

College of Computer Studies and Information Technology

PROPERTY INVENTORY AND CONTROL SYSTEM

A Capstone Project
submitted to the
College of Computer Studies and Information Technology
Sogod, Southern Leyte

In Partial Fulfilment of the Requirements
for the degree Bachelor of Science in Information Technology

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December, 2022

Dedication

First and foremost, we would want to dedicate our effort to the Southern Leyte State University's supply and property management office, more especially to Mr. Vincent Joseph Gojoco II, which motivates us to create and construct a web-based system. According to him, he has been having difficulties maintaining document files containing private data and information in the department. In this regard, as we design the system, we will be contributing significantly to the growth of our IT capabilities, as well as easing and assisting Mr. Gojoco and the supply office in managing the essential document files in an effective and organized manner.

Furthermore, we would like to dedicate this project to the faculty of the College of Computer Studies and Information Technology (CCSIT), Southern Leyte University for providing us with the opportunity to develop and design a system that will legitimately facilitate the expansion and growth of our IT skills as we continue to acquire more knowledge and expertise.

Finally, we would want to dedicate and express our heartfelt gratitude to our parents and family for their unwavering support during our journey. We have been inspired by their unwavering efforts to encourage and serve as our foundation in the creation of our project, as well as to remind us that giving up is not and will never be the key to achieving our goals at the end of this endeavor.

Above everything, thanks be to the Great Almighty, the source of knowledge and intelligence, for his boundless love,

Thank You!

Acknowledgement

We would like to offer our heartfelt appreciation to our project adviser Mr. Keano Nikko Sy for his direction, help, and support in establishing the project, as well as for always being reachable. We would also want to acknowledge and convey our gratitude to Dr. Czarina Ancella Gabi for her unending efforts to facilitate and ease our way through the partial completion of these endeavors. To our Department Head, Dr. James Brian Flores and CCSIT Dean, Dr. Geraldine Mangmang, we sincerely convey our heartfelt gratitude to you. Their attendance and contributions are all deeply welcomed and heartily recognized.

We truly express our gratitude to all relatives, friends, our families, and those who also provided moral, financial, and physical assistance.

Above everything, thanks be to the Great Almighty, the source of knowledge and intelligence, for his boundless love,

Thank You!

Executive Summary

This study will establish and design a web-based management solution that will manage the supply and property inventory as well as the complexities of dealing with document files and paperwork such as inventory custodian slips (ICS) and property acknowledgement receipts (PAR) at the Supply and Property Management Office of Southern Leyte State University. The employees are utilizing spreadsheet software for data management, but it is not proficient and convenient enough to meet the benchmark requirements of the office. The Property Inventory and Control System is a web-based system that will be responsible for managing supplies, tracking, and accounting for all requisitions and custodianships made inside the university. The specific feature of the system is to manage all data and information coming from ICS and PAR documents into a computerized system by securing all its information entries into a more secure cloud database server instead of dealing and handling it manually through paper documents, which are necessary to be kept for some vital purposes, specifically if there is a change in custodianship or user of the property.

Keywords: property inventory, ISO25010, waterfall model, web-based system, ICS, PAR

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CHAPTER I

INTRODUCTION

This chapter provides an overview of the Property Inventory and Control System project, which includes the background, purpose, and objectives of the study as well as the range and constraints of the system.

Project Context

Management offices and systems are marked by vivid significance and methodical frameworks projected for managing an organization's daily operations and advancing internal continuous improvement. According to the MSG Content Team (c2022), management has been defined as a social process including responsibility for the economical and effective planning and management of an enterprise's operation to achieve specific goals. The supply and property management office of Southern Leyte State University is an adequate and effective department that procures all necessary materials needed for the daily operation of the university. The office controls the distribution and documentation of books, supplies, materials, and equipment, which includes the preparation of bills, requisitions, and issue slips. The office seeks to meet all of its stakeholders' demands, starting with a regularly updated recording system and human resources that are educated in supply management and inventory planning. They are also accountable for classifying, storing, retrieving, securing, tracking, and archiving records of properties for monitoring and conducting inventory procedures specifically for item and property acquisitions.

The conduct of an inventory process within the supply department of a certain government establishment, such as public universities and colleges, is an essential way of providing up-to-date information on property status and other necessary documents such as requisitions and acquisitions. An inventory control system may serve as an aid in managing the organization's stock goods by keeping track of where the assets are and how much they are worth (Levinson, 2018). Inventory management is a critical

component of internal control, implementing the organization's decisions as well as protecting the security and integrity of data and information records. Most corporations have a separate department of inventory planners who constantly monitor, regulate, and assess inventory and communicate with the corporation's production, procurement, and finance departments (Lin, 2019). Utilizing technological facilities to supplement inventory control helps the organization stay ahead of things by simplifying the procurement and tracking processes. With this level of inventory management, an operations manager can accurately identify how many units of a product they have on hand, how many units they have purchased from the supplier, and how much the total cost of each unit is. (LaMarco, 2019). Misfiled documents might be hard to track down when they are urgently necessary. A computer-controlled system, in the long run, eliminates the aforementioned issues and is likely to result in a more precise and structured method of record keeping. A computerized system is speedier than a manual method, since instead of sifting through stacks of manuscripts to find information, the user may typically find what they need with just a few keystrokes or mouse clicks. (Joseph, [retrieved 2022]).

In this case, the proponents find it useful and have investigated some issues and problems in the supply and property management office of Southern Leyte State University that is necessary to be addressed by an IT solution. The use of spreadsheet software in the supply department of the university that can manage data records of inventory custodian slips (ICS) and property acknowledgment receipts (PAR) has produced the desired result yet is not proficient and convenient enough to meet the standard requirements of the office. According to Citizen's Charter No. CO-AF-09, Property Acknowledgement Receipts (PAR), and Inventory Custodian Slips (ICS) are forms that must be issued to a person to show accountability for a property. PAR is granted for properties with a purchase price of P15,000 or more, whereas ICS is granted for properties with a purchase price of P15,000 or less. The office administrator is having a hard time managing those data records that serve as the basis and proof for inventory procedures and also for authentication. The office is also struggling with storing and keeping those receipts in folders since there is a possibility of misplacement and

difficulty tracking property and item acquisitions. By considering that developing a computer system is essential for the office's daily operation, the proponents have decided to provide a solution that will work out in advance to assist the office with the challenges they are currently experiencing.

The Property Inventory and Control System is a web-based system that will be responsible for managing the supply and property management offices of Southern Leyte State University. This will generally manage supplies, itemize, surveil, and track the product/item/equipment requisitions and acquisitions of any department, organization, or even an individual in a more efficient and protected way. The specific feature of the system is to manage all data and information coming from the Property Acknowledgement Receipts (PAR) and Inventory Custodian Slips (ICS) to a computerized system instead of dealing with and handling it manually through paper documents, which are necessary to be kept for renewal that will occur every three years or every time there is a change in custodianship or user of the property. In this instance, this will help the office to conduct precise property tracking and prepare reports in a more alleviating manner. To guarantee that data and information are safeguarded, the proponents have come up with a conclusive approach to the use of cloud servers. This will be a huge help during inventory processes and prevent any contradictions and conflicts in the management of university resources, as well as obviate data loss, bewildered file collections, and complex paper forms.

Purpose and Description of the Project

The purpose of this study was to solve the complexities of dealing with and managing data records of supply and property at the supply and property management office through the development of the Property Inventory and Control System. The system expedited record keeping by logging all supply and property transactions online, as well as property receipts and transfer notices, and allowed the SPMO administrator and end-user to find and retrieve information in real-time with no further delays. The system was also adaptable for possible data migration and system upgrades whenever

necessary.

Objectives of the Project

The main objective of this study was to develop and design a web-based management solution that would address the complexities in the supply and property management offices. Specifically, this project aimed to:

1. Safeguard all data records of property custodianship on the cloud server.
2. Provide organized transaction monitoring of properties in the SPMO.
3. Conduct systematic inventories of supply and property through the online platform.

Scope and Limitations of the Project

The scope of this study is mainly focused on developing and designing a property inventory and control system that will manage supplies, categorize, itemize, track, and secure data records of inventory custodian slips (ICS) and property acknowledgment receipts (PAR) issued by the SPMO to the end users and serve as the basis and proof for inventory procedures and authentication. The system will require login credentials from both the administrator and the user to access the system. All data records, including entity name, quantity, property cost, inventory, property number, property description or name, date of acquisition, property custodian, and end-user account, will be stored on the cloud server. Relevant study results will also be provided to demonstrate the efficacy of establishing a computerized system to tackle the problem.

This study has not extended to performing other tasks and obligations of the SPMO, such as covering losses of property or investigating damage to property and equipment. Technically, brownouts and internet connectivity issues do not force the system to reset or clear its data; they only render it inoperable.

CHAPTER II

REVIEW OF RELATED LITERATURE

This chapter entails an elaboration of concepts and ideas, as well as associated literature and research papers that will replenish and act as a foundation or evidence to substantiate the proposed framework of the study.

Related Literature / Theoretical Background

A property inventory is created by an inspection of the property, which results in a report that is generally completed by a professional and authorized inventory keeper. The report includes descriptions and status information for everything on the property. These are always reported in the state they were in at the time of custodianship. Property inventory reports are commonly used as an appendix to short-term property agreements. A property inventory report provides a starting point for all individuals involved in the property agreement. It can be viewed as a reference document to be utilized after the property agreement finishes (Pixel, 2019). Inventories are resources stored in the form of items or supplies that will be used in the production system or the provision of services (Zengwa and Dr. Choga, 2016). Property inventory is critical to the success and efficiency of any department or firm while also being an important aspect of the management of materials and objects that must be retained (or stored) for later use (Dhodi, 2018).

Under Property Management Policy C.2.7, inventory control created an internal control system to help with property management. This system's components include the use of operational efficiency and effectiveness, moral custodianship, and collaborative accountability by the custodial staff. Inventory control is becoming an increasingly crucial commercial activity, and it is frequently the deciding element in an organization's growth (Wild, 2017). Relatedly, a property inventory is a detailed report that describes the condition of the property at the start of the acquisition. When property inventories become too large for a single person to handle, a software application or a third-party

property manager may be utilized to track and maintain the inventory. Anyone, on the other hand, can establish and track their respective properties in a basic or more accurate sense using their structures. Property inventories are particularly useful for tracking assets, losses, expenses, and information over some time for analysis. Property inventory will also maintain the specific collections of data for a certain property, including identifying pieces of information such as the property name, address, book value, classification codes, and descriptions, as well as future outlook projections. (Kagan, 2020). Property inventory allows departments to audit inventory in a simplified manner, allowing the operations manager to uncover possible issues sooner or before they emerge. With a well-organized environment, meticulous record-keeping, and inventory management software, you can audit and regulate stock levels regularly for improved property inventory (Lopeinski, 2019).

According to the Philippine Science High School-CCVISC module, "property management" refers to the government's office management responsibility in the effective acquisition, utilization, and disposal of property and equipment. It also entails adequate property custodianship, accounting, safekeeping, and protection. In the government, property management is a proactive process that may be divided into three initial measures: (1) acquisition, (2) usage, and (3) disposal. The operations should preferably begin with acquisition and conclude with the disposal. There are several actions or sub-processes associated with each of these processes to guarantee efficiency, integrity, and compliance. Inventory, warehousing, custodianship, and reporting are a few examples.

A requisition is an official process of requesting a service or object, generally via the use of a purchase requisition document or some other standardized paper. The requisition process is a systematic method of tracking and accounting for all requisitions made inside an organization. A requisition establishes a request for a specific activity while also documenting that action for future reporting requirements. Employees at a firm, for example, might use an acquisition requisition if they want to request more goods or items for some purposes. Requisitions were once done on paper forms, but most businesses

now use digital requisition processes that allow for better traceability of the process, including an accounting of pertinent inventory. These requisitions often update the inventory automatically, allowing for improved inventory control. Requisition forms normally include the requester's name, the date of the request, the products requested, the delivery date, the delivery location, and the department in charge of completing the request. The papers also include the signature of the person who completed the request as well as the date it was done. These requisition processes are crucial in sustaining staff productivity in large businesses with many locations and centralized buying (Chen, 2021).

Acquisition or procurement refers to all the steps involved in carrying the products and services that a company requires to run its day-to-day operations, such as sourcing, negotiating terms, collecting particulars, entering and examining goods as demanded, and maintaining track of all stages of the process. Maintaining records for the whole acquisition process, from purchase requests through price conversations, contracts, records, and everything in between are extremely pivotal. These records could be useful for a variety of reasons. Straightforward, accurate records can also aid in the resolution of any implicit controversies. People are frequently in charge of starting or authorizing each phase of the accession process (Jenkins, 2021).

Paper-Based Property Management

Under the dissertation made and written by Kheng (2015), competent management is essential to always maintain a fair balance between the products kept in storage and the items flowing in and out to keep the organization working at a steady pace. Before the age of technology, the inventory control system was a paper-based system for recording all item and property statuses. It was widely used by organizations to manage their resources. Nevertheless, while the organization grows larger and the storage expands in size to the point where everything has to be categorized into a few areas, the inventory control system would devour a huge amount of space and funds since it will use a bunch of paper documents to take account of and keep track of the item, and at the same time,

papers will require more storage capacity. In this case, searching for information about a specific item or property among a massive stack of papers will take a long time. As stated by Melo (2019), paper documents may take up a lot of space, and the amount of paper is increasing all the time. Furthermore, papers should be kept close at hand so that they may be accessible as quickly as possible. Any institution, regardless of size, must safeguard its data and other valuable assets. Paper is one of the most significant information security hazards for organizations since printed papers are more likely to be lost, misused, or destroyed, whereas digital data may be protected and safely stored on hard drives or computer components.

Computer-Based Property Management

Many areas have seen significant changes as a result of information technology, which has quickly been integrated into property management. The advancement of computing power and the creation of new data sources have revealed several opportunities for the sector. The changes affect almost every aspect of property management, beginning with the development of a business model, human resource management, and cost optimization. The number of businesses attempting to deal with the speed, depth, and breadth of these changes is also increasing (Stoyanova et al., 2021). Since technology keeps on advancing, a computer-based inventory control system is being used to track inventory levels, requisitions (demands), purchases, and resources. This may have been utilized in manufacturing organizations to generate a job request, a resource invoice, and several connected production documents. Inventory control software is a tool used to consolidate inventory data that was originally gathered on printed forms and spreadsheets (Oladele et al., 2021). To accomplish effective management, a technology-based inventory control system is utilized as a tool to track inventory levels and asset statuses easily (Kheng, 2015). One of the most important benefits of a computerized inventory method is that it allows the operation manager to fetch and gather data and information in real-time with no further delays, as well as avoid lost documents since they will automatically be saved on a secured and protected local or cloud database server.

Information technology (IT) encompasses a wide range of hardware and software solutions that enable organizations to acquire, arrange, and interpret information to help them achieve their goals (Dhodi, 2018). Through the advancement of streamlined inventory control operations, information technology (IT) has also aided in the reduction of workload and improved the quality of stock control functions. The inventory control system merged and consolidated those inventory materials, such as slips and receipts, into a centralized database server and assigned resource data points (numbers) to items and properties for the system to authenticate the information easily. The system records all the operations, along with product receipts, reversals, and transfer notices. The system logs all of the events and transactions, which immediately records the date, time, user, and agents (who requested the purchases), and provides written documentation and an audit log right after. Through the usability of technology, the operation manager can effortlessly encode some specific words or hints for retrieval purposes of property or item information, and the system will involuntarily search for and display the corresponding results. (Zengwa and Dr. Choga, 2016)

As stated by Dunbar (2017), a computerized system or document can become an interactive entity rather than just a reproduction of a static paper document. For example, a computerized version of a fill-in form that can allow data to be entered directly into the document with real-time mistake checking and verification Calculations and functionality may be integrated directly into the text. An existing client can be mentioned or retrieved in an encoded format by instructing the document or the system to use the computer's client database file collection and allowing the user to simply choose the client's name from the table of all the clients within the database server. Dunbar (2017) also added that files must be protected against physical harm or destruction. These activities are made easier by using a digital filing system. Copies of digital information may be easily made and stored in a variety of settings, including several computer platforms, such as digital databases and storage providers within a network, and removable data media for physical storage devices.

Database systems organize the massive volumes of data needed by businesses in

their everyday operations. The information must be arranged so that administrators can simply and promptly retrieve specific data to make decisions (Meiryani, 2019). Relatedly, nowadays, cloud computing is a modern information technology (IT) architecture that enables users to access programs, resources, and information from a cloud platform (Namasudra, 2018). Database management is an essential aspect of computer infrastructure. Numerous researchers are proposing SQL and NoSQL-based database approaches for the cloud computing situation. Data in the cloud database is classified as organized, unstructured, huge, or little data (Dac-Nhuong et al., 2022). Cloud databases provide several benefits over previous databases, including enhanced accessibility, automated backup and quick automated recovery from errors, automated on-the-fly scalability, and perhaps superior performance (Beal, 2021). According to Flynn (2022), 48% of organizations want to put their most critical data in the cloud. In fact, by 2022, the cloud will have stored 60% of all data resources. That implies that the cloud is used by the majority of enterprises for storage, and over half of them trust its safety and dependability enough to store their most critical information. According to Right Scale's 2019 State of the Cloud Report, 91% of organizations utilized the public cloud, and 72% used the private cloud. The majority of organizations use both possibilities, with 69 percent opting for a hybrid cloud-based solution (Galov, 2022).

