after that applicant completes contribution and signing of memorandum with the parish priest. Applicant is now ready to execute the deed of donation, which is required but still called and considered a donation by the church, then the parish issues acknowledgement of donation and privilege to use vault.

The mentioned processes are not easy to execute in the current system as storing and finding physical records is inefficient because retrieving records takes a lot of time and effort and it also requires the staff to look for documents in remote locations for manual retrieval in storage rooms, which is prone to human errors and can delay overall business processes. The progress

report of applicants is hard to track and to manage without a digital system, organizing and managing the collected data can be overwhelming as it requires the categorizing of physical records leading to inefficiencies and human errors like the possibility of overlooking key data points in records. Applicants are required to show proof to inform that a specific vault is their property. This way of verification is inefficient as it requires cross verification with the church's records which can lead to possibility of the proof being rejected if the records are mismanaged, destroyed, or overlooked. Also, can be cause of disputes if the certificate is non-existent in the church's records which can also lead to double sale.

Managing the columbarium requires an effective and efficient digital system that can help alleviate the staff's workload in the processes involved. Furthermore, the system will help the staff finish their workload quickly to engage in other work as well.

1.2 Statement of the Problem

St. Alphonsus Mary de Liguori Parish Church have the following problems:

1. Management of requirement records is inefficient. It takes a significant amount time and effort to retrieve physical copies of requirement records. Because all documents are kept in file cabinets, it is difficult to retrieve a specific document or record.
2. Submission of requirements and tracking applicant progress are labor intensive as it is using manual method which is time-consuming and leads to data overload, complicating management and risking key information being overlooked.
3. Verification of vault ownership through manual cross-verification is labor-intensive as it requires manual location of the records which is laborious and slow as it requires scanning by hand one by one.

1.3 Objectives

A. Main Objective

InnoVentures aims to create an automated vault management system for the columbarium of St. Alphonsus Mary de Liguori parish church. The system will digitalize the church's process in their columbarium promoting efficiency.

B. Specific Objectives

1. Streamline the retrieval of requirement records and documents enabling quick and efficient access to records and documents.
2. Simplify submission process and tracking of applicant progress minimizing labor involved in management of applicant data
3. Enhance reliability and speed of vault ownership verification to minimize effort and errors.

1.4 Significance of the Project

Upon finishing the project, the client will greatly benefit, and their business processes will improve. Using user-friendly interface and utilizing modern technologies, the business processes of the client will be more efficient. This will alleviate the staffs' workload and reduce their struggle, especially in retrieving and storing documents.

The staffs of the client who will be using the system may take a while to familiarize themselves but with the provided user manual, further usage of the system, and by InnoVentures ensuring to create a user-friendly interface, the staffs will learn how to use the system in no time.

Furthermore, the following roles will benefit from the project:

A. Staffs

For the staff, the vault management system will help them manage and finish tasks efficiently. The digitalized records and tracking system will give the staff consistency in terms of data. This will help the staffs ensure to avoid double sale of a single vault, avoiding conflicts with customers. The system will also help them stay on track by updating them using the notification system of the project which will also help them in labelling or categorizing the customers based on their progress in requirements submissions.

B. Customers

The client's customers will greatly benefit from the project as well. In the system there is a feature which shows the needed requirements, a submission feature, required flow of steps in acquiring a columbarium and what is their current progress. This will help them be efficient in terms of requirements completion. There will also be a digital payment gateway in the system to help the customers give their donation efficiently by providing a platform which they can submit their requirements and at the same time donate.

C. Developers

Great benefit will also be enjoyed by the developers of this project. InnoVentures group members will learn more about how to better diagnose a problem in business processes and how to better create a solution. The developers will have the opportunity to be better in terms of developing, enhancing, and making the system more user friendly.

D. Future Developers

Aspiring developers will also be helped by this project by providing them a knowledge regarding how to provide solution for the client and to improve their skills in terms of developing.

Sustainable Development Goals

The following SDG that bases the project are:

- SDG No. 8 carrying out sustainable economic development by innovation of technology to provide employment and decent work.
- SDG No. 9 promoting modern technologies and efficient use of resources.

1.5 Scope and Limitations

Scope

The main scope of the project is to create a digital management system for St. Alphonsus Mary de Liguori Parish Church's columbarium. Also, to add a requirement tracker to streamline submission processes, notifying users of required submissions and tracking progress. Allow clients to upload requirements and . Creating a more reachable, available, and faster finding of records would give benefits to the staff in managing records such as finding what are the available columbarium to be acquired by a donor, categorize requirements submitted, categorize donor by their submission progress, tracking donors' requirements such as examining what specific requirements the donor is still not submitting or what is the progress of requirements submission of a specific donor. To have an innovation in the project the team will add a digital payment gateway for efficient donation processing and also a digital map for the columbarium that show where the columbarium is placed and so the applicants will also see every vaults position.

Limitation

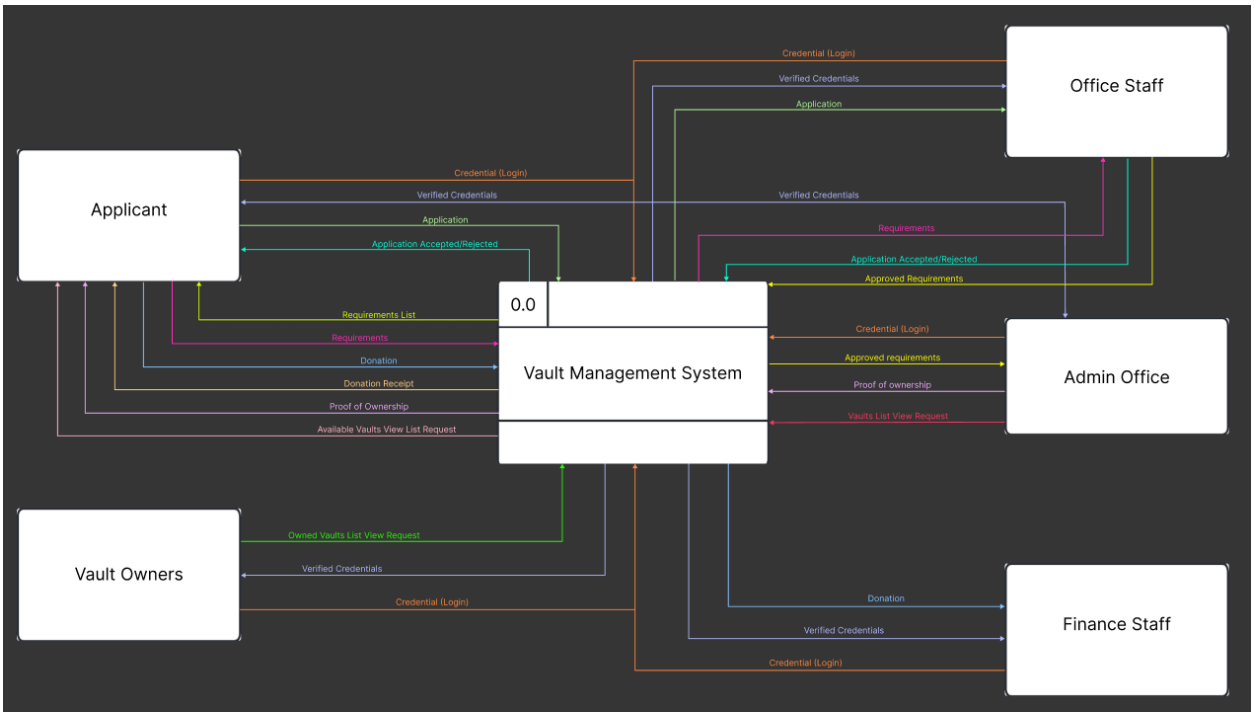
The project will focus for now on phase 2 of the columbarium as suggested by the client. Phase 1 can proceed only if phase 2 of the columbarium is fully recorded in the system. Also, the developers will only input the data of the existing owners of vaults and not the future donors because this work would be on the staff as they have privileges in managing sensitive data of the donors. The group will only develop the mentioned features in the scope of the project.