Related Studies

Online Property Management System

The proposed property management system has allowed the corporation to provide additional services to expatriates. It also shortens the time required to seek out appropriate properties that meet the necessities of the purchasers. A web-based property management system is meant to supply an all-in-one remedy for property managerial activities like adding users, adding properties, seeking properties that meet customer requirements, managing rented shops, calculating charges for rented shops and issuing invoices, generating reports over requested periods, and so on. Customers can use the online system to access the system from any location. Through comprehensive and comparative reports generated by the system, the company's administration can analyze the progress of property sales and the revenue generated from rented shops. The proponents of the system used Hypertext Preprocessor (PHP) as a server-side scripting language, together with structured programming and object-oriented concepts. The Unified Modeling Language (UML) was used in constructing analyses and system designs. The MySQL database was used to access the data. HTML and CSS are accustomed to creating user interfaces (Mahesh, 2015).

Online Requisition and Inventory System for Department of Education Batangas City Supply and Property Office

As encoding and updating entries are done manually, managing properties and creating inventory reports become time-consuming. Producing erroneous and inconsistent reports is a significant difficulty that supply staff has while traditionally conducting their jobs. The newly built website can help the Department of Education Batangas City Supply and Property Office enhance its procedures for inventory monitoring, protecting records and account information, and creating accurate reports. The system is in charge of adding, saving, and updating property information. In addition, the system generates precise inventory and condemnation reports. Physical counting is required for proper

inventory item registration and report generation. (Calanog, 2019).

Procurement, Inventory, and Supply Monitoring System

The procurement, inventory, and supply monitoring system was designed to offer a dependable, precise, and secure information framework to help the district headquarters fulfill its responsibilities expeditiously. The system managed all transactions and procedures in the Department of Education's Regional Office V supply department. A procurement, inventory, and supply tracking system is included for more accurate and speedier transactions. As a result, the system intends to save employee work time and keep them more informed about the condition of their material. They are presently able to keep track of every supply transaction made (Ariola, c2022).

Mobile-Based Inventory Management System

Inventory consists of stock items, which include property or commodities. As an organization grows, difficulties arise as a variety of items are required to be maintained in the inventory, making it difficult for inventory managers to monitor stocks. As inventory quantities increased, the formal method of keeping records had to evolve. In this paper, researchers created a cross-platform inventory control system based on mobile devices. The application's design methodology was based on the waterfall process model. The cross-platform functionality was built with Flutter, and the backend was powered by Firebase. Users in charge of inventory management can act on the fly whenever the need arises (Joshua and Obatomowo, 2021).

Computerized Inventory Management System (IMS) for Industry Application

Inventory management systems (IMS) are extensively utilized today to improve item flow effectiveness. As a result, the inventory management system can be computerized to improve IMS efficiency even further. The purpose of the project is to construct IMS software that can hold a lot of item data. It also has a check-in/check-out function and a

search function that works by scanning a QR code. The computer-based IMS is capable of interacting with the user through a Graphical User Interface and is capable of signing up new items, deleting items, modifying item details, generating a label for each item, categorizing each item suitably, and storing the data in a database (Kheng, 2015).

Computerized Inventory Management System (IMS) for Supermarkets

This study created a computerized inventory management system to determine a supermarket's stock level when to order additional items, and to record transaction status and updates, therefore assisting managerial choices, progress levels, and stock taking. This research project effort focuses on stock control, management, and the correction of business irregularities. It allows faster operation by recording and automating manual processes (Abisoye et al., 2013).

CHAPTER III

TECHNICAL BACKGROUND



The technicality of the Project







A web-based system is a suitable way to develop the system since storing, keeping, and securing data and information is made much easier with the help of a cloud server. The Property Inventory and Control System is an online system that will be responsible for managing the Inventory Custodian Slips (ICS) and Property Acknowledgement Receipts (PAR) data and information in the supply and property management office of Southern Leyte State University. The following are the technical terms that will be utilized by the proponents in developing the project: Microsoft Visual Studio Code (VSC), PHP, AJAX, jQuery, JavaScript (JS), HTML5, CSS, Bootstrap, Web Hosting Service, Database—XAMPP, MySQL—phpMyAdmin




Details of the Technologies to be Used

The web-based project will be accessible on any technology, such as mobile phones, laptops, and computers, to run the system. The following are the technology tools that will be utilized by the proponents in developing the project:

Table 1. Details of the Technologies to be Used

Technologies to be Used	Definition
 AJAX	AJAX is an acronym that stands for Asynchronous JavaScript and XML. It is a web development framework used to create more responsive websites and applications. AJAX enables websites to change their content without requiring visitors to refresh the page.
 Bootstrap	Bootstrap is a massive library of useful, reusable code written in HTML, CSS, and JavaScript. It's also a front-end development framework that allows designers and developers to establish fully

	responsive websites instantly.
 CSS	<p>CSS is an abbreviation for Cascading Style Sheets. It is the language used to describe the presentation of Web pages, such as colors, layout, and fonts, which allows anyone to present web pages to users. CSS is intended to be used to create style sheets for the web. It is HTML-independent and can be used with any XML-based markup language.</p>
 HTML5	<p>HTML5 is the primary markup language used on the World Wide Web. HTML5 is the most recent HTML version. There are two meanings to the term. One is the updated HTML language, which includes new elements and attributes. The second is a broader set of technologies that, like a new video format, work with this new version of HTML to allow developers to create more complex and powerful websites and apps.</p>
 JavaScript (JS)	<p>JS is a dynamic programming language used for web development, web applications, game development, and many other things. It enables developers to implement dynamic features on web pages that would be impossible to implement using only HTML and CSS.</p>
 jQuery	<p>jQuery is a JavaScript-based framework. It enables web developers to add new features to their websites. It is the most widely used JavaScript package for traversing and manipulating the HTML DOM tree. It also makes event handling, CSS animation, and Ajax easier.</p>
 Microsoft Visual Studio Code (VSC)	<p>Microsoft's Visual Studio Code (often known as VS Code) is a free, open-source text editor. Windows, Linux, and macOS are all supported by VS Code. Although the editor is minimal, it contains several strong capabilities that have helped VS Code become one of the most popular development environment tools in recent years.</p>
 MySQL	<p>MySQL is a relational database management system that is free and open source. MySQL, like other relational databases, stores data in tables comprised of rows and columns. Structured Query Language, or SQL, allows users to construct, manage, control, and query data.</p>

 PHP	<p>PHP is an open-source server-side programming language that many web developers utilize. It is also a general-purpose programming language that may be used to create a variety of applications, including graphical user interfaces (GUIs).</p>
 Web Hosting Service	<p>Web hosting is an online service that makes the content of a website accessible through the internet. When users procure a hosting package, they are purchasing space on a real server to store all of the files and data for their website project.</p>
 XAMPP	<p>The XAMPP software package (X stands for Cross-platform, (A) Apache server, (M) MariaDB, (P) PHP, and (P) Perl) comprises Apache distributions for Apache server, MariaDB, PHP, and Perl. It is essentially a local host or local server. This local server is compatible with either a desktop or a laptop PC. XAMPP is used to test clients or websites before publishing them to a remote web server. This XAMPP server software provides a good environment for local testing of MySQL, PHP, Apache, and Perl projects.</p>

How the Project will Work

Architectural Design of the Proposed System

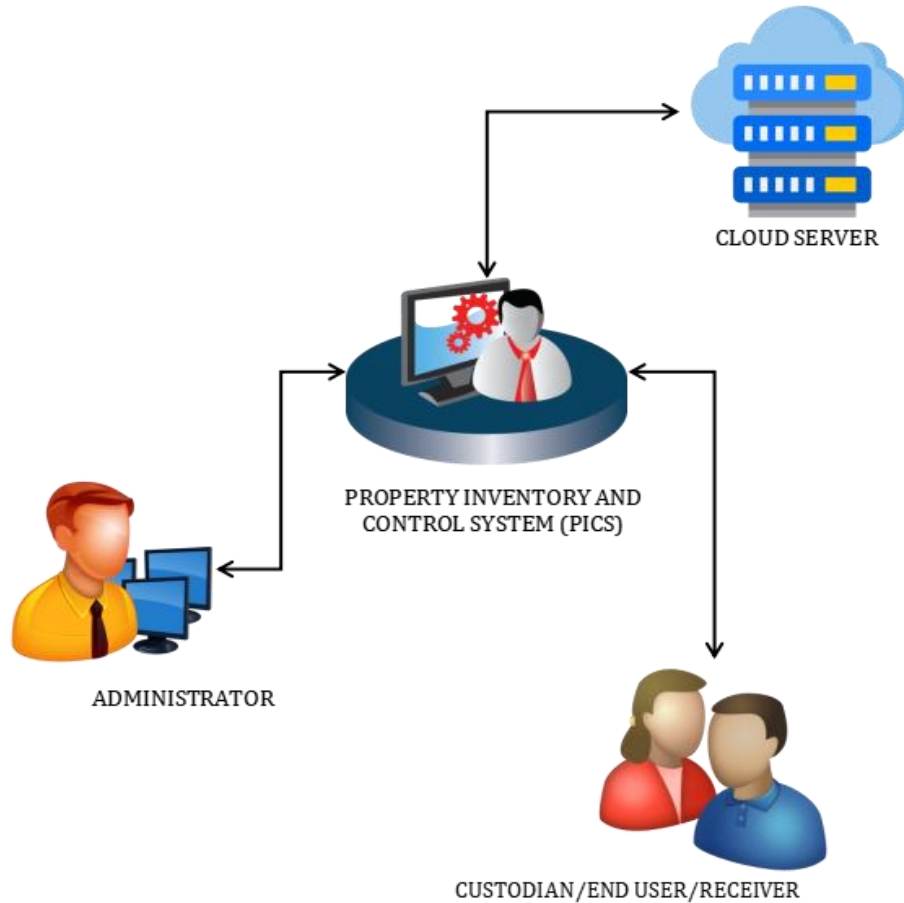


Figure 1. Architectural Layout

Figure 1 depicts the project's architectural layout. The web-based system will be rendered operable when all of the following components and necessities, such as programs, procedures, hardware, and any mandatory resources, have been met and achieved, as well as when the proper structure configuration has been executed. To appropriately run the system, the assigned SPMO administrator needs a personal computer, a laptop, or a mobile phone, and more importantly, stable internet connectivity. For the property custodian and end user to gain access, the requirements are similar for the previously mentioned necessities.

Process Flow of the Proposed Project

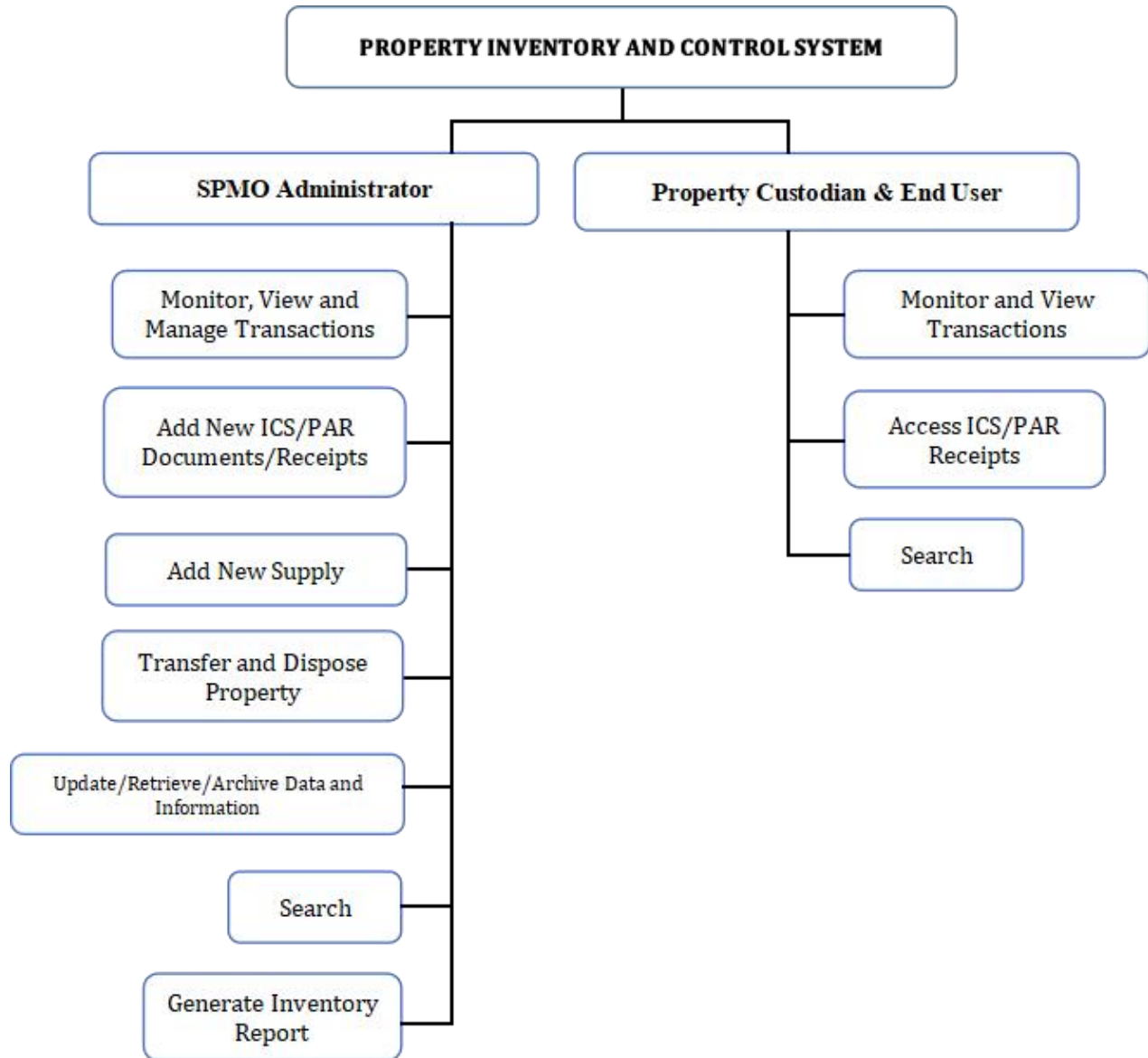


Figure 2. Functional Decomposition Diagram

Figure 2 shows the functional decomposition diagram of the proposed property inventory and control system. There are two ways to access the system: through the Supply and Property Management Office (SPMO) administrator and through the property custodian and end user accounts. The SPMO Administrator has comprehensive

managerial responsibilities throughout the system, particularly controlling the web page structure. The SPMO Administrator is assigned to manage the ICS and PAR documents within the department through the system. The administrator is in charge of adding new data and information from the ICS/PAR documents, adding new supplies, viewing and monitoring transactions as well as the status of transactions (whether they are still pending, acquired, or transferred), transferring property, updating, retrieving, or archiving data and information as needed, and searching the item/unit/product/equipment or acquirer/custodian as needed for tracking and inventory purposes. In this mode, however, the property custodian and end user can freely browse the site through their system accounts to monitor transactions. This will be built into the system so that the property custodian and end user can freely monitor their data records and transaction receipts (ICS and PAR) from the office, as well as view or monitor what properties or items they currently have in their custody via the Internet. This process will be done by simply logging into the system through their respective accounts.

CHAPTER IV

METHODOLOGY, RESULTS, AND DISCUSSION

This chapter covers the requirements analysis, requirement documentation, design of the software, system processes, development and testing, description of the system, implementation plan, and implementation results.

Requirements Analysis

This section presents the economic feasibility, requirement modeling, and risk assessment and analysis of the project.

Economic Feasibility

The proponents will use the cost-benefit analysis approach to assess the efficacy of the proposed framework. It illustrates the organization's net gain from the proposed system in terms of both advantages and expenses.

Cost and Benefit Analysis

Table 2. Cost and Benefit Analysis

Cost Description	Amount
➤ Total Hardware Cost used for development	38,300.00
➤ Total Software Cost used for development	0.00
Total Development Cost	38,300.00

Operating Expenses	
➤ Internet Bill	1,500.00
➤ Transportation	1,700.00
➤ Electric Bill	500.00
➤ Print	1,200.00
➤ Soft Bound	120.00
➤ Miscellaneous Expenses	800.00
Total Expenses	4,500.00

Cost Recovery Scheme

Table 3. Cost Recovery Scheme

Expenses	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Internet expenses	150	150	150	150	150	150	150	150	150	150
Transportation	170	170	170	170	170	170	170	170	170	170
Electric Bill	50	50	50	50	50	50	50	50	50	50
Print	120	120	120	120	120	120	120	120	120	120
Soft Bound	12	12	12	12	12	12	12	12	12	12
Miscellaneous Expenses	80	80	80	80	80	80	80	80	80	80
Laptop	38,000	-	-	-	-	-	-	-	-	-
Flash drive	300	-	-	-	-	-	-	-	-	-
Total	38,882	582	582	582	582	582	582	582	582	582

System Requirements and Modelling

This section presents the system requirements and modeling of the property inventory and control system.

Input

- The end users must have accounts, which the admin must create.
- The administrator can release or issue a transaction receipt.

- The administrator can add additional supplies and categories.
- The system will automatically create a transaction queue on the database server.
- All log-ins can be recorded by the system.
- Process
- The system will authenticate log-in credentials.
- The system can update and search for information.
- The system can update accounts.
- The administrator can approve or delete a transaction that is in process or that is pending.
- The administrator can add to the cart items for release or issuance.
- The administrator can transfer property.
- The system will notify you of each transaction.

Output

- The system can display all transactions made in the office.
- The system can display and print the Inventory Custodian Slip (ICS) and Property Acknowledgement Receipt (PAR).
- The system can display all available supplies.
- The system can print all the information required for backup purposes.
- The administrator can view all end-user accounts.
- The system can view all archived and deleted properties.

Performance

- The system will need to access the internet to perform and view transactions.
- The system is capable of holding and maintaining thousands of data records.
- The system's response time during the search and retrieval of information will not exceed 5 to 10 seconds (depending on the internet speed).
- The system can perform accurate inventories of properties and items.
- The system can log several users in multiple browsers simultaneously.

- The system can issue transactions effortlessly.
-

Security and Control

- To prevent complications, only the administrator is permitted to create accounts for users.
- The system's CRUD operations can only be used by the administrator.
- Only the administrator is authorized to issue and transfer property.
- If no login credentials are submitted, the system's online pages are inaccessible.
- Only those with accounts are permitted to use the system.

Object Modelling

Use Case Diagram

Figures 3–4 are the use-case models for the proposed system. These are illustrations of how administrators and users interact with the system, demonstrating the various ways in which they can access its features.

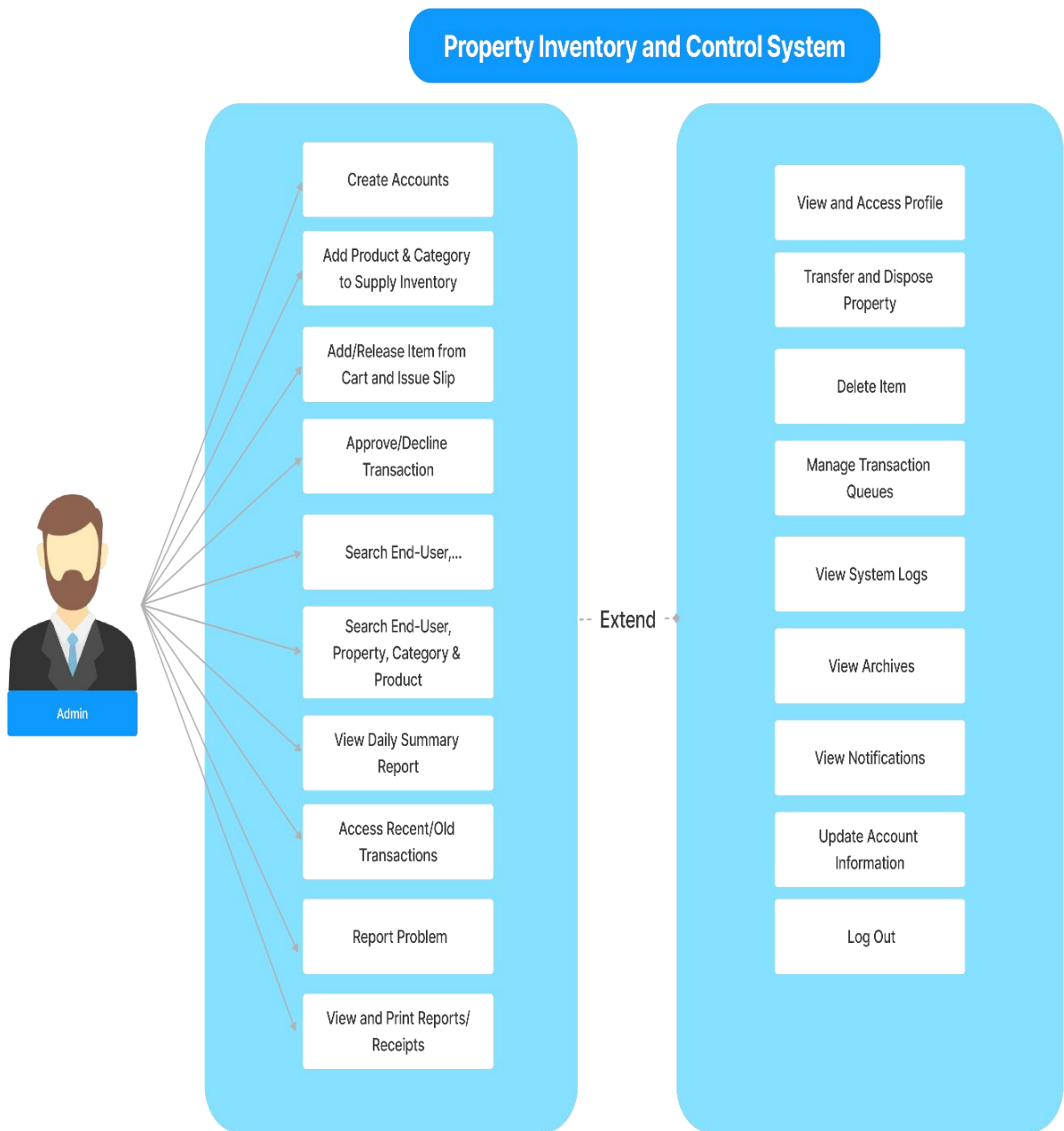


Figure 3. Use Case Diagram for System Administrator

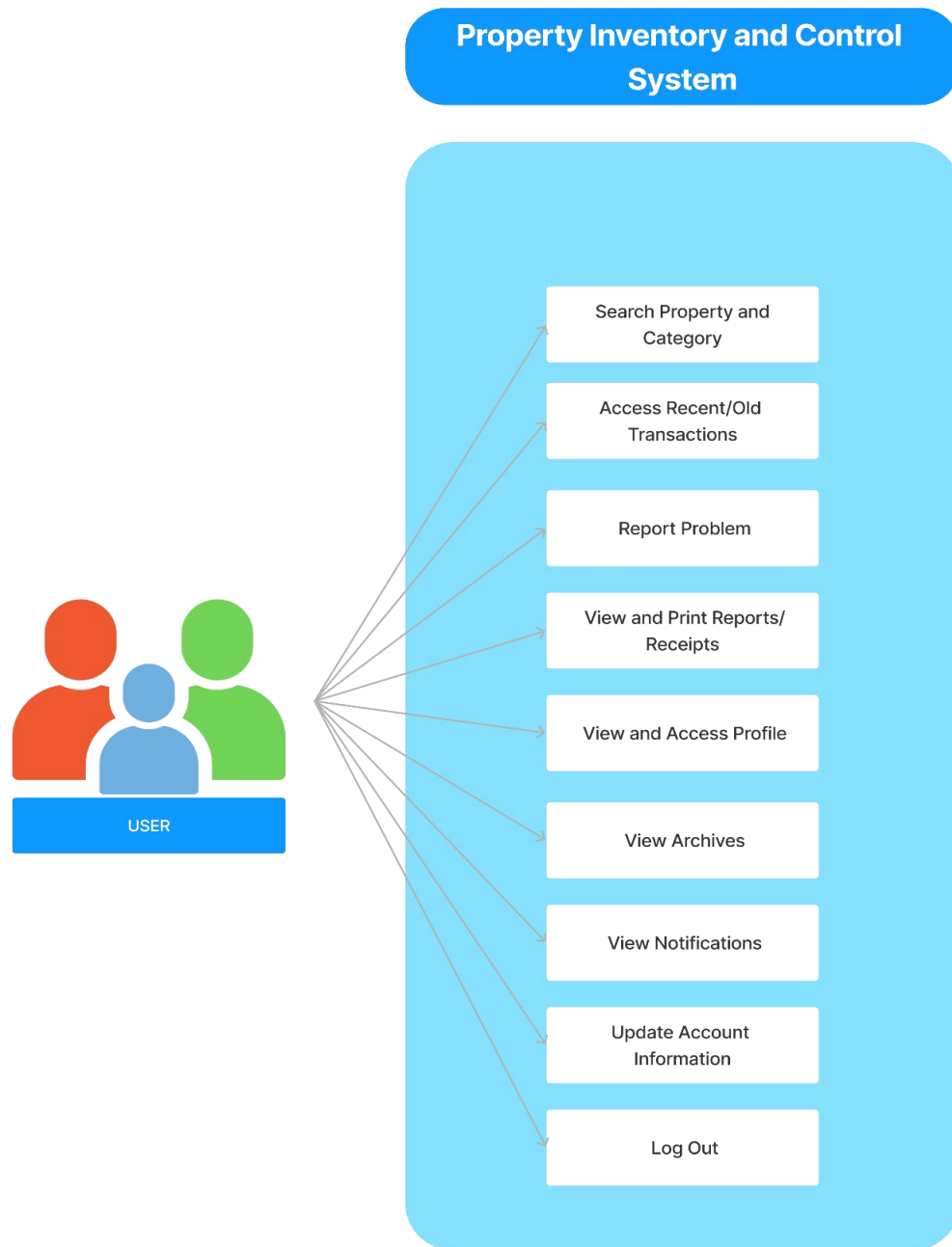


Figure 4. Use Case Diagram for System Users

Risk Assessment/Analysis

Table 4. Risk Assessment/Analysis

Risk Description	Effect	Risk Grading (Small, Medium, or Large)	Recovery Measure
There is no internet connection.	There is no access to the application or website.	Low	Subscribe to another ISP.
Personal Identifiable Information	can be used to identify a person, including their name, address, and other private information.	High	There are no confidential details like credit card numbers or passport numbers stored in the system for accounts. The only person with the authority to manage every user account is the system administrator.
Poor password strength	Attackers could guess the password of the user to gain access to the system.	High	urges users to modify their default passwords (12345) after the administrator has set up their accounts.

Requirements Documentation

Shown in Table 5 are the requirements documentation of the proposed system.

Table 5. Functional Requirements

Identifier	Description	Depends
FR1	The users must have individual accounts to access the system, which will be created by the administrator.	
FR2	Only the administrator has the authority to issue the ICS/PAR documents to the end user.	
FR3	allowing receipts and slips to be printed	
FR4	Only the administrator can manage all the accounts.	
FR5	The system can hold a large number of supplies and keep track of stock availability.	
FR6	The system can release the item or property.	FR5
FR7	Only the administrator can dispose of unusable items or property.	FR8
FR8	The system can store accounts and conduct inventories of	

	properties and supplies.	
FR9	The system can transfer an item or property to a new custodian.	FR8
F10	The system must generate an automatic transaction ID that will be used in receipt verification.	FR6
F11	The system can search accounts, property, and supplies.	
F12	The system can print tables from the database required for backup purposes and inventory reports.	FR8

Design of the Software

This section discusses the design and implementation of the data structures and algorithms used in the software. It presents the data design that produced the detailed data model of a database, such as the database schema in Figures 5–6 and the data dictionary in Table 6–18.

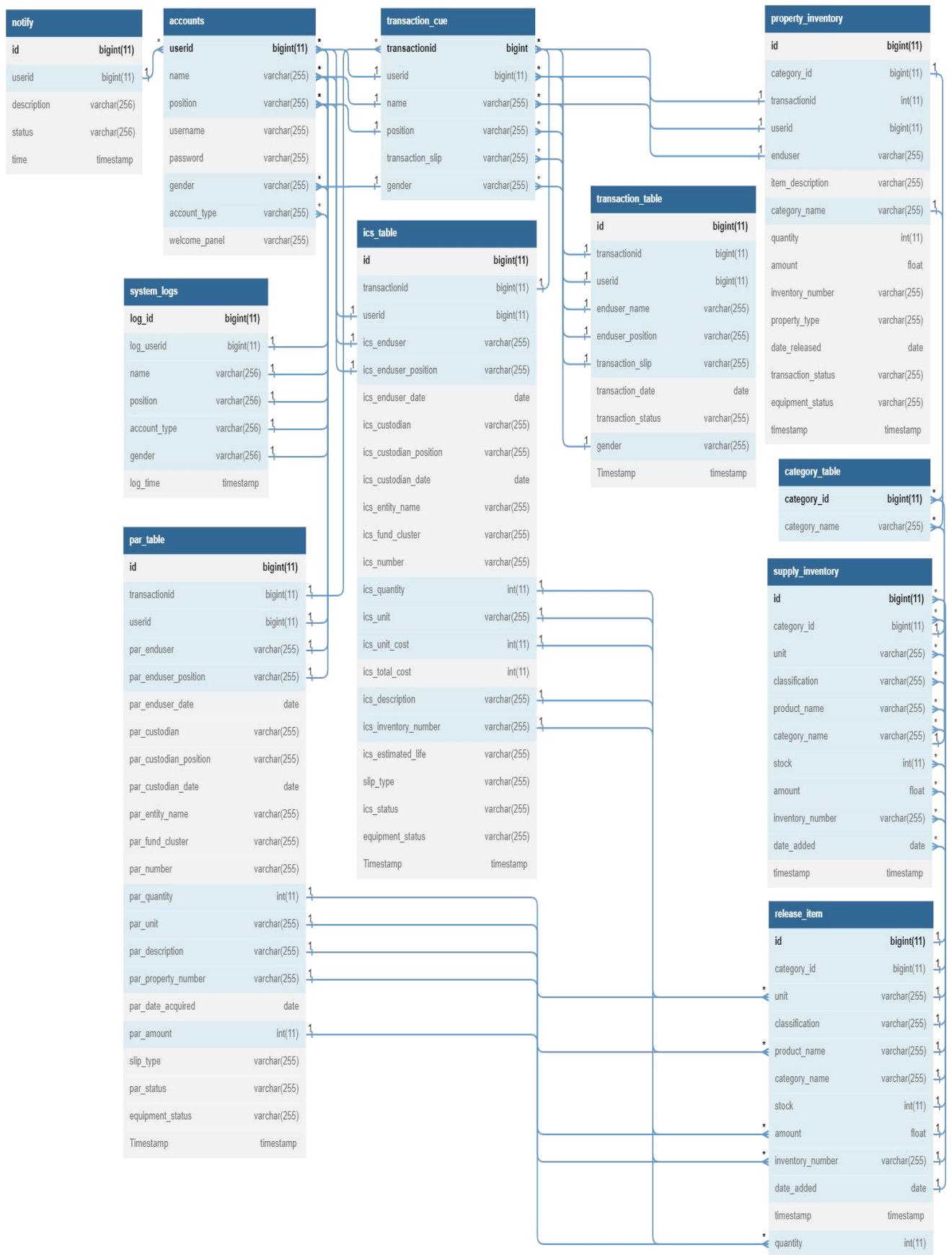


Figure 5. Database Schema

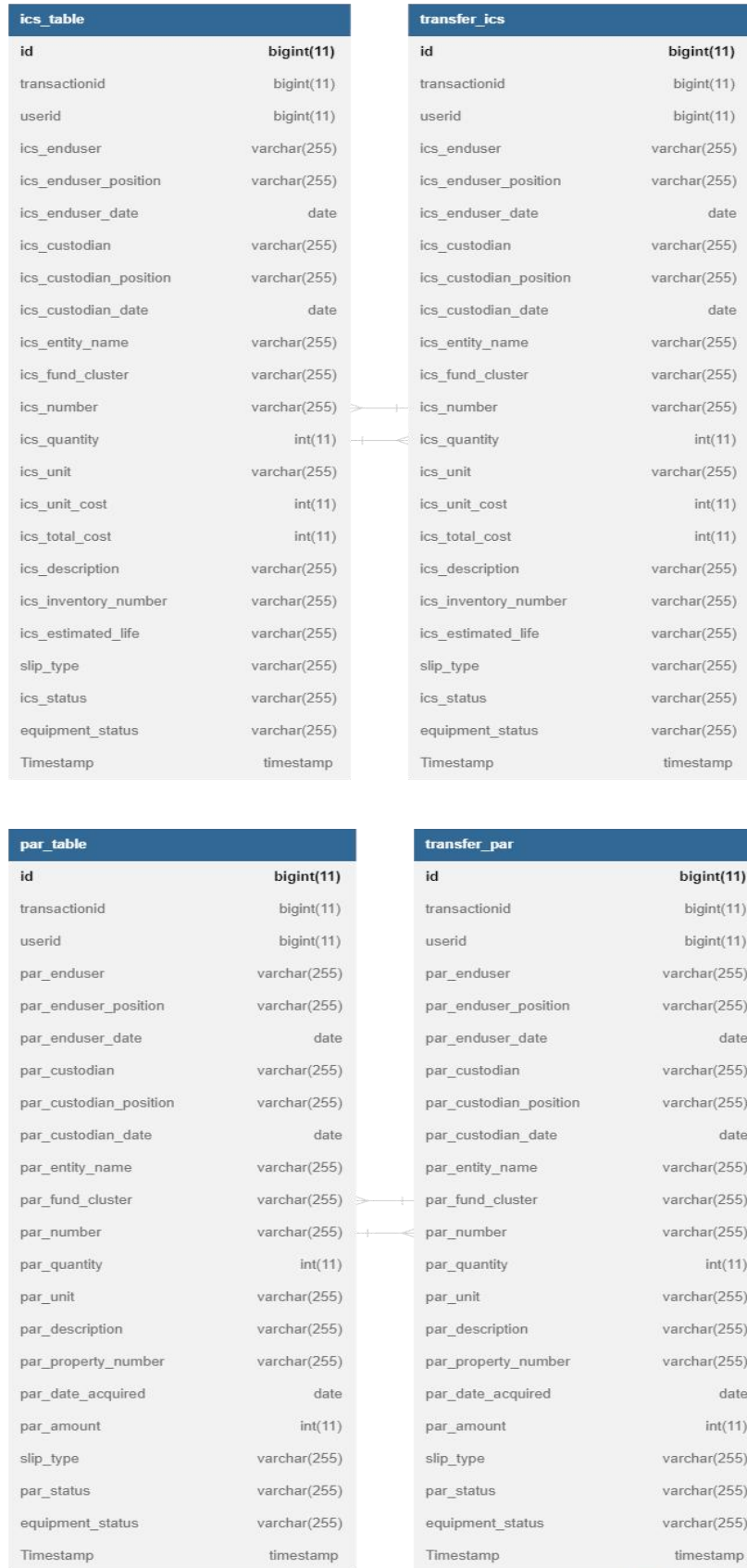


Figure 6. Database Schema

Table 6. Data Dictionary - accounts

Column	Type	Comments
userid	bigint(19)	User's ID used for Authentication
name	varchar(255) utf8mb4_general_ci	Account's Full Name
position	varchar(255) utf8mb4_general_ci	Account's Position/Office
username	varchar(255) utf8mb4_general_ci	Account's Username
password	varchar(255) utf8mb4_general_ci	Account's Password
gender	varchar(255) utf8mb4_general_ci	Account's Gender
account_type	varchar(255) utf8mb4_general_ci	Type of Account (ADMIN or USER)
welcome_panel	varchar(255) utf8mb4_general_ci	Welcome panel status (SHOW or HIDE)