II. Review of Related Literature / Systems

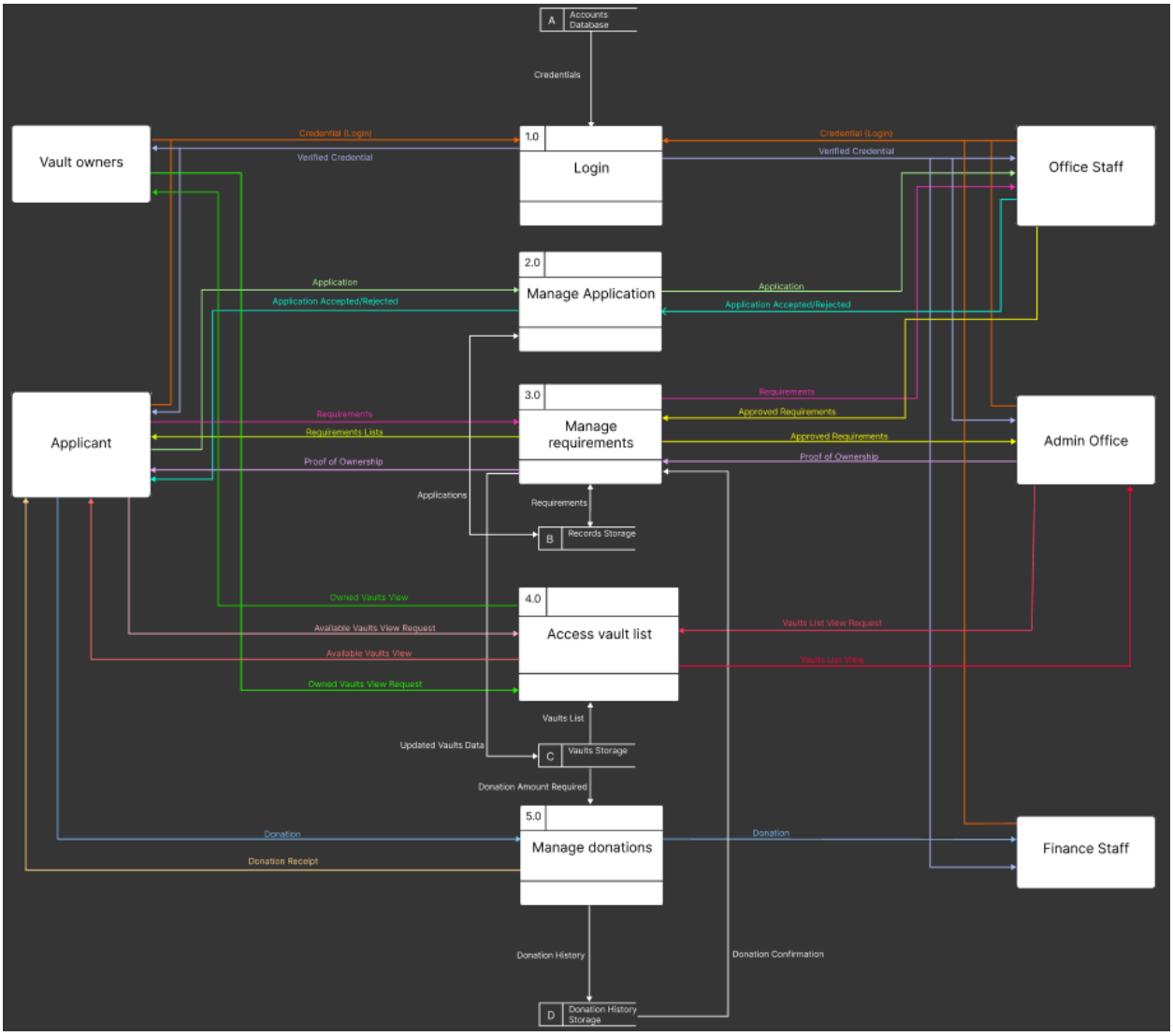
This chapter the developers discuss the literature and system that are related to our project vault management system. This system aims to streamline the management of vaults within, addressing challenges such as record-keeping, transaction monitoring, and overall efficiency.