Table 7. Data Dictionary - category_table

Column	Type	Comments
category_id	bigint(11)	Category's Unique ID that are used for authentication through displaying properties by category
category_name	varchar(255) utf8mb4_general_ci	Category Name

Table 8. Data Dictionary - ics_table

Column	Type	Comments
id	bigint(11)	Unique ID used for authentication such as transferring/disposing item
transactionid	bigint(11)	A Unique ID generated from the transaction_cue table that is used for receipt authentication per transaction
userid	bigint(11)	User's Unique ID used for Authentication
ics_enduser	varchar(255) utf8mb4_general_ci	Requester's Full Name
ics_enduser_position	varchar(255)	Requester's Position

	utf8mb4_general_ci	
ics_enduser_date	date	Date Acquired
ics_custodian	varchar(255) utf8mb4_general_ci	Custodian's Full Name
ics_custodian_position	varchar(255) utf8mb4_general_ci	Custodian's Position
ics_custodian_date	varchar(255) utf8mb4_general_ci	Date Issued
ics_entity_name	int(11)	Receipt Name Entity
ics_fund_cluster	varchar(255) utf8mb4_general_ci	Receipt Fund Cluster
ics_number	int(11)	Receipt Inventory Number
ics_quantity	int(11)	Quantity of The Requested Item
ics_unit	varchar(255) utf8mb4_general_ci	Unit of Measurement
ics_unit_cost	varchar(255) utf8mb4_general_ci	Price or Amount per Item
ics_total_cost	varchar(255) utf8mb4_general_ci	Total Cost depends on Quantity
ice_description	varchar(255) utf8mb4_general_ci	Item's Description/Name
ics_inventory_number	varchar(255) utf8mb4_general_ci	Item's Inventory Number
ice_estimated_life	varchar(255) utf8mb4_general_ci	Estimated Life of the Item
slip_type	varchar(255) utf8mb4_general_ci	Receipt/Slip Type
ics_status	varchar(255) utf8mb4_general_ci	Transaction Status (Pending Acquired or Transferred)
equipment_status	varchar(255) utf8mb4_general_ci	Items Status (Active means still usable while Inactive means disposed or cannot utilize anymore)
Timestamp	timestamp	Automated Date/Time Records from inserting or uploading information

Table 9. Data Dictionary - notify

Column	Type	Comments
id	bigint(11)	Unique ID for notification Entries
userid	bigint(11)	User's Unique ID used for authentication
description	varchar(255)	Notification's

	utf8mb4_general_ci	Description/message
status	varchar(255) utf8mb4_general_ci	Status (UNREAD or READ)
time	timestamp	Automated Date/Time Records in inserting information

Table 10. Data Dictionary - par_table

Column	Types	Comments
id	bigint(11)	Unique ID used for authentication such as transferring/disposing item
transactionid	bigint(11)	A Unique ID generated from the transaction_cue table that is used for receipt authentication per transaction
userid	bigint(11)	User's Unique ID used for Authentication
par_enduser	varchar(255) utf8mb4_general_ci	Requester's Full Name
par_enduser_position	varchar(255) utf8mb4_general_ci	Requester's Position
par_enduser_date	date	Date Acquired
par_custodian	varchar(255) utf8mb4_general_ci	Custodian's Full Name
par_custodian_position	varchar(255) utf8mb4_general_ci	Custodian's Position
par_custodian_date	date	Date Issued
par_entity_name	varchar(255) utf8mb4_general_ci	Receipt Name Entity
par_fund_cluster	varchar(255) utf8mb4_general_ci	Receipt Fund Cluster
par_number	varchar(255) utf8mb4_general_ci	Receipt Inventory Number
par_quantity	int(11)	Quantity of the Requested Item
par_unit	varchar(255) utf8mb4_general_ci	Unit of Measurement
par_description	varchar(255) utf8mb4_general_ci	Item's Description/Name
par_property_number	varchar(255) utf8mb4_general_ci	Item's Inventory Number

par_date_acquired	date	Date Acquired
par_amount	int(11)	Price or Amount per item
slip_type	varchar(255) utf8mb4_general_ci	Receipt/Slip Type
par_status	varchar(255) utf8mb4_general_ci	Transaction Status (Pending Acquired or Transferred)
Equipment_status	varchar(255) utf8mb4_general_ci	Item Status (Active means still usable while Inactive means disposed or cannot be utilize anymore)
Timestamp	timestamp	Automated Date/Time Records from inserting or uploading information

Table 11. Data Dictionary - property_inventory

Column	Types	Comments
id	bigint(11)	Unique ID used for authentication such as transferring/disposing item
category_id	bigint(11)	Category's Unique ID that are used for authentication through displaying properties by category
transactionid	int(11)	A Unique ID generated from the transaction_cue table that is used for receipt authentication per transaction
userid	bigint(11)	User's Unique ID used for Authentication
enduser	varchar(255) utf8mb4_general_ci	Requester's Full Name
item_description	varchar(255) utf8mb4_general_ci	Item's Description/Name
category_name	varchar(255) utf8mb4_general_ci	Category Name
quantity	int(11)	Quantity of the Request Item
amount	float	Price or Amount per Item
inventory_number	varchar(255) utf8mb4_general_ci	Item's Inventory Number
property_type	varchar(255) utf8mb4_general_ci	Property Type either Less than or Greater than 15k (PROPERTY or ITEM)

date_released	date	Date Acquired
transaction_status	varchar(255) utf8mb4_general_ci	Transaction Status (Pending, Acquired or Transferred)
equipment_status	varchar(255) utf8mb4_general_ci	Items Status (Active means still usable while Inactive means disposed or cannot be utilize anymore)
timestamp	Timestamp	Automated Date/Time Records from inserting or updating information

Table 12. Data Dictionary - release_item

Column	Types	Comments
id	bigint(11)	Unique ID used for authentication such as transferring/disposing item
category_id	bigint(11)	Category's Unique ID that are used for authentication through displaying properties by category
unit	varchar(255) utf8mb4_general_ci	Unit Measurement
classification	varchar(255) utf8mb4_general_ci	Classification (Commonly Used Supplies, Maintenance and Constructions Materials and Equipments)
product_name	varchar(255) utf8mb4_general_ci	Item's Description/Name
stock	varchar(255) utf8mb4_general_ci	Category Name
amount	int(11)	Stock Availability
inventory_number	float	Price or Amount per Item
date_added	varchar(255) utf8mb4_general_ci	Item's Inventory Number
timestamp	timestamp	Date Added Date/Time Records from inserting or automated information
quantity	int(11)	Quantity of the Request Item

Table 13. Data Dictionary - supply_inventory

Column	Types	Comments
id	bigint(11)	Unique ID used for authentication such as transferring/disposing item
category_id	bigint(11)	Category's unique ID that are used for authentication through displaying properties by category
unit	varchar(255) utf8mb4_general_ci	Unit of Measurement
classification	varchar(255) utf8mb4_general_ci	Classification (Commonly Used Supplies, Maintenance and Constructions Materials and Equipment)
product_name	varchar(255) utf8mb4_general_ci	Item's Description/Name
category_name	varchar(255) utf8mb4_general_ci	Category Name
stock	int(11)	Stock Availability
amount	float	Price or amount per Item
inventory_number	varchar(255) utf8mb4_general_ci	Item's Inventory Number
date_added	date	Date Added from Supply Inventory
timestamp	timestamp	Automated Date/Time Records from inserting or updating information

Table 14. Data Dictionary - system_logs

Column	Types	Comments
log_id	bigint(11)	Log in Time ID
log_userid	bigint(11)	User's Unique ID used for Authentication
name	varchar(255) utf8mb4_general_ci	Account's Full Name
position	varchar(255) utf8mb4_general_ci	Account's Position
account_type	varchar(255) utf8mb4_general_ci	Type of Account (ADMIN or USER)
gender	varchar(255) utf8mb4_general_ci	Account's Gender

log_time	timestamp	Automated Date/Time Records used to determine Log In time of the user
-----------------	-----------	---

Table 15. Data Dictionary - transaction_cue

Column	Types	Comments
transactionid	bigint(11)	A unique ID generated from this cue table that is used for receipt/item authentication per transaction
userid	bigint(11)	User's Unique ID used for Authentication
name	varchar(255) utf8mb4_general_ci	Account's Full Name
position	varchar(255) utf8mb4_general_ci	Account's Position
transaction_slip	varchar(255) utf8mb4_general_ci	Slip Type (ICS or PAR)
gender	varchar(255) utf8mb4_general_ci	Account's Gender

Table 16. Data Dictionary - transaction_table

Column	Type	Comments
id	bigint (11)	Unique ID used for authentication
transactionid	bigint (11)	A unique ID generated from the transaction_cue table that is used for receipt authentication per transaction
userid	bigint (11)	User's Unique ID used for authentication
enduser_name	varchar(255) utf8mb4_general_ci	Requester's Full Name
enduser_position	varchar(255) utf8mb4_general_ci	Requester's Position
transaction_slip	varchar(255) utf8mb4_general_ci	Receipt/Slip Type (ICS or PAR)
transaction_date	date	Date Issued/Acquired
transaction_status	varchar(255) utf8mb4_general_ci	Transaction Status (Pending, Acquired or Transferred)
gender	varchar(255)	Account's Gender

	utf8mb4_general_ci	
Timestamp	timestamp	Automated Date/Time Records in inserting information

Table 17. Data Dictionary - transfer_ics

Column	Type	Comments
id	bigint(11)	Unique ID used for authentication such as transferring/disposing item
transactionid	bigint(11)	A Unique ID generated from the transaction_cue table that is used for receipt authentication per transaction
userid	bigint(11)	User's Unique ID used for Authentication
ics_enduser	varchar(255) utf8mb4_general_ci	Requester's Full Name
ics_enduser_position	varchar(255) utf8mb4_general_ci	Requester's Position
ics_enduser_date	date	Date Acquired
ics_custodian	varchar(255) utf8mb4_general_ci	Custodian's Full Name
ics_custodian_position	varchar(255) utf8mb4_general_ci	Custodian's Position
ics_custodian_date	varchar(255) utf8mb4_general_ci	Date Issued
ics_entity_name	int(11)	Receipt Name Entity
ics_fund_cluster	varchar(255) utf8mb4_general_ci	Receipt Fund Cluster
ics_number	int(11)	Receipt Inventory Number
ics_quantity	int(11)	Quantity of The Requested Item
ics_unit	varchar(255) utf8mb4_general_ci	Unit of Measurement
ics_unit_cost	varchar(255) utf8mb4_general_ci	Price or Amount per Item
ics_total_cost	varchar(255) utf8mb4_general_ci	Total Cost depends on Quantity
ice_description	varchar(255) utf8mb4_general_ci	Item's Description/Name
ics_inventory_number	varchar(255) utf8mb4_general_ci	Item's Inventory Number
ice_estimated_life	varchar(255)	Estimated Life of the Item

	utf8mb4_general_ci	
slip_type	varchar(255) utf8mb4_general_ci	Receipt/Slip Type
ics_status	varchar(255) utf8mb4_general_ci	Transaction Status (Pending Acquired or Transferred)
equipment_status	varchar(255) utf8mb4_general_ci	Items Status (Active means still usable while Inactive means disposed or cannot utilize anymore)
Timestamp	timestamp	Automated Date/Time Records from inserting or uploading information

Table 18. Data Dictionary - transfer_par

Column	Types	Comments
id	bigint(11)	Unique ID used for authentication such as transferring/disposing item
transactionid	bigint(11)	A Unique ID generated from the transaction_cue table that is used for receipt authentication per transaction
userid	bigint(11)	User's Unique ID used for Authentication
par_enduser	varchar(255) utf8mb4_general_ci	Requester's Full Name
par_enduser_position	varchar(255) utf8mb4_general_ci	Requester's Position
par_enduser_date	date	Date Acquired
par_custodian	varchar(255) utf8mb4_general_ci	Custodian's Full Name
par_custodian_position	varchar(255) utf8mb4_general_ci	Custodian's Position
par_custodian_date	date	Date Issued
par_entity_name	varchar(255) utf8mb4_general_ci	Receipt Name Entity
par_fund_cluster	varchar(255) utf8mb4_general_ci	Receipt Fund Cluster
par_number	varchar(255) utf8mb4_general_ci	Receipt Inventory Number
par_quantity	int(11)	Quantity of the Requested Item

par_unit	varchar(255) utf8mb4_general_ci	Unit of Measurement
par_description	varchar(255) utf8mb4_general_ci	Item's Description/Name
par_property_number	varchar(255) utf8mb4_general_ci	Item's Inventory Number
par_date_acquired	date	Date Acquired
par_amount	int(11)	Price or Amount per item
slip_type	varchar(255) utf8mb4_general_ci	Receipt/Slip Type
par_status	varchar(255) utf8mb4_general_ci	Transaction Status (Pending Acquired or Transferred)
Equipment_status	varchar(255) utf8mb4_general_ci	Item Status (Active means still usable while Inactive means disposed or cannot be utilize anymore)
Timestamp	timestamp	Automated Date/Time Records from inserting or uploading information

Design of the System

The developed system is an online, web-based system that runs on web platforms using different browsers. Figures 7 to 26 are the screenshots taken from the developed system.

Interface Design

Login. Figure 7 provides the form used to enter login credentials. This authenticates the users of the system.

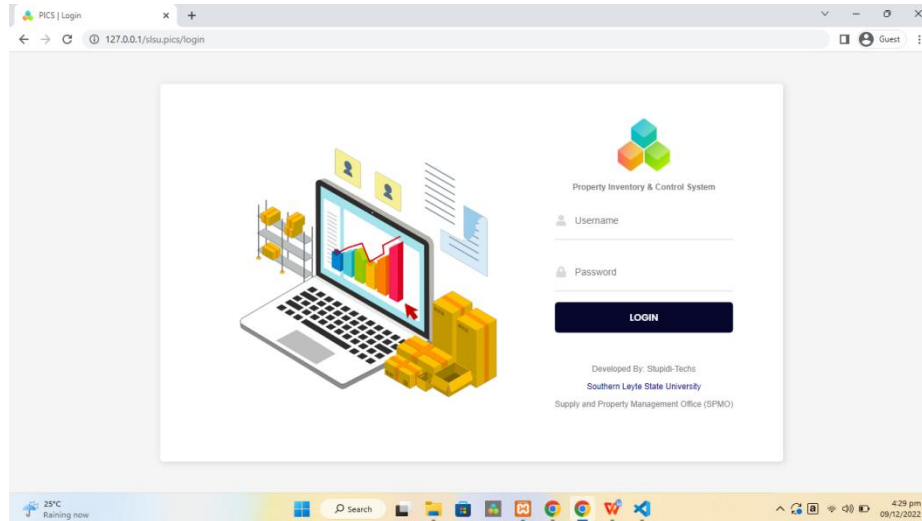
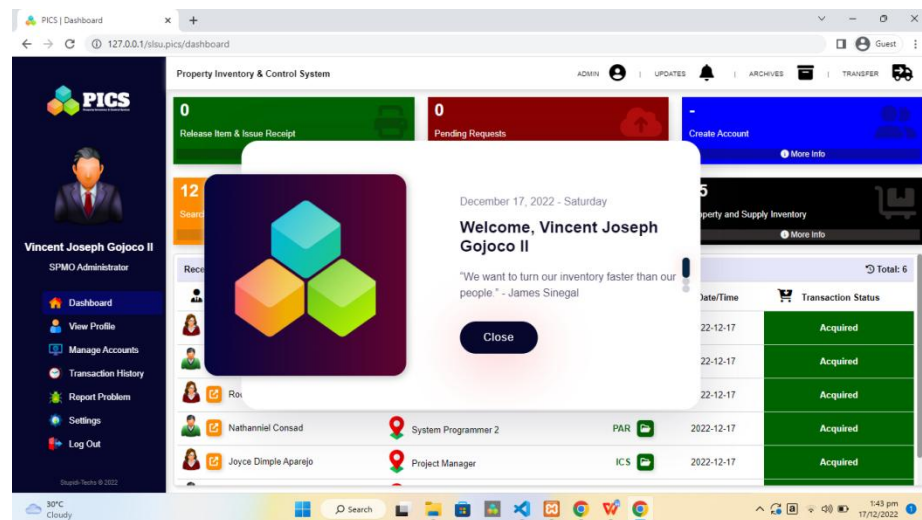


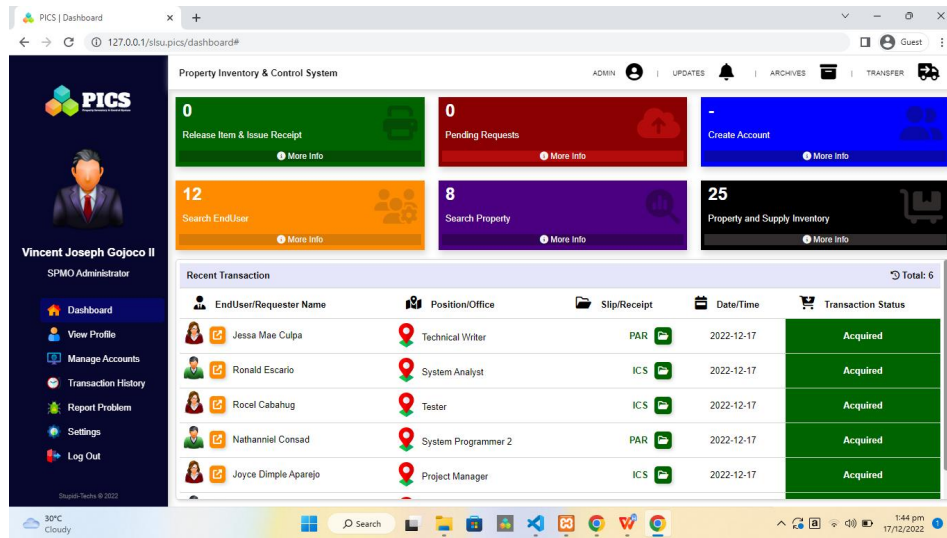
Figure 7. Login Interface

Dashboard. Figure 8-10 displays the homepage of the system this includes the features and functionalities of the user and admin access.



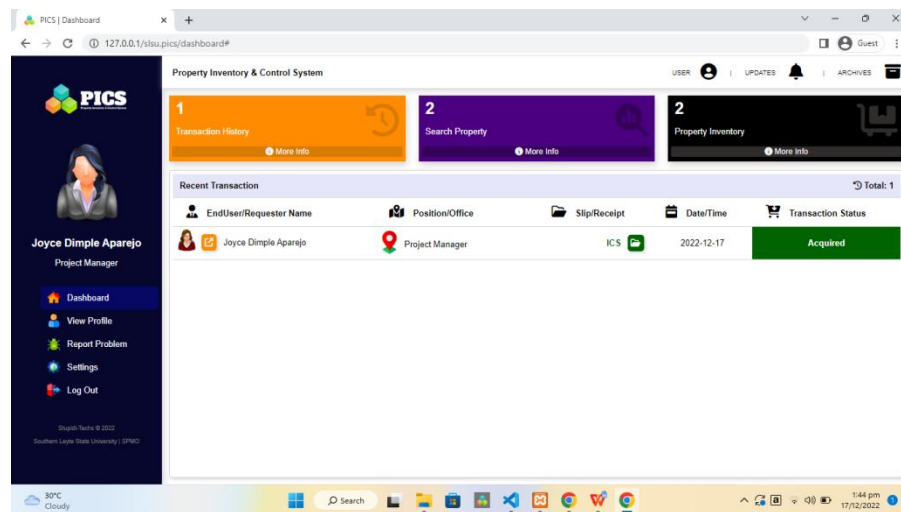
admin & user access - welcome panel

Figure 8. Welcome Panel



admin access

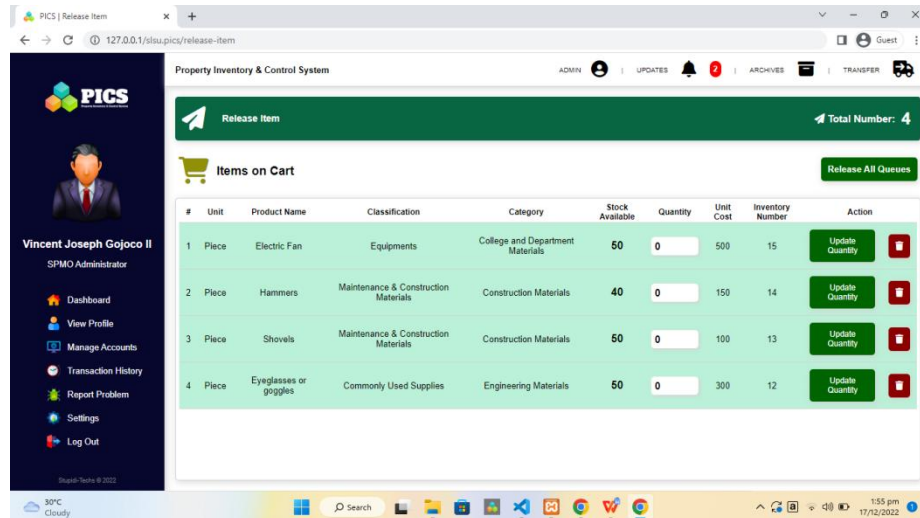
Figure 9. Dashboard Interface for Admin



user access

Figure 10. Dashboard Interface for User

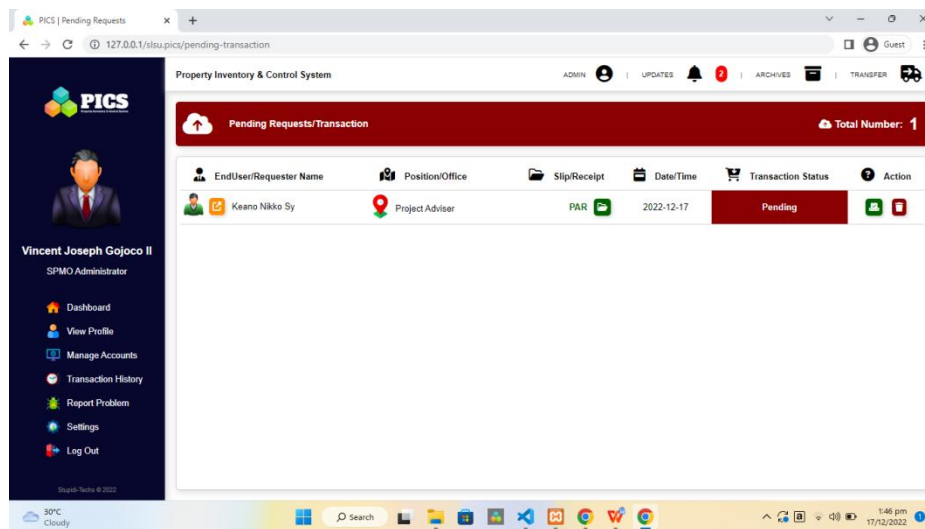
Release Item & Issue Receipt. Figure 11 displays items on cart that are queued for releasing per employee's requisition. By clicking the release all queues button, choose receipt will pop up.



admin access

Figure 11. Release Item and Issue Receipt Interface

Pending Transaction/Requests. Figure 12 displays transaction recommended for approval before releasing.



admin access

Figure 12. Pending Transaction Interface

Create Account. Figure 13 provides fill-up form for account registration.

Property Inventory & Control System

ADMIN | UPDATES | ARCHIVES | TRANSFER

PICS

Vincent Joseph Gojoco
SPMO Administrator

- Dashboard
- View Profile
- Manage Accounts
- Transaction History
- Report Problem
- Settings
- Log Out

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Southern Leyte State University (SLSU)

Register Account

Full Name

Position/Office

Select Gender

Select Account Type

Username

Password

Create Account

23°C Rain to stop 4:51 pm 09/12/2022

admin access

Figure 13. Create Account Interface

Search End-User. Figure 14 displays all end-users. The page has also a filtered search functionality.

Property Inventory & Control System

ADMIN | UPDATES | ARCHIVES | TRANSFER

PICS

Vincent Joseph Gojoco II
SPMO Administrator

- Dashboard
- View Profile
- Manage Accounts
- Transaction History
- Report Problem
- Settings
- Log Out

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Southern Leyte State University (SLSU)

Search End User Total Number: 12

Search User... Filter Result: Name

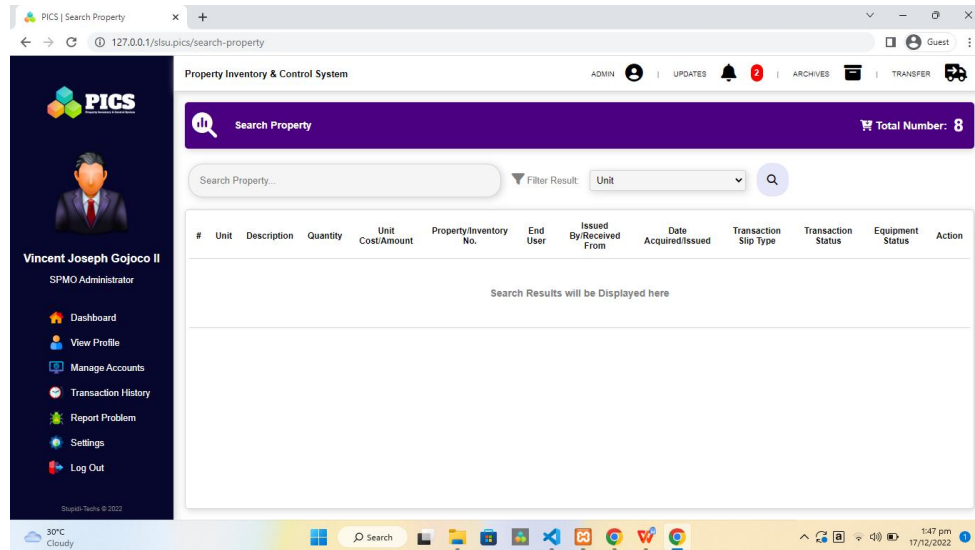
Name	Position/Office	Action
Geraldine Mangmang	CCSIT Dean	View
Gilbert Siega	CCSIT Instructor	View
James Brian Flores	CCSIT Department Head	View
Jemuel Cadayona	System Programmer 1	View
Jessa Mae Culpa	Technical Writer	View
Jimson Olaybar	CCSIT Instructor	View
Joyce Dimple Aparejo	Project Manager	View
Marianne Niblan, Jr.	Technical Assistant	View

30°C Cloudy 1:48 pm 17/12/2022

admin access

Figure 14. Search End-User Interface

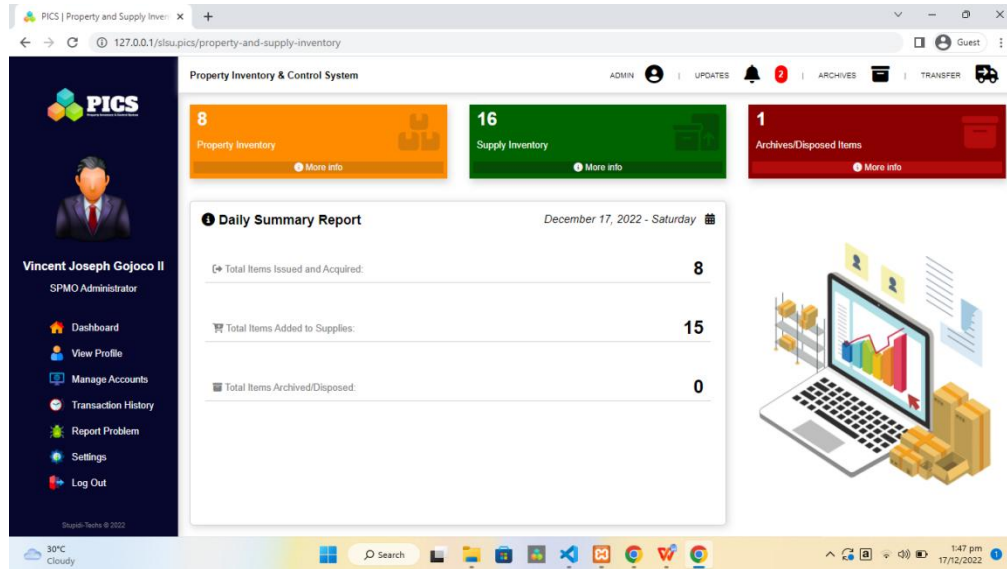
Search Property. Figure 15 displays all the properties based on the filtered search results.



admin & user access

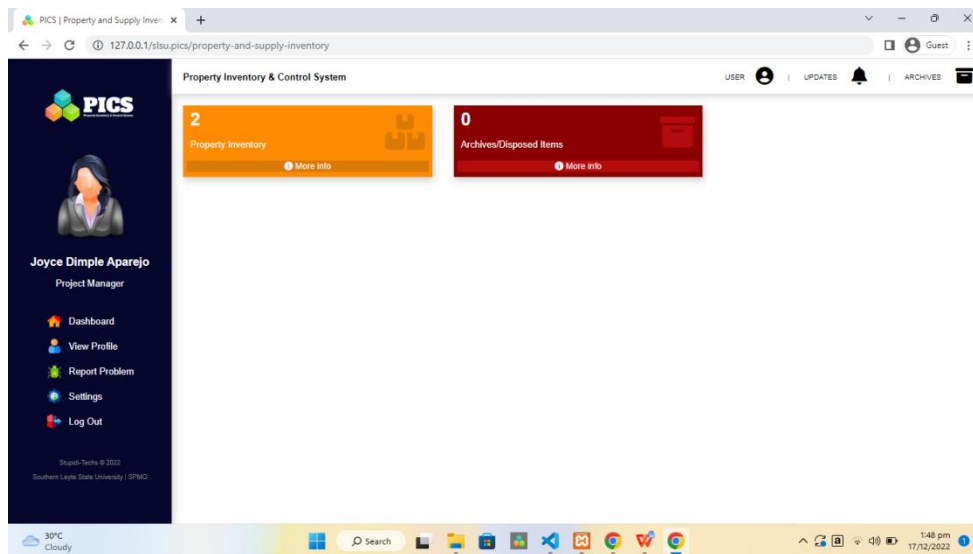
Figure 15. Search Property Interface

Property & Supply Inventory. Figure 16-17 displays 3 panels and one summary report for the admin access: Property Inventory, Supply Inventory, Archives and Daily Summary Report. The users can only access their respective property inventory and archives. **Property Inventory** displays all released or acquired properties by the requester/end-users for the admin access. The user access can only view their respective properties and cannot manipulate data (the add category, dispose and delete action buttons are disabled for users). **Supply Inventory** displays all available supplies from the SPMO. The admin can search/add/update/delete category and product to the system. The user cannot view this page. **Archives** displays all inactive/disposed/unusable properties. The users can only view their respective archives.



admin access

Figure 16. Property and Supply Inventory Interface for Admin



user access

Figure 17. Property Inventory Interface for User

View Account/Profile. Figure 18 displays all acquired properties by the end-user. The admin and user can perform filtered search, view PAR/ICS Documents and Archives from the system.

Unit	Description	Quantity	Unit Cost/Amount	Property/Inventory No.	End User	Issued By/Received From	Date Acquired/Issued	Transaction Slip Type	Transaction Status
Piece	C# Programming Language	50	375	4	Joyce Dimple Aparejo	Miguel Bidon	2022-12-17	ICS	Acquired
Piece	Java Programming Modules	50	400	3	Joyce Dimple Aparejo	Miguel Bidon	2022-12-17	ICS	Acquired

admin & user access

Figure 18. View Account

Manage Accounts. Figure 19 displays all the accounts from the system. The admin can perform search and update account information. The user cannot view this page.