2.1 Data Flow Diagram

2.1.1 DFD Level 0

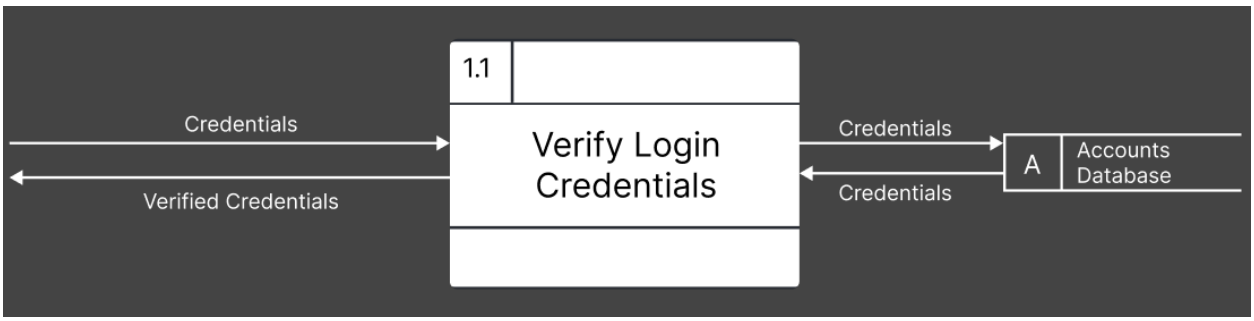


2.1.2 DFD Level 1

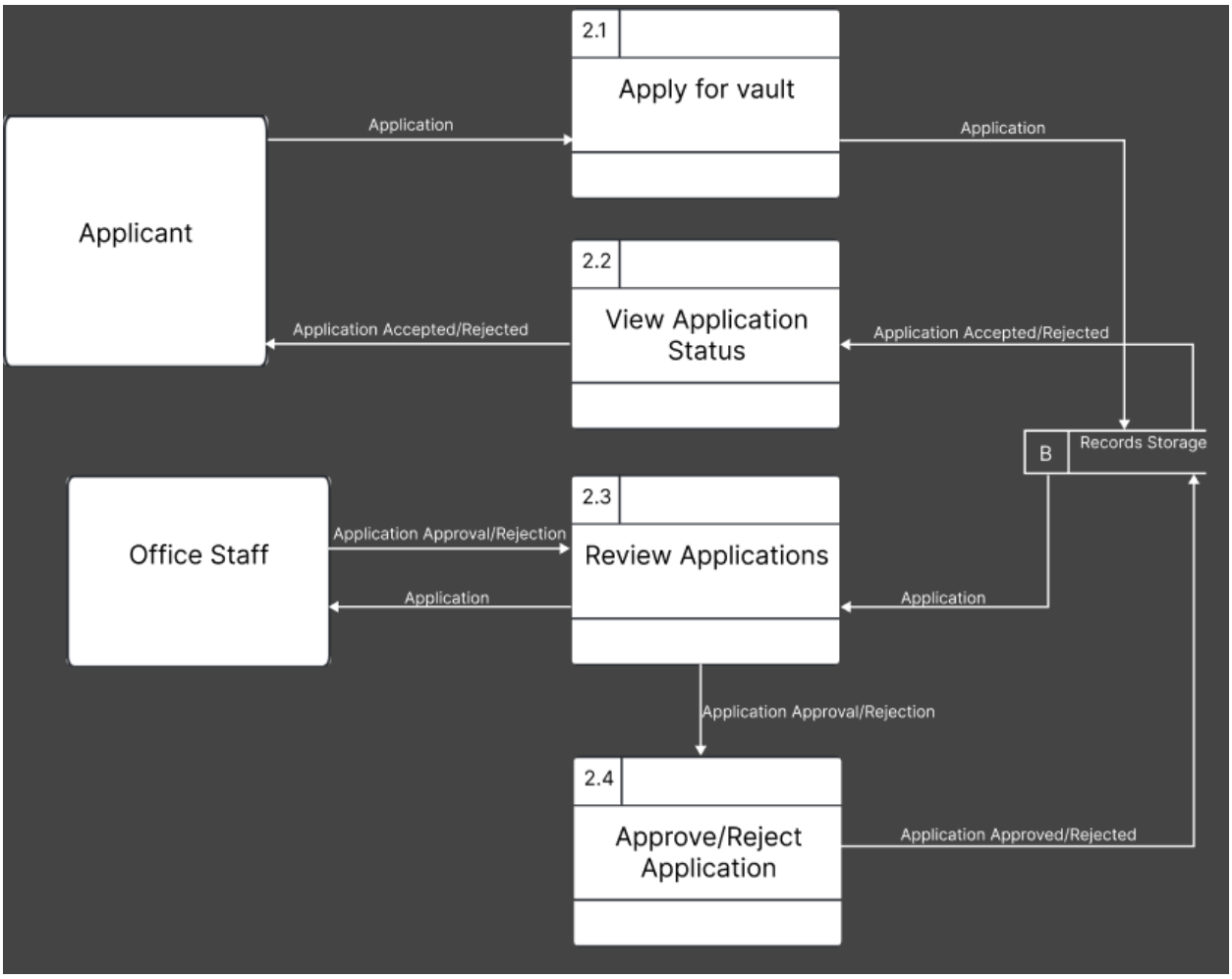


2.1.3 DFD Level 2

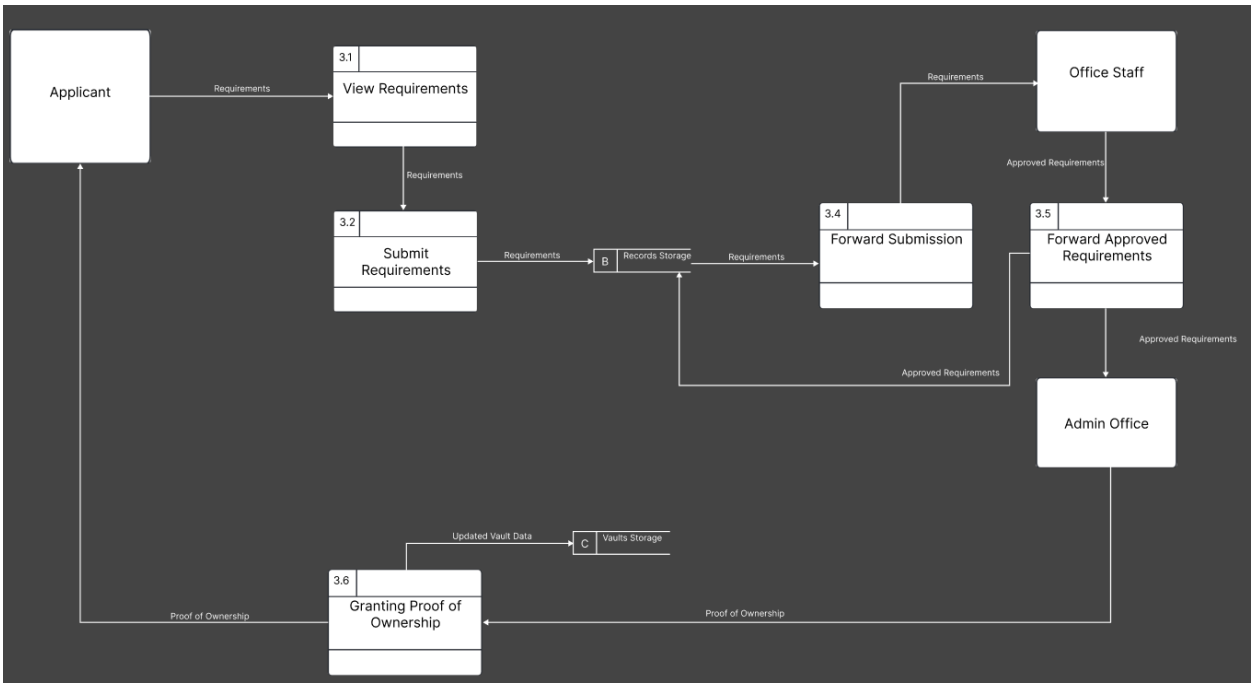
a. Login



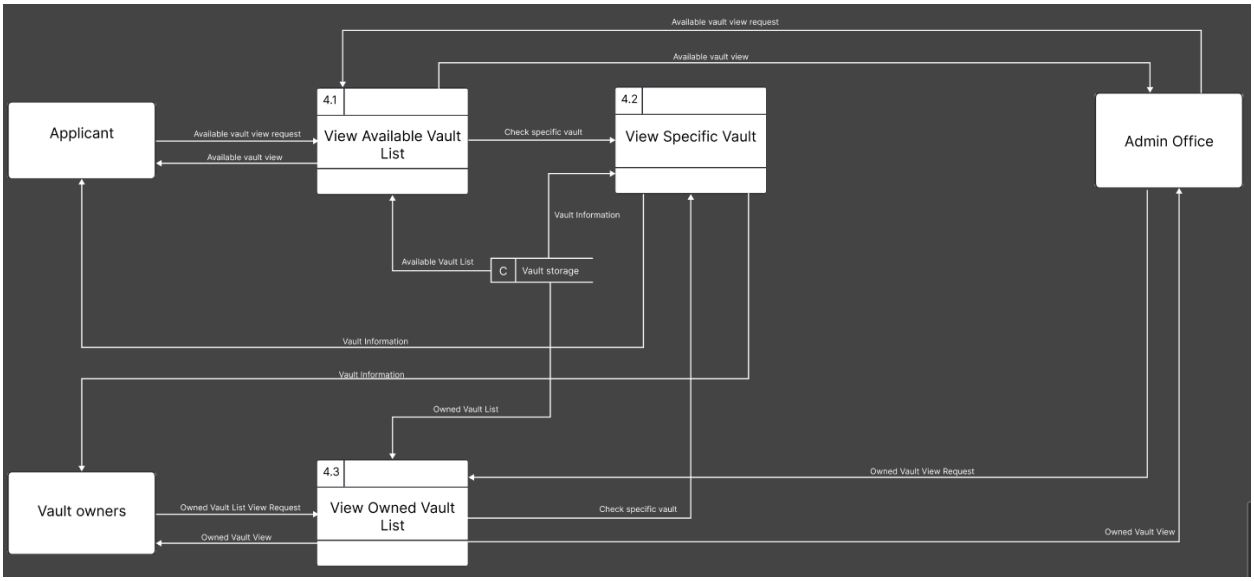
b. Manage Application



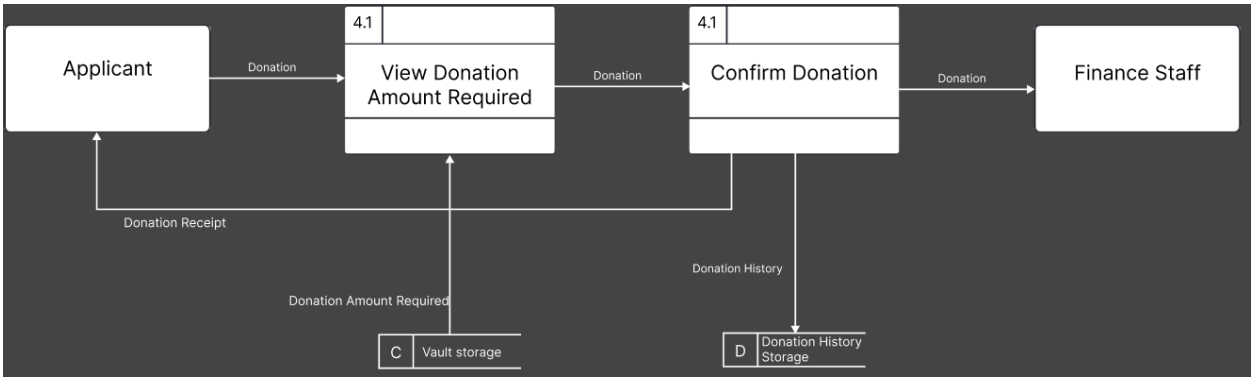
c. Manage Requirements



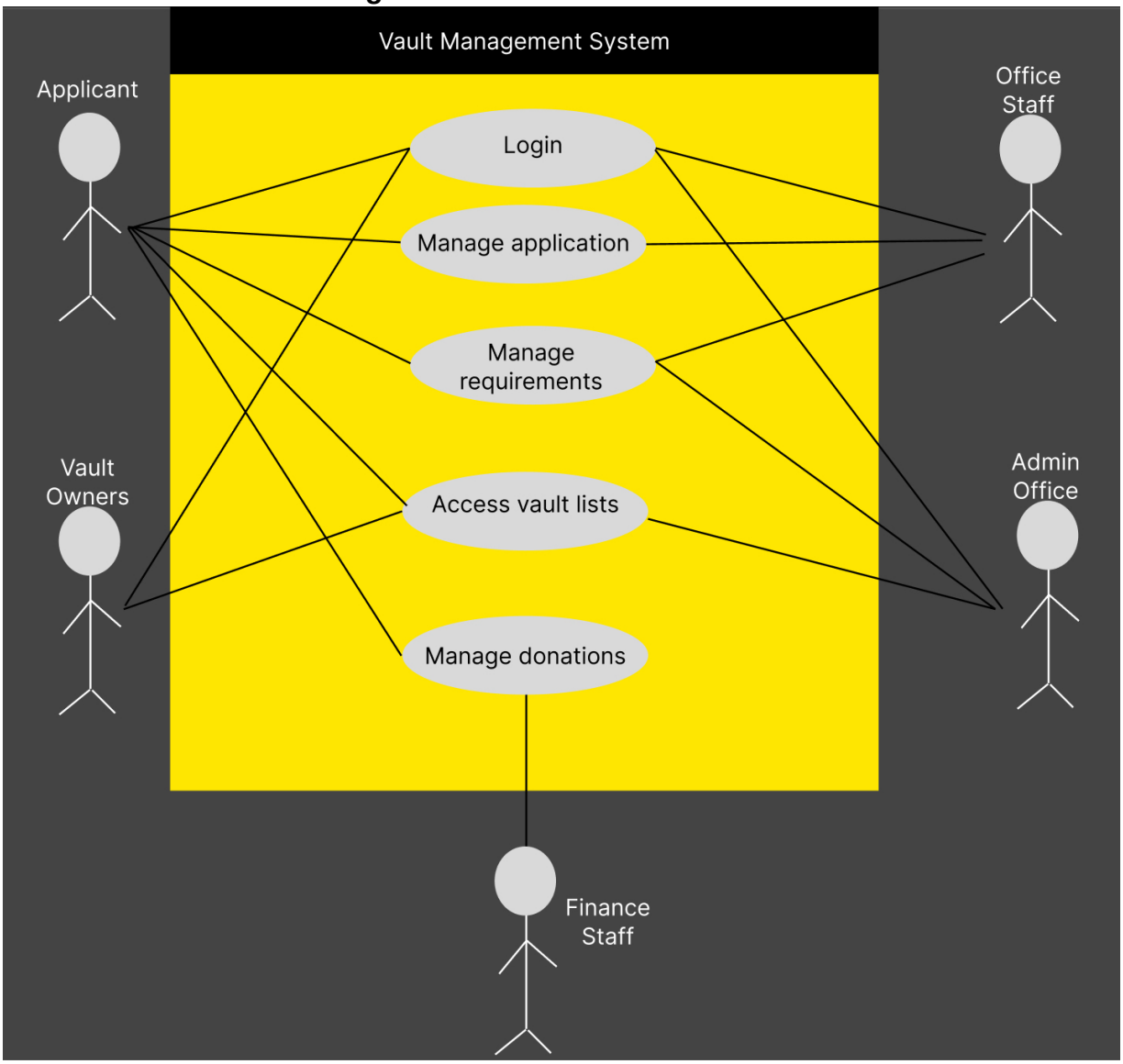
d. Access Vault List



e. Manage Donation



2.2 Use Case Diagram



2.3 Fully Dressed Use Cases

Use Case Name	Login
Use Case Number	UC-001
Created By:	InnoVentures: John Keisuke Miyabe
Date Created:	10/24/2024
Description:	The User (Applicant, Vault Owner, Office Staff, Admin Office, and Finance Staff) log in the system

Actors:	User (Applicant, Vault Owner, Office Staff, Admin Office, and Finance Staff)
Trigger	None
Preconditions:	1. The device must be connected in the internet. 2. The User (Applicant, Vault Owner, Office Staff, Admin Office, and Finance Staff) must have their email and password.
Postconditions:	1. The User (Applicant, Vault Owner, Office Staff, Admin Office, and Finance Staff) are logged in to the system.
Main Flow:	1. The User (Applicant, Vault Owner, Office Staff, Admin Office, and Finance Staff) navigates to the login page. 2. The User (Applicant, Vault Owner, Office Staff, Admin Office, and Finance Staff) inputs their email and password. 3. The system verifies the credential entered against the stored user data. 4. If the entered credentials are correct, User (Applicant, Vault Owner, Office Staff, Admin Office, and Finance Staff) can now access the system in their respective views.
Extensions or Alternate Scenarios	a. The User (Applicant, Vault Owner, Office Staff, Admin Office, and Finance Staff) enters incorrect credentials. 1. The system displays an error prompt 2. The User (Applicant, Vault Owner, Office Staff, Admin Office, and Finance Staff) can try again to log in.

Use Case Name	Manage Application
Use Case Number	UC-002
Created By:	InnoVentures: John Keisuke Miyabe
Date Created:	10/24/2024
Description:	The Applicant/Office Staff manages application.
Actors:	Applicant & Office Staff
Trigger	None
Preconditions:	1. The Applicant/Office Staff must be logged in the system.