#	Name	Position/Office	Username	Password	Account Type	Action
1	Vincent Joseph Gojoco II	SPMO Administrator	admin	admin	ADMIN	[Edit]
2	Jamuel Cadayona	System Programmer 1	jamuel	12345	USER	[Edit]
3	Joyce Dimple Aparejo	Project Manager	joyce	12345	USER	[Edit]
4	Roxel Cabahug	Tester	rocel	12345	USER	[Edit]
5	Jessa Mae Culpa	Technical Writer	jessa	12345	USER	[Edit]
6	Ronald Escario	System Analyst	ronald	12345	USER	[Edit]
7	Nathaniel Consad	System Programmer 2	nathan	12345	USER	[Edit]

admin access

Figure 19. Manage Account

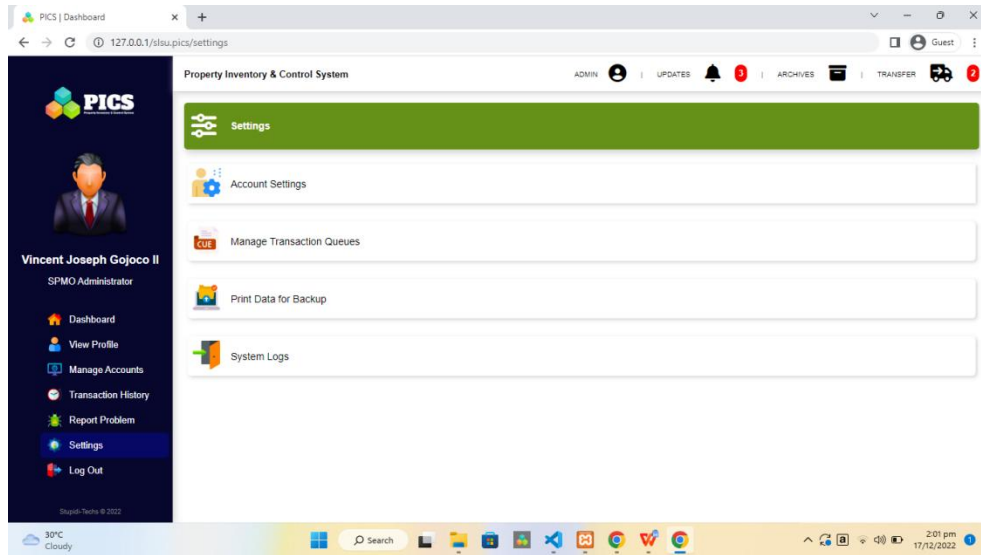
Transaction History. Figure 20 displays all recent and old transaction from the system. The admin and user can perform filtered search. The users can only view their respective transactions.

EndUser/Requester Name	Position/Office	Slip/Receipt	Date/Time	Transaction Status
Jessa Mae Culpa	Technical Writer	PAR	2022-12-17	Acquired
Ronald Escario	System Analyst	ICS	2022-12-17	Acquired
Rocel Cabahug	Tester	ICS	2022-12-17	Acquired
Nathaniel Consad	System Programmer 2	PAR	2022-12-17	Acquired
Joyce Dimple Aparejo	Project Manager	ICS	2022-12-17	Acquired
Jemuel Cadayona	System Programmer 1	PAR	2022-12-16	Acquired

admin & user access

Figure 20. Transaction History

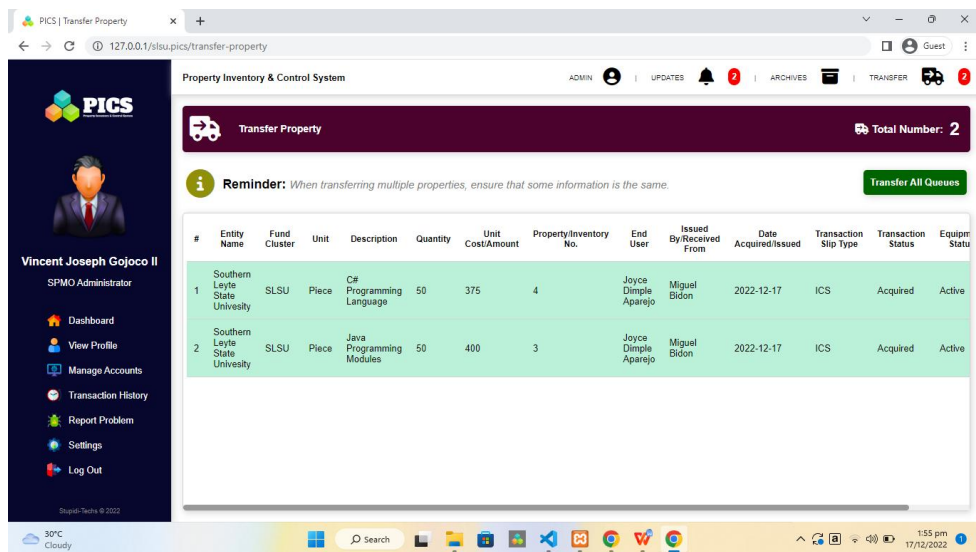
Settings. Figure 21 displays some system functionalities such as Account Settings, Manage Transaction Queues, Print Data for Back-Up and System Logs. The user can only access Account Settings. **Account Settings** provides form to update account information. **Manage Transaction Queues** displays transaction queuing that must be deleted to avoid server error. **Print Data for Back-Up** provides print functionality to generate inventory reports based on selected options. **System Logs** displays all accounts that have logged onto the system.



admin access

Figure 21. Settings

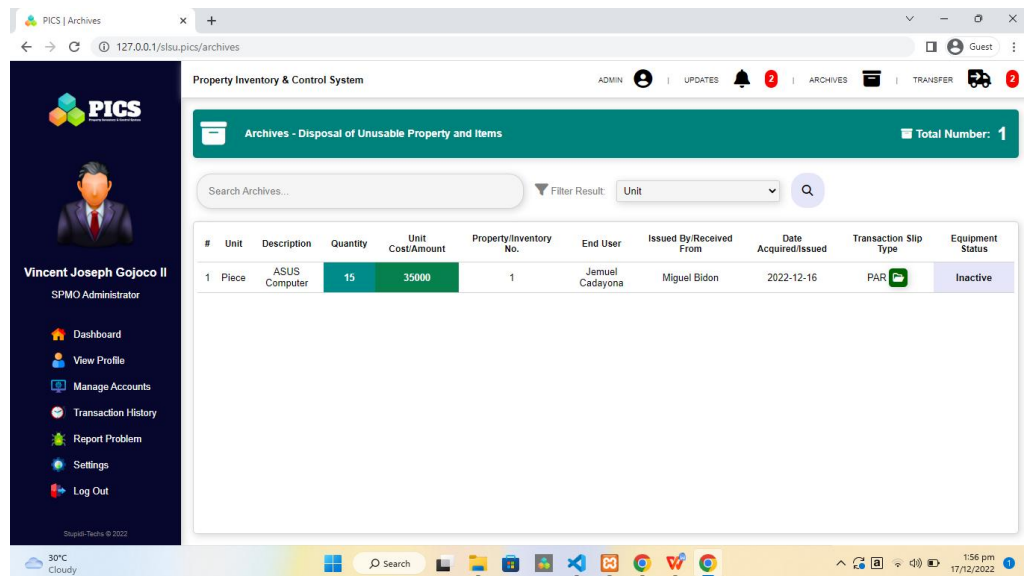
Transfer. Figure 22 displays all queued properties that are ready for custodianship transferring.



admin access

Figure 22. Transfer Property

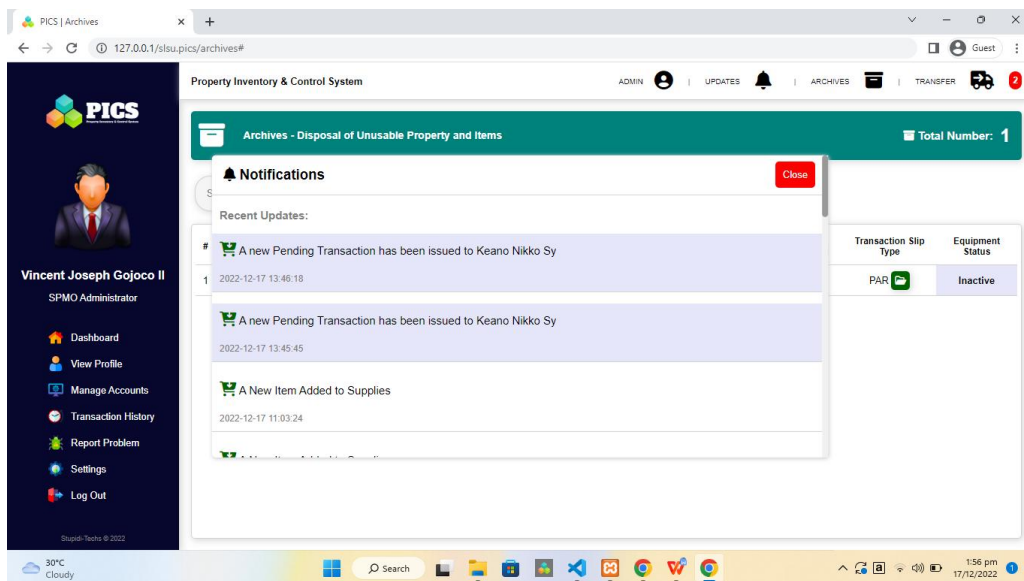
Archives. Figure 23 displays all inactive/disposed/unusable properties. The users can only view their respective archives.



admin & user access

Figure 23. Archives

Updates. Figure 24 displays all update/notifications from a system activity. The users can only view their respective notifications.



admin & user access

Figure 24. Updates/Notifications

ICS Print. Figure 25 prints Inventory Custodian Slip (ICS).

The screenshot shows a web browser window titled "ICS | Joyce Dimple Aparajo" with the URL "127.0.0.1/slsu/pics/ics-print". The main content is the "INVENTORY CUSTODIAN SLIP" form, Appendix 59. The form includes fields for Entity Name (Southern Leyte State University), Fund Cluster (SLSU), and a table with columns: Quantity, Unit, Unit Cost, Description, Inventory Item No., and Estimated Useful Life. The table contains 10 rows of inventory items. Below the table are fields for "Received From" and "Received By" with signature and date lines. To the right of the form is a print dialog with options for Destination (Microsoft Print to PDF), Pages (All), Color (Color), and a "Print" button. The Windows taskbar at the bottom shows the date and time as 6:12 pm on 09/12/2022.

Quantity	Unit	Unit Cost	Description	Inventory Item No.	Estimated Useful Life
100	Piece	2500	PE Uniforms	5	
200	Piece	600	School Uniforms	6	
30	Piece	235	Java Programming Modules	7	
5	Piece	360	Electric Fans	8	
50	Book	400	Science and Technology Module	13	
100	Piece	2000	Woodwork Chairs	14	

admin & user access

Figure 25. ICS Print

PAR Print. Figure 26 prints Property Acknowledgement Receipt (PAR).

The screenshot shows a web browser window titled "PAR | Jessa Mae Culpa" with the URL "127.0.0.1/slsu/pics/par-print". The main content is the "PROPERTY ACKNOWLEDGEMENT RECEIPT" form, Appendix 71. The form includes fields for Entity Name (Southern Leyte State University), Fund Cluster (SLSU), and a table with columns: Quantity, Unit, Description, Property Number, Date Acquired, and Amount. The table contains 3 rows of property items. Below the table are fields for "Received By" and "Issued By" with signature and date lines. To the right of the form is a print dialog with options for Destination (Microsoft Print to PDF), Pages (All), Color (Color), and a "Print" button. The Windows taskbar at the bottom shows the date and time as 6:14 pm on 09/12/2022.

Quantity	Unit	Description	Property Number	Date Acquired	Amount
7	Device	Apple MNC OS	2	2022-12-09	120000
5	Piece	Saleable Wood with Carving	16	2022-12-09	18700

admin & user access

Figure 26. PAR Print

System Process

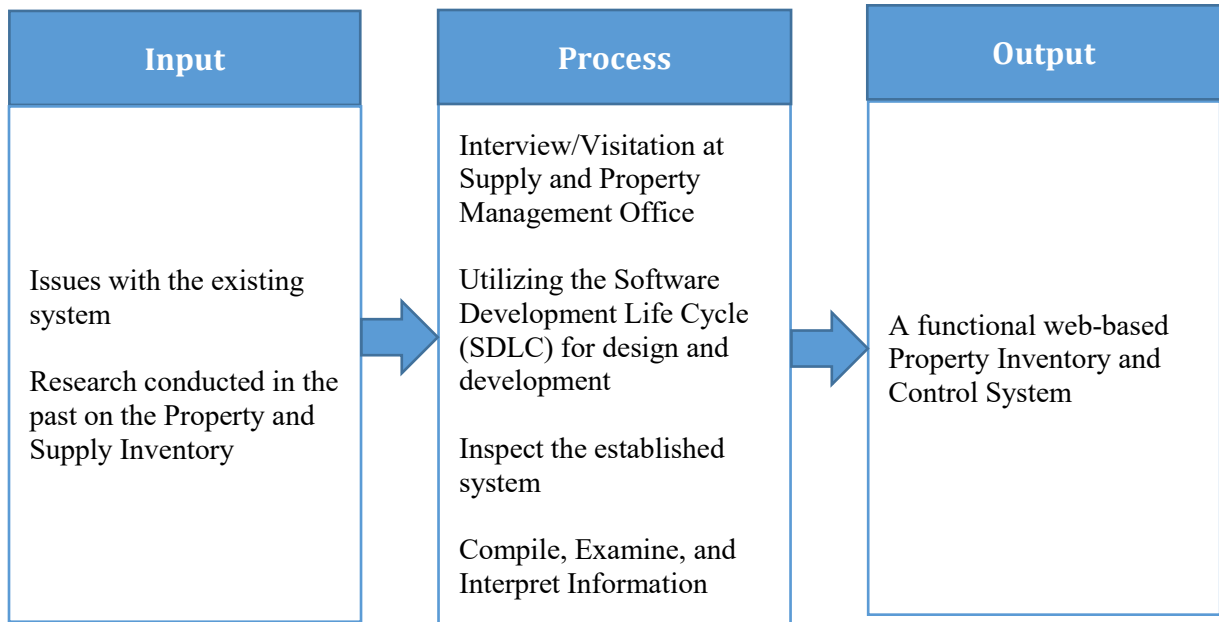


Figure 27. System Process

Development and Testing

Software Development

The system development process is anchored to the system development life cycle (SDLC) waterfall model, as shown in Figure 28.

- The first and second phases contain the **analysis**. The brainstorming process was conducted as well as a visit to the supply and property management office (SPMO) of the institution to assess the prospective demands and characteristics of the recommended system. To make the system more practical and better meet the demands of the target client, consultation with them was also conducted.
- The third phase is **design**. This section includes the creation of the prototype and layout, which covers the arrangement of buttons, panels, and some other components of the system.
- The fourth phase is **building and development**. Implementation stage and

evaluation of the technologies to be utilized for front-end and back-end development that are appropriate for a web-based system.

- The fifth phase is **testing**. After the development phase, this section covers system testing and the evaluation of potential bugs and malfunctions.
- The last phase is the **final system review**, which encompasses a broad array of operations, including deleting unneeded features and design flaws, updating documentation, and performing a system re-evaluation.

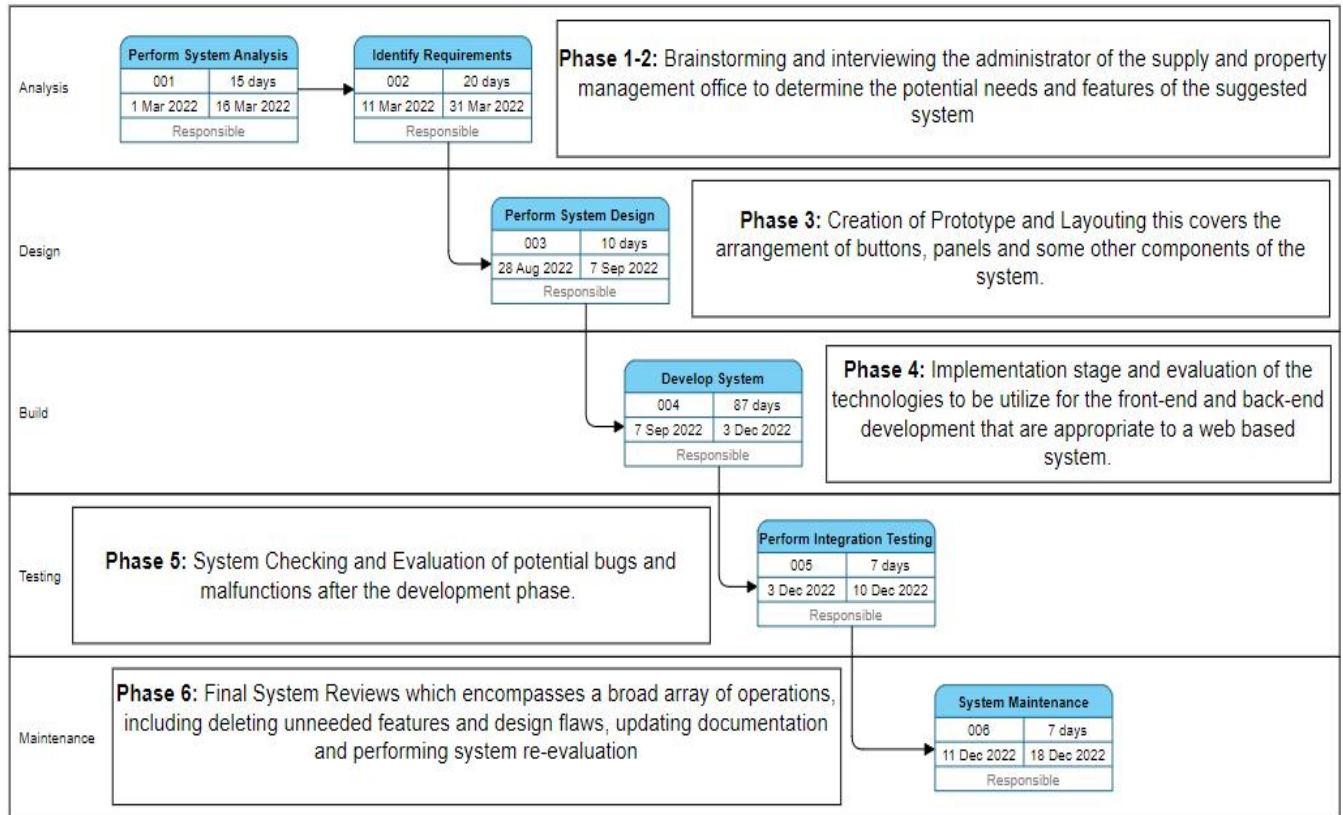


Figure 28. SDLC Waterfall Model

Hardware Specification

Table 19 presents the minimum hardware specifications in developing the Property Inventory and Control System.

Table 19. Hardware Specification

Hardware	Description/Specification
Computer/Laptop	<ul style="list-style-type: none"> ➤ Size of the RAM, which should be over 2GB - 4GB, though more is better. ➤ Processor speed: 1.3 GHz - 2.40 GHz ➤ Storage device recommended is Solid State Drive. SSDs can handle data at the ultra-speeds necessary for web development and rendering.
External Hard Drive, DVDs or Flash Drive for Backup	➤ Recommended storage size: 2GB - 4GB

Software Specification

Shown in Table 20 is the software specifications for the development of Property Inventory and Control System.

Table 20. Software Specification

Software
➤ Microsoft Visual Studio Code x64 - v1.44.0 or higher
➤ XAMPP Control Panel v3.2.4 or higher
➤ Browsers (Google Chrome, Mozilla Firefox or Microsoft Edge)

Testing

The designed property inventory and control system was tested after development. To make sure the system works as intended, unit testing was done. A variety of browsers, including Google Chrome, Microsoft Edge, Mozilla Firefox, and UC Browser, were tested for compatibility with the web-based system on both Windows-based computers and mobile devices. The system's compatibility with other operating systems was not evaluated. Additionally, system testing was done using target clients as evaluators.

Description of the System

For all different types of users, the developed system creates a user-friendly design. The system's front end makes use of HTML, CSS, and other web design library frameworks, including JavaScript (jQuery), Font Awesome for icons, and Bootstrap. The system also makes use of AJAX, a method for client-side JavaScript code to execute HTTP requests asynchronously. AJAX calls are used by JavaScript front-end applications to connect to back-end services and APIs and to retrieve data from the Web server. The programmers use PHP, a general-purpose programming language designed for web development used for the system's back end (server side). The created system uses MySQL as its database engine and is data-driven and web-responsive. The system makes it more comfortable and hassle-free to use by reducing the time and effort required for each transaction that needs to be completed. The system also leads to a more trustworthy and accurate inventory.

Implementation Plan

The project's implementation strategy is shown in Figure 29. This includes everything from the project's conception to its execution and evaluation.

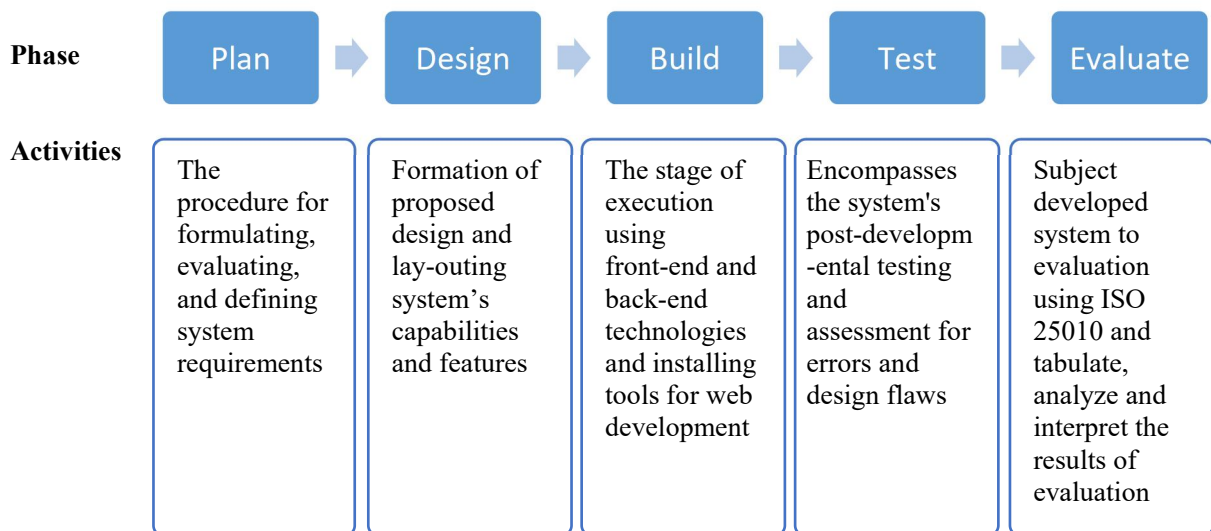


Figure 29. Implementation Plan

Implementation Result

The first phase is planning. A brainstorming session was held along with a visit to the institution's supply and property management office (SPMO) to identify potential requirements and features of the recommended system. To enhance the usability of the system and better meet the demands of the target client, consultations with them were also undertaken. The following step is designing. This section covers prototype building as well as layouts, which deal with how buttons, panels, and numerous other system components are organized. Building and development are the next phases. A web-based application's implementation stage and the evaluation of the front-end and back-end technologies that will be utilized Testing is the next. After the development phase, the system is examined for potential flaws and malfunctions in this step. Evaluation is the final stage. The final system evaluations include a wide range of tasks, such as removing unused features and complicated design elements, updating documentation, and reevaluating the system using ISO 25010.

Table 21 is the result of the evaluation using the ISO 25010. Frequency, mean and modal interpretation are used in the treatment of data using the corresponding Likert Scale provided below.

Table 21. User Evaluation of Property Inventory and Control System

Criteria	5	4	3	2	1	Mean	Interpretation
Functionality						4.5	Fully Functional
The system performs the tasks required.	3	2	0	0	0	4.6	Fully Functional
The result is as expected.	4	0	1	0	0	4.6	Fully Functional
The system interacts with another system.	3	2	0	0	0	4.6	Fully Functional
The system prevents unauthorized access.	2	3	0	0	0	4.4	Fully Functional
Reliability						4.2	Mostly

							Reliable
Most of the faults in the system have been eliminated over time.	1	4	0	0	0	4.2	Mostly Reliable
The system is capable of handling errors.	1	4	0	0	0	4.2	Mostly Reliable
The system notifies the user about wrong data entry.	2	2	1	0	0	4.2	Mostly Reliable
The software resumes working and restores lost data after a failure.	1	4	0	0	0	4.2	Mostly Reliable
Usability						4.6	Very Usable
The user comprehends how to use the system easily.	3	2	0	0	0	4.6	Very Usable
The user learns to use the system easily.	3	2	0	0	0	4.6	Very Usable
The user utilizes the system without much effort.	3	2	0	0	0	4.6	Very Usable
The system's interface looks good.	4	1	0	0	0	4.8	Very Usable
Efficiency						4.4	Very Efficient
The system responds quickly to the user.	2	3	0	0	0	4.4	Very Efficient
The system's execution time is appropriate.	3	2	0	0	0	4.6	Very Efficient
The software utilizes resources efficiently.	2	3	0	0	0	4.4	Very Efficient
Maintainability						4.4	Strongly Agree
The system faults can be easily diagnosed.	1	4	0	0	0	4.2	Mostly Agree
The system continues functioning when changes are made.	4	1	0	0	0	4.8	Strongly Agree
The software can be tested easily.	2	3	0	0	0	4.4	Strongly Agree
Portability						4.5	Strongly Agree
The system can be moved to other environments.	3	2	0	0	0	4.6	Strongly Agree

The software can be installed easily. <i>(for administrator)</i>	3	2	0	0	0	4.6	Strongly Agree
The software can replace easily other software. <i>(for administrator)</i>	2	3	0	0	0	4.4	Strongly Agree
Security						4.2	Mostly Secure
The software ensures confidentiality of data	2	3	0	0	0	4.4	Very Secure
The software prevents unauthorized access and modification to computer programs and/or data	1	3	1	0	0	4.0	Mostly Secure
The software requires authentication of users	3	1	1	0	0	4.4	Very Secure
A system log is maintained.	1	3	1	0	0	4.0	Mostly Secure
Compatibility						4.3	Very Compatible
The software performs its required functions efficiently while sharing a common environment and resources without negatively impacting any other product/s.	2	3	0	0	0	4.4	Very Compatible
The software allows two or more systems, products, or components to exchange and use the information.	1	4	0	0	0	4.2	Mostly Compatible

Functionality

Based on the evaluations given by the evaluators, it is assumed that the system has an overall rating of 4.5 for its functionality. It is fully functional when it completes the necessary duties, produces the expected results, communicates with other systems, and protects against unauthorized access.

Reliability

Based on the evaluations made by the evaluators, it is determined that the system has an overall rating of 4.2 for its reliability. It is generally dependable where the majority of the system's flaws have been fixed over time, and the system is now capable of managing errors. It also alerts the user when incorrect data has been entered, and after a failure, the program restarts the operation and recovers lost data.

Usability

Based on the evaluations provided by the assessors, it is concluded that the system has an overall rating of 4.6 for its usability . It is extremely useful and easy for users to understand how to use the system and they do so without much difficulty, and the user interface is also visually attractive.

Efficiency

Based on the evaluations made by the evaluators, it is assumed that the system has an overall rating of 4.4 for its efficiency. It is extremely efficient since it responds to the user instantly, takes an acceptable amount of time to execute, and makes good use of its resources.

Maintainability

Based on the evaluation, the system has an overall rating of 4.4 for its maintainability. The evaluators have generally and strongly concluded that the system is maintainable since it can be tested easily, problems can be identified quickly, and the system keeps running even after modifications are made.

Portability

Based on the evaluation, the system has an overall rating of 4.5 for its portability. The evaluators generally agreed that the system is portable in that it can be transported to different locations, the program can be readily loaded, and it can easily replace other software.

Security

According to the scores provided by the evaluators, the system has an overall rating of 4.2 for its security. It is extremely secure, with the system ensuring data confidentiality, preventing unwanted access and alteration to computer programs and/or data, requiring user identification, and maintaining a system log.

Compatibility

Based on the ratings given by the evaluators, it can be concluded that the system has an overall rating of 4.3 for its compatibility. It seems to be mostly and very compatible, allowing two or more systems, products, or components to exchange and use information while the software performs its necessary functions effectively while sharing a common environment and resources without adversely affecting any other product.

CHAPTER V

RECOMMENDATIONS

Based on the outcomes of system implementation and assessment, the following suggestions are made:

1. By encrypting the data on its database server, the system may better safeguard sensitive data, protect confidential details, and increase the security of interactions between the client and server sides. In essence, information that has been encrypted prevents access by unauthorized parties and ensures that they cannot read it.
2. Design a responsive mobile device view of the system to provide better interaction with the users when visiting the site through smartphone browsers.
3. Evaluate the system in the Supply and Property Management Office to examine the accuracy of its inventory features and management capabilities.
4. Automate the issuance of receipts based on the cost of the item that will be issued to the end user.
5. To quickly find all the properties acquired by a certain end user, add the end user's name to the filter result on the search property web page.
6. Reduce page load time by removing any extraneous icons, especially if the internet connection is unstable.
7. Provide a checkbox for transferring properties so the administrator may choose only the items they want to transfer.

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Appendix A

Relevant Source Code

Database Connection

Shown in Figure 30 is the database connection of the system.

```
<?php
/*<- DATABASE CONNECTION VARIABLES ... ->*/

$hostname = '127.0.0.1';
$username = 'root';
$password = '';
$database_name = 'property_db';

/*<- DATABASE CONNECTION ... ->*/

$database_conn =
    mysqli_connect($hostname, $username, $password, $database_name);

    session_start();

?>
```

Figure 30. Database Connection

Add & Save

Shown in Figure 31-32 is adding and saving new information to database through jQuery, AJAX and PHP.

index.js

```
$(document).ready(function(){
    $("#add-new-item").click(function(){
        var item_description = $("#product-name").val();
        var category_name_suggest = $("#category-name-suggest").val();
        var product_quantity = $("#product-quantity").val();
        var iNum = $("#product-cost").val();
        var product_cost = parseFloat(iNum);
        var product_inventory_number = $("#product-inventory-number").val();
        var product_date_released = $("#product-date-added").val();
```

```

        if(item_description != '' && category_name_suggest !='' &&
product_quantity != '' && product_cost != '' && product_inventory_number !=
'' && product_date_released != '') {
            $.ajax({
                url: "server.php",

                method: "POST",
                data: {
                    item_description:item_description,
                    category_name_suggest:category_name_suggest,
                    product_quantity:product_quantity,
                    product_cost:product_cost,
                    product_inventory_number:product_inventory_number,
                    product_date_released:product_date_released
                },
                dataType: "text",
                success:function() {
                    $("#add-success").fadeIn(100);
                    $("#add-failed").hide();
                }
            })
        }
        else {
            $("#add-success").hide();
            $("#add-failed").fadeIn(100);
        }
    });
});
});

```

Figure 31. Add & Save Data

server.php

```

<?php
    /*<----- ADD NEW PRODUCT AND DIPLAYING PRODUCT BY CATEGORY THROUGH
AUTHENTICATION ... ----->*/

    /*< INSERT NEW PRODUCT/ITEM > */
    if(isset($_POST['item_description'])) {
        $unit = $_POST['unit'];
        $classification = $_POST['classification'];
        $item_description = $_POST['item_description'];
        $category_name_suggest = $_POST['category_name_suggest'];
        $product_quantity = $_POST['product_quantity'];
    }
}

```

```

        $product_cost = $_POST['product_cost'];
        $product_inventory_number =
$_POST['product_inventory_number'];
        $product_date_added = $_POST['product_date_added'];
        $product_category_id = '';
        $sql_retrieve_category_id = "SELECT * FROM category_table
WHERE category_name='$category_name_suggest'";
        $sql_retrieve_category_id_result =
mysqli_query($database_conn, $sql_retrieve_category_id);
        if(mysqli_num_rows($sql_retrieve_category_id_result) == 1) {
            while($rows_fetch_category_id =
mysqli_fetch_assoc($sql_retrieve_category_id_result)) {
                $product_category_id =
$rows_fetch_category_id['category_id'];
            }
        }
        $sql_add_new_item = "INSERT INTO supply_inventory (category_id,
unit, classification, product_name, category_name, stock, amount,
inventory_number, date_added)
VALUES($product_category_id, '$unit', '$classification',
'$item_description', '$category_name_suggest', '$product_quantity',
'$product_cost', '$product_inventory_number', '$product_date_added')";
        mysqli_query($database_conn, $sql_add_new_item);
        $notify_description = "A New Item Added to Supplies";
        $sql_ics_insert_to_notify = "INSERT INTO notify (userid,
description, status) VALUES (0, '$notify_description', 'UNREAD')";
        mysqli_query($database_conn, $sql_ics_insert_to_notify);
    }
?>

```

Figure 32. Add & Save Data

Edit & Update

Shown in Figure 33-34 is editing and updating account information to database through jQuery, AJAX and PHP.

index.js

```

// UPDATE ACCOUNT QUERY TO SERVER: -----
$(document).ready(function(){

```

```

$("#update_information").click(function() {
    var update_userid = $('#update_userid').val();
    var update_name = $('#update_name').val();
    var update_position = $('#update_position').val();
    var update_username = $('#update_username').val();
    var update_password = $('#update_password').val();
    var update_accountType = $('#update_account_type').val();
    if(update_name != "" && update_position != "" && update_username != ""
&& update_password != "" && update_accountType != "") {

        if(update_accountType == "ADMIN" || update_accountType == "USER")
        {
            $.ajax({
                url: "server.php",
                method: "POST",
                data: {
                    update_userid:update_userid,
                    update_name:update_name,
                    update_position:update_position,
                    update_username:update_username,
                    update_password:update_password,
                    update_accountType:update_accountType
                },
                success: function()
                {
                    $(".required-field").fadeOut(100);
                    $(".update-loader").show();
                    $(".update-loader").delay(3000).fadeOut(100);
                    $(".confirmation").delay(3000).fadeIn(100);
                    $(".confirm-banner").delay(3000).fadeIn(100);
                    $(".confirmation").html("<span
class='confirm-icon'><i class='fa-solid
fa-circle-check'></i></span><p>Account Updated Successfully!</p><a href='#'
id='back'>Back</a>");

                    $("#back").click(function() {
                        $(".confirmation").fadeOut(100);
                        $(".confirm-banner").fadeOut(100);
                    });
                }
            })
        }
    }
    else {
        $(".required-field").show();
    }
}