Postconditions:	1. The Applicant can now apply for vault and view the status of the application. 2. The Office Staff can now review the application submitted by applicant and approve/reject the application.
Main Flow:	1. The Applicant/Office Staff navigates to the “Applications” tab. 2. The system will show the Applicant an application form to complete; The system will show the Office Staff a list of applications to review. 3. The system verifies the form the applicant filled and uploads it; The Office Staff approves/rejects the application. 4. The applicant views the application if approved or rejected.
Extensions or Alternate Scenarios	a. The Applicant enters a wrong input in a field 1. The system displays an error prompt, and the Applicant can try again to correct the error.

Use Case Name	Manage Requirements
Use Case Number	UC-003
Created By:	InnoVentures: John Keisuke Miyabe
Date Created:	10/24/2024
Description:	The Applicant, Office Staff, Admin Office manages requirements.
Actors:	Applicant, Office Staff, and Admin Office
Trigger	Manage Application
Preconditions:	.. The Applicant, Office Staff, or Admin Office must be logged in the system. 2. The Applicant must already have approved application.
Postconditions:	1. The Applicant submitted the requirements. 2. The Office staff approves the requirements submitted. 3. The Admin Office grants proof of ownership to the Applicant.
Main Flow:	1. The Applicant/Office Staff/Admin Office navigates to the “Requirements” tab. 2. The system will show the Applicant the list of requirements and the submission progress; The system will show the Office Staff

	a list of Applicants with complete submitted requirements to approve. 3. The system verifies the requirements submitted by the applicant and uploads it; The Office Staff approves the complete submitted requirements. 4. Admin Office receives notification and grants proof of ownership to the applicant.
Extensions or Alternate Scenarios	1. The Applicant uploads requirements not in the correct format or file size 2. The system will display an error, and the applicant can try to correct it.

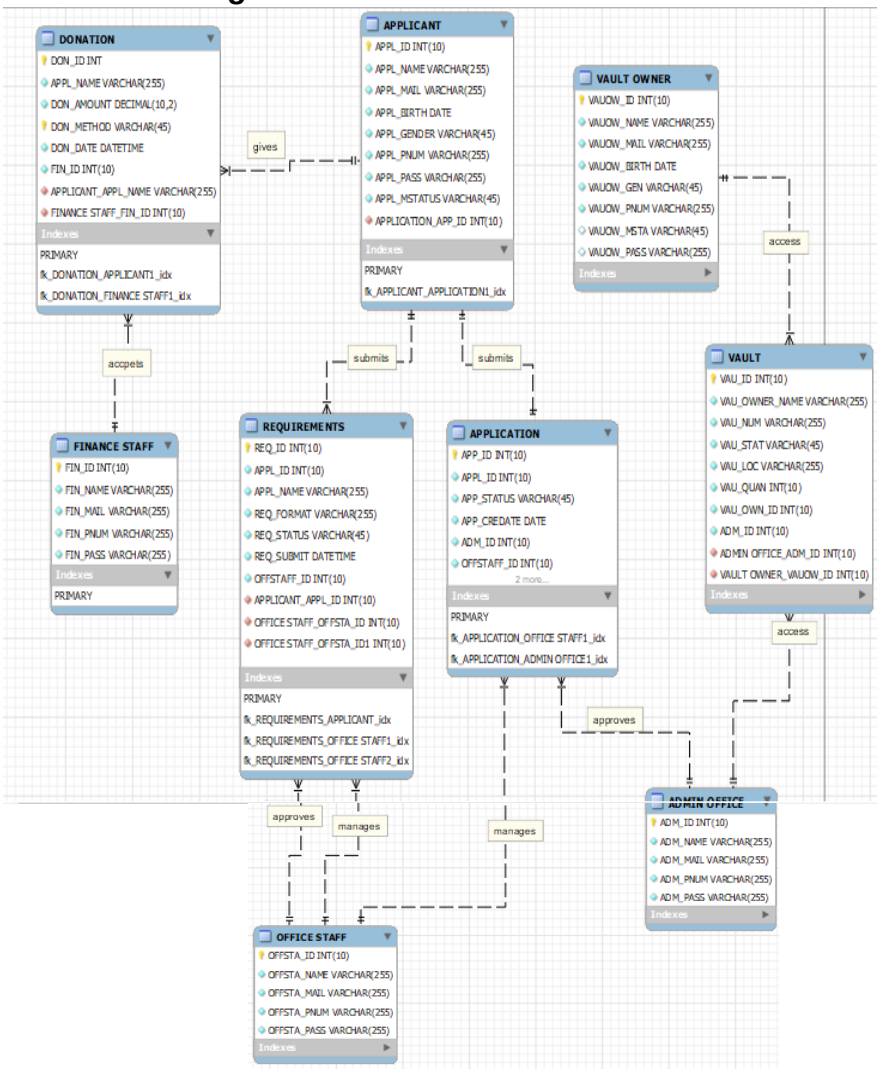
Use Case Name	Access Vault Lists
Use Case Number	UC-004
Created By:	InnoVentures: John Keisuke Miyabe
Date Created:	10/24/2024
Description:	The Applicant, Vault Owner, Admin Office access the vault lists.
Actors:	Applicant, Vault Owner, and Admin Office
Trigger	None
Preconditions:	1. The Applicant, Vault Owner, or Admin Office must be logged in the system.
Postconditions:	1. The Applicant, Vault Owner, or Admin Office can now access vault lists.
Main Flow:	1. The Applicant/Vault Owner/Admin Office navigates to the “Vaults” tab. 2. The system will show the Applicant the list of available vaults to apply for; the system will show the Vault Owner the owned vault; The system will show Admin office all vaults both available and owned.
Extensions or Alternate Scenarios	a. The admin office chose to filter to show only available vaults or only the owned vaults 1. The system will display the list according to the filter.

Use Case Name	Manage Donations

Use Case Number	UC-005
Created By:	InnoVentures: John Keisuke Miyabe
Date Created:	10/24/2024
Description:	The Applicant, Finance Staff manages donation.
Actors:	Applicant & Finance Staff
Trigger	None
Preconditions:	1. The Applicant & Finance Staff must be logged in the system. 2. The Applicant must have complete submitting all requirements.
Postconditions:	1. The Applicant successfully donated. 2. The Finance Staff receives the donation
Main Flow:	1. The Applicant/Finance Staff navigates to the “Donation” tab. 2. The system will show the Applicant the amount needed for donation. 1. The Applicant gives the donation using preferred payment method; The Finance Staff receives notification and the donation. 4. The system confirms the donation and issues donation receipt

2.4 Activity Diagrams with Swimlane

2.5 Database Design



2.6 Product Backlog / User Stories

ID	As a …	I want to be able to…	So that…	Priority
1	Applicant	submit intent of acquiring vault and inquiries	I can be able to do the needed process in acquiring a vault.	Must
2	Applicant	view vault information	I can know which vault I want by knowing	Must

			information such as the location and price	
3	Applicant	submit requirements	I no longer need to go to the parish to submit the files or documents and if I still have incomplete documents.	Must
4	Applicant	monitor progress	I know which documents must be ready to be submitted.	Must
5	Applicant	make a donation	I can give the donation required to get the vault.	Must
6	Office Staff	to reply to intents of acquiring vaults and inquiries from applicants	I can know and process who are the applicants that wants to acquire a vault	Must
7	Office Staff	to manage vault information	I can track the status of the vaults and availability while keeping the records up to date.	Must
8	Office Staff	to receive and manage documents from applicants	I can record and make sure the submitted documents by the applicant are stored properly.	Must