```

```

    }
    else {
        $(".required-field").show();
    }
});
});

```

Figure 33. Edit & Update Data

server.php

```

/*<- UPDATES ACCOUNT INFORMATION ->*/

if(isset($_POST['update_name'])) {
    $update_userid = $_POST['update_userid'];
    $update_name = $_POST['update_name'];
    $update_position = $_POST['update_position'];
    $update_username = $_POST['update_username'];
    $update_password = $_POST['update_password'];
    $update_accountType = $_POST['update_accountType'];
    $sql_account_update = "UPDATE accounts SET name='$update_name',
position='$update_position', username='$update_username',
password='$update_password', account_type='$update_accountType' WHERE
userid='$update_userid'";
    mysqli_query($database_conn, $sql_account_update);
}

```

Figure 34. Edit & Update Data

Delete

Shown in Figure 35 is the deletion of information from supply inventory through PHP POST method and SQL “DELETE FROM ... WHERE ...” command.

server.php

```

/*<----- DELETE ITEM... ----->*/

if(isset($_POST['delete_item'])) {
    $delete_item_id = $_POST['delete_item_id'];
    $sql_delete_item = "DELETE FROM supply_inventory WHERE
id='$delete_item_id'";
    mysqli_query($database_conn, $sql_delete_item);
}

```

```
?>
<script>
    document.location.href = "property-and-supply-inventory";
</script>
<?php
}
```

Figure 35. Delete Data

Appendix B

Evaluation Tool or Test Documents

INFORMATION AND DESCRIPTIVE SYSTEM ISO 25010 EVALUATION FORM

Security Indicator

Limits of Scale	Qualitative Description
4.21-5.00	Very Secure
3.21-4.20	Mostly Secure
2.61-3.20	Secure
1.81-2.60	Almost Secure
1.0-1.8	Not Secure

Compatibility Indicator

Limits of Scale	Qualitative Description
4.21-5.00	Very Compatible
3.21-4.20	Mostly Compatible
2.61-3.20	Compatible
1.81-2.60	Almost Compatible
1.0-1.8	Not Compatible

Efficiency Indicator

Limits of Scale	Qualitative Description
4.21-5.00	Very Efficient
3.21-4.20	Mostly Efficient
2.61-3.20	Efficient
1.81-2.60	Almost Efficient
1.0-1.8	Not Efficient

Functionality Indicator

Limits of Scale	Qualitative Description
4.21-5.00	Fully Functional
3.21-4.20	Mostly Functional
2.61-3.20	Functional
1.81-2.60	Slightly Functional
1.0-1.8	Not Functional

Maintainability Indicator

Limits of Scale	Qualitative Description
4.21-5.00	Strongly Agree
3.21-4.20	Mostly Agree
2.61-3.20	Agree
1.81-2.60	Slightly Agree
1.0-1.8	Strongly Agree

Usability Indicator

Limits of Scale	Qualitative Description
4.21-5.00	Very Usable
3.21-4.20	Mostly Usable
2.61-3.20	Usable
1.81-2.60	Almost Usable
1.0-1.8	Not Usable

Portability Indicator

Limits of Scale	Qualitative Description
4.21-5.00	Strongly Agree
3.21-4.20	Mostly Agree
2.61-3.20	Agree
1.81-2.60	Slightly Agree
1.0-1.8	Strongly Agree

Reliability Indicator

Limits of Scale	Qualitative Description
4.21-5.00	Very Reliable
3.21-4.20	Mostly Reliable
2.61-3.20	Reliable
1.81-2.60	Almost Reliable
1.0-1.8	Not Reliable

Group: _____

Title: _____

EVALUATION SHEET

Criteria		Score				
<i>Characteristic</i>	<i>Sub Characteristic</i>	1	2	3	4	5
1. Functionality	The system performs the tasks required.					
	The result is as expected.					
	The system interacts with another system.					
	The system prevents unauthorized access.					
2. Reliability	Most of the faults in the system have been eliminated over time.					
	The system is capable of handling errors.					
	The system notifies the user about wrong data entry.					
	The software resumes working and restores lost data after a failure.					
3. Usability	The user comprehends how to use the system easily.					
	The user learns to use the system easily.					
	The user utilizes the system without much effort.					
	The system's interface looks good.					
4. Efficiency	The system responds quickly to the user.					
	The system's execution time is appropriate.					
	The software utilizes resources efficiently.					
5. Maintainability	The system faults can be easily diagnosed.					
	The system continues functioning when changes are made.					
	The software can be tested easily.					
6. Portability	The system can be moved to other environments.					
	The software can be installed easily. <i>(for administrator)</i>					
	The software can replace easily other software. <i>(for administrator)</i>					
7. Security	The software ensures confidentiality of data					
	The software prevents unauthorized access and modification to computer programs and/or data					
	The software requires authentication of users					
	A system log is maintained.					
8. Compatibility	The software performs its required					

Criteria		Score				
<i>Characteristic</i>	<i>Sub Characteristic</i>	1	2	3	4	5
	functions efficiently while sharing a common environment and resources without negatively impacting any other product/s.					
	The software allows two or more systems, products, or components to exchange and use the information.					

Evaluator's Name (*optional*) and Signature

Date

Appendix C

Sample Reports

Appendix 59

INVENTORY CUSTODIAN SLIP

Entity Name: Southern Leyte State University

Fund Cluster: SLSU ICS No.: ICS-3

Quantity	Unit	Amount		Description	Inventory Item No.	Estimated Useful Life
		Unit Cost	Total Cost			
1	Furniture	2000	2000	Office Table	9	5 Years
1	Device	12000	12000	TV Monitor	5	5 Years

Received From:

MIGUEL BIDON
Signature Over Printed Name

AOV
Position/Office

2022-12-17
Date

Received By:

RONALD ESCARIO
Signature Over Printed Name

SYSTEM ANALYST
Position/Office

2022-12-17
Date

Appendix 71

PROPERTY ACKNOWLEDGEMENT RECEIPT

Entity Name: Southern Leyte State University

Fund Cluster: SLSU PAR No.: PAR-3

Quantity	Unit	Description	Property Number	Date Acquired	Amount
8	Device	Apple MAC OS	11	2022-12-17	120000
30	Equipment	ASUS Computer	1	2022-12-17	35000

Received By:

JESSA MAE CULPA
Signature over Printed Name of End User

TECHNICAL WRITER
Position/Office

2022-12-17
Date

Issued By:

MIGUEL BIDON
Signature over Printed Name of Supply and/or Property Custodian

AOV
Position/Office

2022-12-17
Date

Appendix D

User's Guide

Administrator's Manual

1. Conduct Supply and Property Inventory

- Go to dashboard, and click **Property And Supply Inventory -> Property Inventory**
- Go to dashboard, and click **Property And Supply Inventory -> Supply Inventory**

2. Create Account

- For end users to use the website and track their office transactions, the administrator must first register an account for them. End-user accounts will also be utilize during receipt issuance/releasing of products based on their requests. In the Dashboard, click **Create Account** panel.

3. Dispose Item/Property

- Go to dashboard, click **Property And Supply Inventory -> Property Inventory** and click **dispose** button in the right side of the product table.

4. Item Issuance to the End-User

- In the Dashboard, click **Property And Supply Inventory -> Supply Inventory** -> then click **add-to-cart** button that can be found in product table - action buttons.
- Go back to Dashboard, click **Release Item & Issue Receipt** then input quantity and click **update quantity**. After updating the preferred quantity, click **Release All Queues** then choose receipt (ICS - Items with less than 15,000 cost) (PAR - Items with greater than 15,000 cost). Then kindly input and select End-User.
- In the Issue Slip/Receipt page, fill up the blank fields to complete the necessary information. Then click **Finish Transaction** to complete the process. The administrator can cancel transaction anytime by clicking **Cancel Transaction**.
- After finishing the transaction, the Receipt will generate automatically. Go back

home and in the dashboard, click **Pending Requests**. In this page, you can approve or delete transaction by clicking the action buttons provided in the right side of the table.

5. Log-In

- To access the system, visit <http://127.0.0.1/slsu.pics/login>
- The user must have an account to log on to the site. Provide log-in credentials such as username and password. For administrator access, e-mail us: stupiditechs@gmail.com

6. Manage Accounts

- Go to dashboard sidebar, and click **Manage Accounts**. The administrator can edit/update account information through edit button in the action column.

7. Printing Document for Back-Ups

- In the dashboard sidebar, go to **Settings** then click Print Data for Back-Up and choose table to be printed.

8. Printing ICS or PAR Documents

- Printing Receipt can be done after finishing transaction through print button provided by the system (Check **Item Issuance to the End-User**).
- View and print receipt in the dashboard then recent transaction table and click **open folder** button in the Slip/Receipt Type column. After redirecting, click **Print/Save as PDF**
- View and print receipt in the dashboard, click **View Profile** and click **open folder** button in the Slip/Receipt Type or Transaction Slip Type column. After redirecting, click **Print/Save as PDF**
- View and print receipt in the dashboard, click **Search Property** and click **open folder** button in the Slip/Receipt Type or Transaction Slip Type column. After redirecting, click **Print/Save as PDF**

9. Report Problem

- Go to dashboard sidebar, and click **Report Problem**

10. Search End-User

- In the dashboard, click Search End-User. In this page, you can search people and view their respective accounts.

11. Search Property

- In the dashboard, click Search Property. In this page, you can search property information and transfer property whenever necessary through **transfer** button.

12. Settings

- Go to dashboard sidebar, and click **Settings**
- In this page, the administrator can edit his/her account, manage transaction queue, print data for back-up, and view system logs.

13. Supply Inventory

- To add new supply and category, click **Property And Supply Inventory -> Supply Inventory ->** then click **+ Product** and **+ Category** buttons.
- The administrator can manage product/item and category information through action buttons that can be found in the right side of each table. (edit, add to cart, delete).

14. Transfer Property

- Go to dashboard, click **Search Property** and in the right side of the table, click **transfer** button.
- Click **Transfer** button in the header. In this page, click **Release All Queues** and choose receipt (ICS - Items with less than 15,000 cost) (PAR - Items with greater than 15,000 cost). Then kindly input and select new custodian or End-User.
- In the Issue Slip/Receipt page, fill up the blank fields to complete the necessary information. Then click **Finish Transaction** to complete the process. The administrator can cancel transaction anytime by clicking **Cancel Transaction**.
- After finishing the transaction, the Receipt will generate automatically. Go back home and in the dashboard, click **Pending Requests**. In this page, you can approve or delete transaction by clicking the action buttons provided in the right side of the table.

15. View Archives

- Go to dashboard, click **Property And Supply Inventory -> Archives** or you can click archive button in the header.

16. View Daily Summary Reports

- Go to dashboard, and click **Property And Supply Inventory**

17. View Profile

- Go to dashboard sidebar, and click **View Profile**. In this page, you can search and view PAR and ICS Documents as well the Archives of that specific account.
- Go to dashboard, and in the recent transaction table - End-User/Requester Name column, click the **view** profile icon. In this page, you can search and view PAR and ICS Documents as well the Archives of that specific account.
- Go to dashboard, and click Search End-User - Action column, click the **view** profile icon. In this page, you can search and view PAR and ICS Documents as well the Archives of that specific account.

18. View Notifications

- In the header, click **Updates**.

19. View Transaction History

- Go to dashboard sidebar, and click **Transaction History**

User's Manual

1. Conduct Property Inventory

- Go to dashboard, and click **Property Inventory -> Property Inventory**

2. Log-In

- To access the system, visit <http://127.0.0.1/slsu.pics/login>
- The user must have an account to log on to the site. Provide log-in credentials such as username and password.

3. Printing ICS or PAR Documents

- View and print receipt in the dashboard then recent transaction table and click **open folder** button in the Slip/Receipt Type column. After redirecting, click **Print/Save as PDF**
- View and print receipt in the dashboard, click **View Profile** and click **open folder** button in the Slip/Receipt Type or Transaction Slip Type column. After redirecting, click **Print/Save as PDF**
- View and print receipt in the dashboard, click **Search Property** and click **open**

folder button in the Slip/Receipt Type or Transaction Slip Type column. After redirecting, click **Print/Save as PDF**

4. Report Problem

- Go to dashboard sidebar, and click **Report Problem**

5. Search Property

- In the dashboard, click Search Property. In this page, you can search property information.

6. Settings

- Go to dashboard sidebar, and click **Settings**
- In this page, the user can edit his/her account.

7. View Archives

- Go to dashboard, click **Property Inventory -> Archives** or you can click archive button in the header.

8. View Profile

- Go to dashboard sidebar, and click **View Profile**. In this page, you can search and view PAR and ICS Documents as well the Archives of that specific account.
- Go to dashboard, and in the recent transaction table - End-User/Requester Name column, click the **view** profile icon. In this page, you can search and view PAR and ICS Documents as well the Archives of that specific account.

9. View Notifications

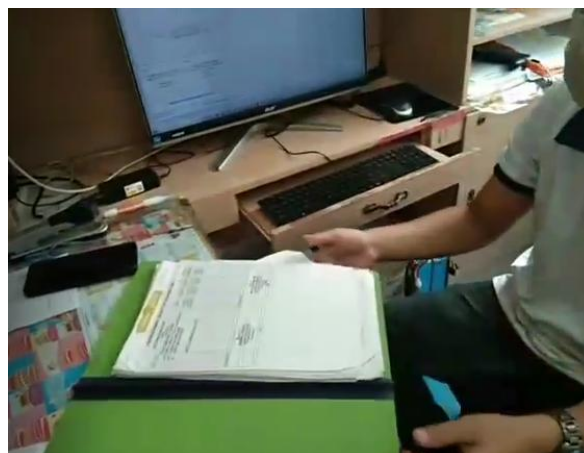
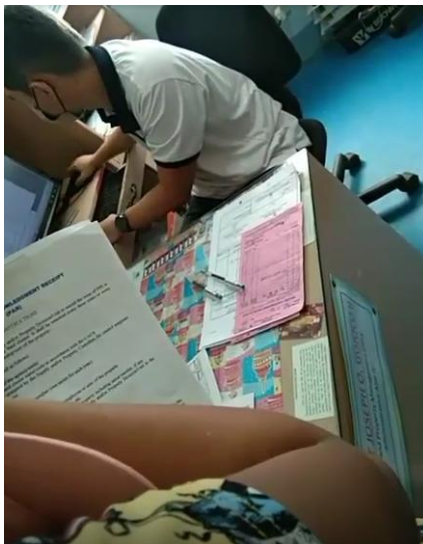
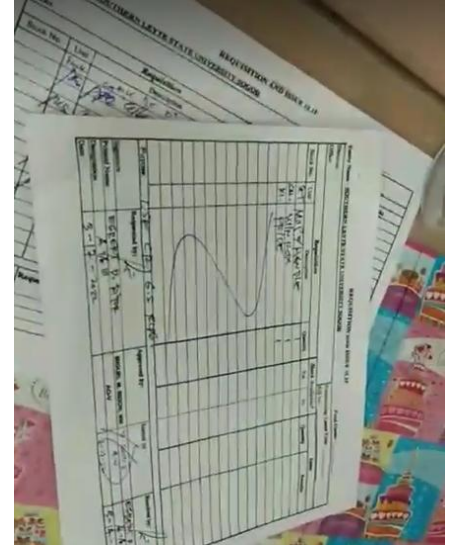
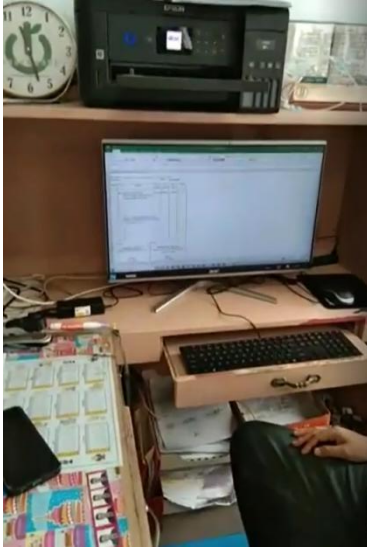
- In the header, click **Updates**.

10. View Transaction History

- Go to dashboard sidebar, and click **Transaction History**

Appendix E

Pictures Showcasing the Data Gatherings and Investigation



Appendix F

Curriculum Vitae



Personal Information

JEMUEL CADAYONA
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Phone:

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Birth-Date:

August 3, 2001

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Single

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Male

Educational Background

Degree:

Bachelor of Science in Information
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Year:

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School/University:

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Appendix F

Curriculum Vitae



Personal Information

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Appendix F

Curriculum Vitae



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Appendix F

Curriculum Vitae



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Appendix F

Curriculum Vitae



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Appendix F

Curriculum Vitae



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Civil Status:
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Gender:
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Educational Background

Degree:
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School/University:
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