9	Admin Office	Monitor applicants' progress	I can know whether the applicant can now	Must
10	Finance Staff	To receive donation	I can get the donation from applicant required before proceed in turning over the vault.	Must

2.7 Partially working Cloud Hosted Prototype

2.8 Updates of Contents in Project GitHub Repository

2.9 Prototype

2.9.1 Technology Stack

- **Frontend**
  -
- **Backend**
  - **ERPNext:**
- **Database**
  - **MySQL:** For stora
- **Version Control**
  - **Git:** For tracking code changes.
  - **GitHub:** Platform used for creating, storing, managing and sharing codes collaboratively.
- **Hosting and Development**
  -

2.9.2 GitHub Project Repository

The link below leads to the group's GitHub repository, where they collaborate and manage project:

GitHub Repository Link: https://github.com/APC-SoCIT/APC-2024-2025-T1-08-Vault-Management-System

2.10 Conclusion

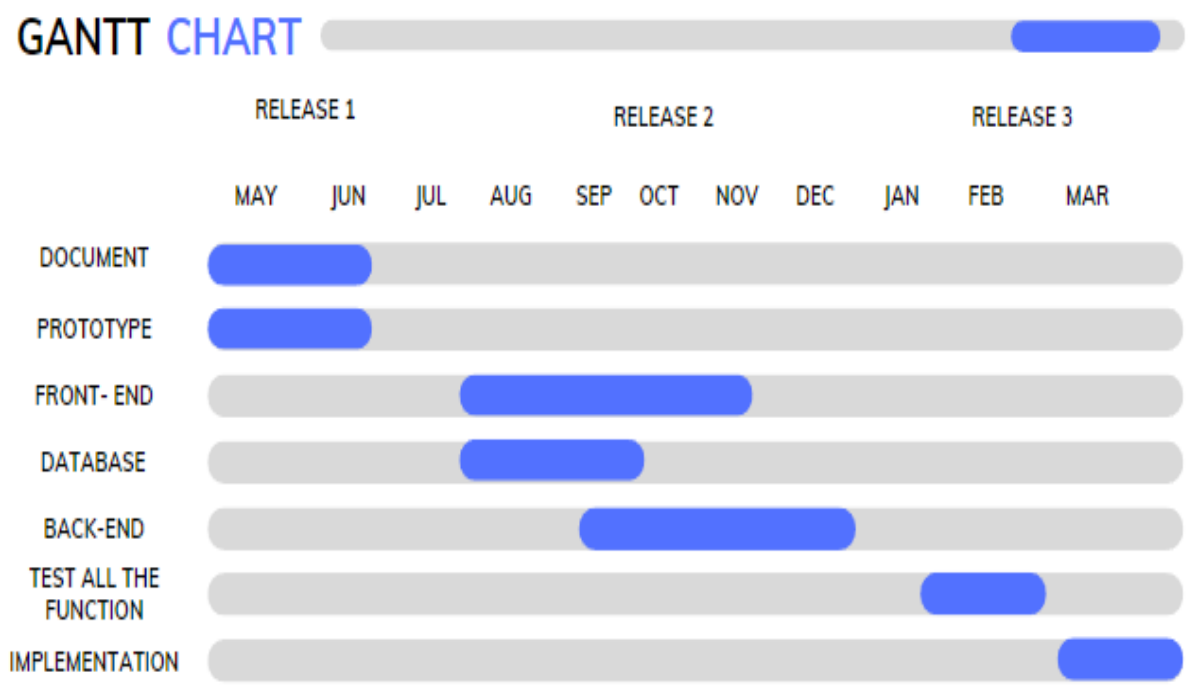
Appendices

Appendix A: Project Vision

Our vision is a transformative initiative aimed at revolutionizing the management of vault records within St. Alphonsus Mary de Ligouri Parish. With the help of this project, the current paper record will be replaced with a digital version that guarantees efficiency, accuracy, and security.

For	The staff of St. Alphonsus Mary de Liguori Parish Church
Who	Are in need of a systematic modernized processing, managing, storing, and monitoring of the vaults in the columbarium.
Vault Management System	Is web-based system
That	Will serve as an accessible all-in-one system that will modernize the whole process of securing a vault and keeping all documents in a database making it more efficient for all users. This will improve document submission and retrieval and aims to do the whole process online making it less hassle for applicants.
Unlike	The columbarium's current system has caused problems to arise as documents are still physically stored and are lost due to natural calamities. The manual process, physical record keeping, and current vault tracking is not consistently effective as it used to be.
Product	Will eliminate the need of going into the columbarium and accomplishing the process onsite. Documents are ensured to be secured in a database. This will digitize and integrate the current system of the columbarium. The system will provide improved visibility for vaults, clients, all documents and each step of the process efficiently.

Appendix B: Schedule



Appendix C: Release Plan

Target Group: St. St. Alphonsus Mary de Liguori Parish Church's columbarium

Goal:

Needs:

Value:

Key Features:

Release 1

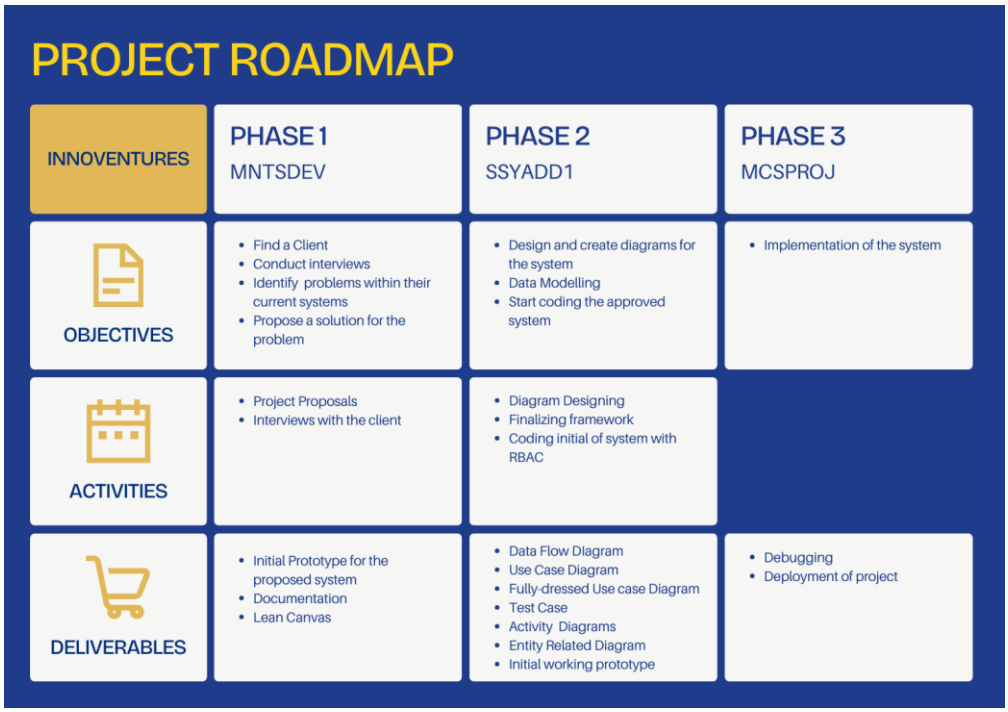
- Use Case Diagram
  - Users:
    - Applicant
    - Client
    - Office Staff
    - Admin Office
    - Finance Staff
- Data Flow Diagrams
  - Level 0
  - Level 1
  - Level 2
    - Login
    - Manage Application
    - Manage Requirements
    - Manage Donation
- Activity Diagrams
- Entity-Relationship Diagram
  - Included entities:
    - Applicant Information
    - Client Information
    - Office Staff Information
    - Admin Office Information
    - Finance Staff Information
    - Donation Information
    - Requirement Information
    - Application Information
    - Vault Information

Release 2

Release 3

Appendix D: Product Roadmap

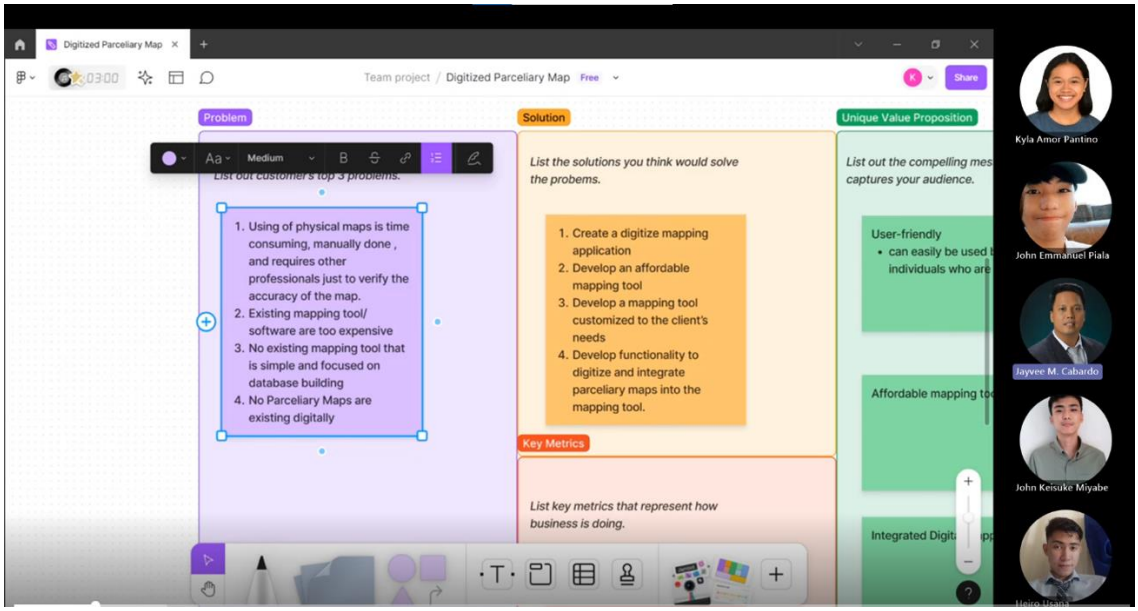
Vault Management System



Appendix E: Team Meetings

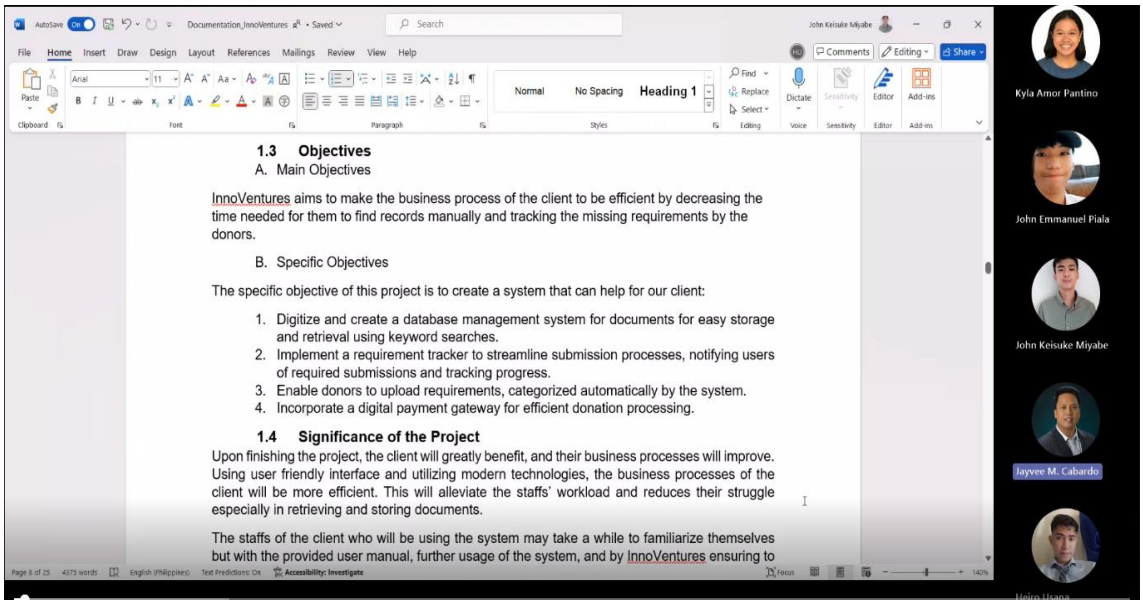
Date: May 20, 2024

Agenda: This meeting we checked with our adviser Sir Jayvee Cabardo, if the lean canvas we made for our new client was correct.



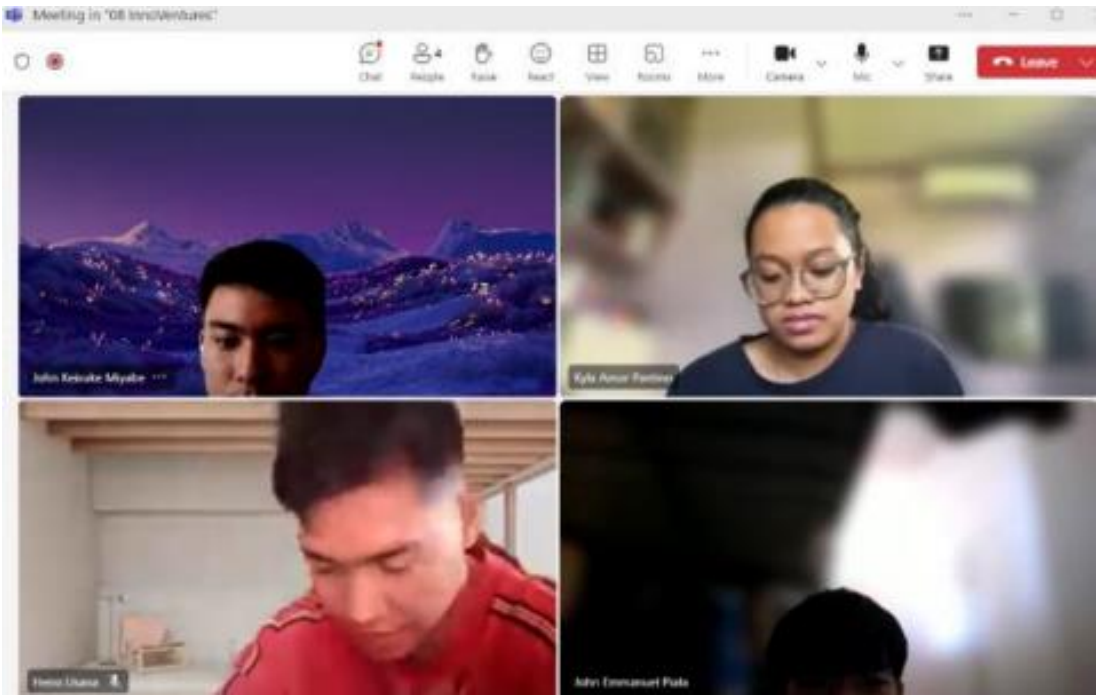
Date: June 10, 2024

Agenda: This meeting is we consult with our adviser sir Jayvee Cabardo if our chapter 1 and 2 are correct



Date: August 12, 2024

Agenda: This meeting we started assigning tasks for PBL and made a Kanban Board



Date: August 19, 2024

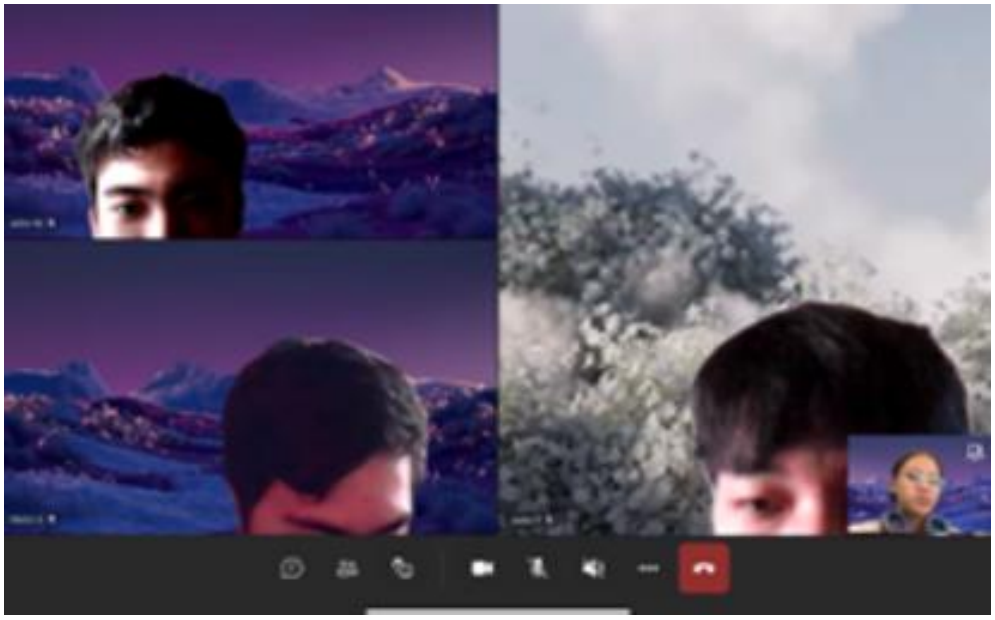
Agenda: This meeting we started to explore open-source platforms to use for PBL and creating a Figma file for the Fully Dressed Use Case

Date: August 29, 2024

Agenda: This meeting we started creating test cases, activity diagram and working on our parts of the project

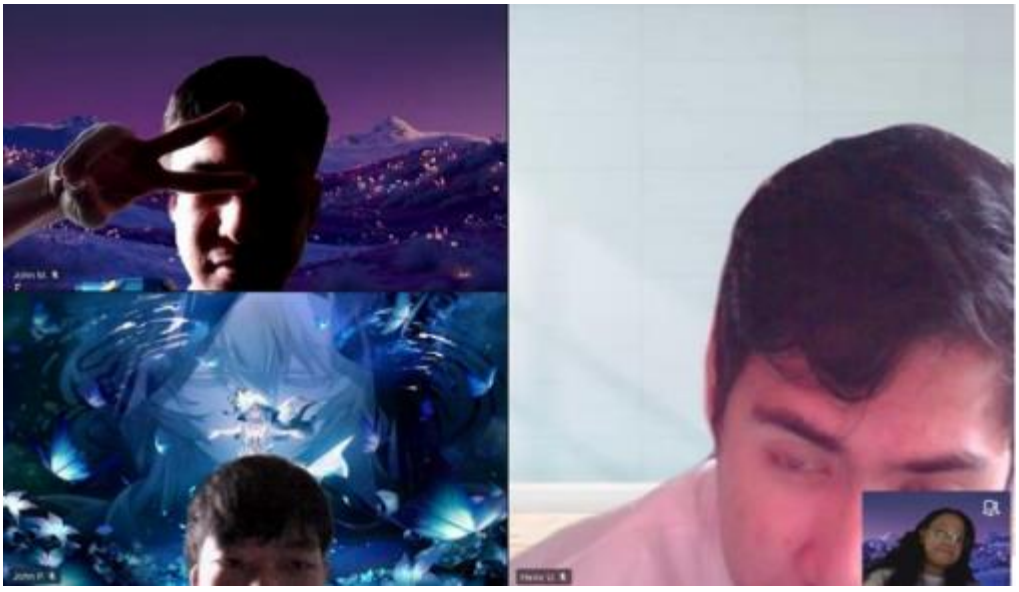
Date: September 23, 2024

Agenda: This meeting we started to accomplish a peer evaluation and submitting requirements before the deadline



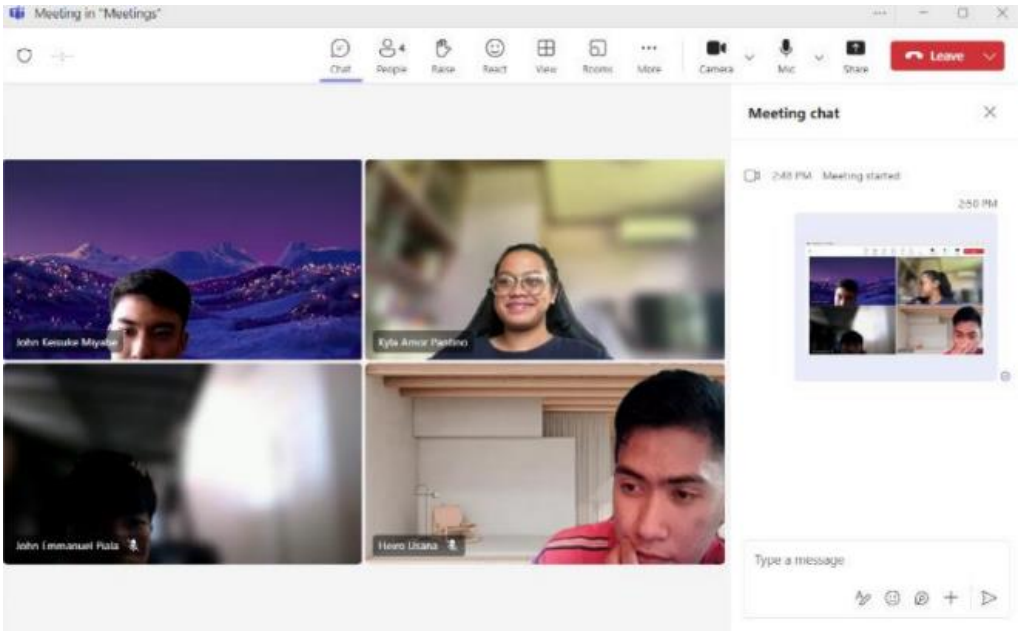
Date: October 5, 2024

Agenda: This meeting we started discussing the framework were using for our system and discussing the UI of it



Date: October 7, 2024

Agenda: This meeting we started finalizing the UI/UX of the system, scheduled a meeting with the consultants and adviser for the revisions we did and finalizing what framework were using for the system



Date: October 16, 2024

Agenda: This meeting we discussed about coding in codespaces and how to stay organized in GitHub and also discussed the framework for coding