



Pateros Technological College  
College St. Sto. Rosario-Kanluran, Pateros, Metro Manila

## **ONLINE THESIS ARCHIVING SYSTEM OF PATEROS TECHNOLOGICAL COLLEGE**

In Partial Fulfillment of the Requirements in the  
Institute of Information and Communication  
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## CHAPTER 1

### THE PROBLEM AND ITS BACKGROUND

#### Introduction

Archiving system is one of the processes of securely storing information that is no actively being used on a regular basis in digital formats for long-term preservation. Organizations still appreciate this information, therefore it must be stored for future use. Archiving systems helps to decrease data loss, improve document security and increase compliance with various rules and regulations while also providing review and legal proof.

This study involves lower-year students who are struggling to find helpful references for their upcoming final-year project. It allows students to archive and manage their final year thesis projects and lower-year students can search for and view a specific thesis that they are looking for in one platform. This makes it simpler for students to save their thesis on one platform and makes it easier to find a certain document. Additionally, this helps students in assessing the originality of their work and in improving the grammar of their thesis to make it sound more professional.



Through this, administrators can verify that all uploaded documents in the system are relevant and helpful for the students' reference by carefully reviewing the accuracy of the thesis documentations. Additionally, because the system will categorize all saved thesis documents based on their content, students will be able to quickly access detailed information about the documents they're looking for. This may allow students to minimize their time and effort when looking for specific information or the document.

The system provides students with an easy way to organize and manage their thesis documentations and enables them to search for a specific keyword to find a document that matches the searched word. It also has additional features, like a plagiarism checker and a grammar checker, that may be useful for students to assess the originality of their work and how professionally the words are used in the document. This could help prevent students from being caught plagiarizing from others. Students can simply navigate the online archiving system because the system is also user-friendly.



### **Background of the Study**

On August 16, 1993, Pateros Technological College opened for business. With the help of a specialized organization, Systematic Computer Education and Services, Incorporated, which provided the curriculum and its faculty, the institution first established short-term and two-year computer courses. Former Mayor Jose T. Capco, Jr., and the PTC Board of Trustees had taken innovative measures to expand their technical-vocational education program and services in collaboration with the Technological University of the Philippines (TUP), a state-run University, in response to the community they serve's overgrowing educational needs. Higher education's academic structure includes both technology and industrial education. Additionally, PTC will be created as a location for TUP's undergrad off-campus programs.

This community is known for its duck farms, particularly for producing the specialty balut, which is created from a cooked, fertilized duck egg. In Pateros, rice cakes called "inutak" and red salted eggs are both well-liked. The city is known for its "alfombra," a type of native footwear with a cloth like a carpet on top. The National Capital Region's Department of Education, Culture, and Sports was given a letter of intent from then-Mayor Jose T. Capco, Jr. on July 22, 1991, to establish a technical college in Pateros. The advice is supported by decisions made by the Pateros Municipal Council, Secretaries, and Treasurers.



The manual method of organizing and storing the thesis for capstone documentation makes it difficult for students to find a specific thesis document that can help them in preparing for their upcoming capstone proposals, because there is no assigned location where all the said thesis documents are being stored, and manual arrangement of the said papers is a hassle for the admins and may result in an unorganized arrangement of the documents. This manual method of managing the documentation runs the risk of losing some of them. Students do not seem to have easy access to hard copies of documentation at school and there is no guarantee that all documents will always be available.

This includes a number of benefits that will enable students to access all the thesis documentation that have been approved and are available in the system. This will be beneficial to them and may serve as a guide for how they should document their own capstone thesis. With the student-uploaded thesis documentation, this can make it easier for administrators and students to gain access. It might make students less frustrated about where to look for more sources of credible writings that they can use as the basis for their papers, depending on the subject matter.

This study intends to make it easier and more convenient for students to navigate through various approved documents that may assist them in their studies and to reduce the burden of students having to come to the school to





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have access to the approved documents they need for their references. According to the Ricoh Corp. (2021) the archiving systems have proven very beneficial to various enterprises and organizations, particularly during the pandemic. Since we have been complying to numerous health protocols to prevent the virus's transmission, it has become essential to convert all hard copies of papers into digital format. Physical interaction is restricted due to the pandemic, which forces all industries including the education sector to adopt technological formats. This leads the researchers to make a conclusion that an online archiving system will greatly benefit Pateros Technological College students by allowing them to access approved papers quickly through the system's digitized copy.



### **General Objectives**

The Online Thesis Archiving System gives the student of a certain organizations or School Colleges an online access to store thesis paper of their final year capstone projects and allow lower-year students to find some references and Ideas for their upcoming final year project. The online thesis archiving is easy to use since it's organized and manage the thesis documentations and enables them to search for a specific keyword to find a document. The plagiarism checker and a grammar checker useful for students to assess the originality of their work. The goal of the online thesis archiving is to help the students easily find references and also easy access to the different thesis paper.

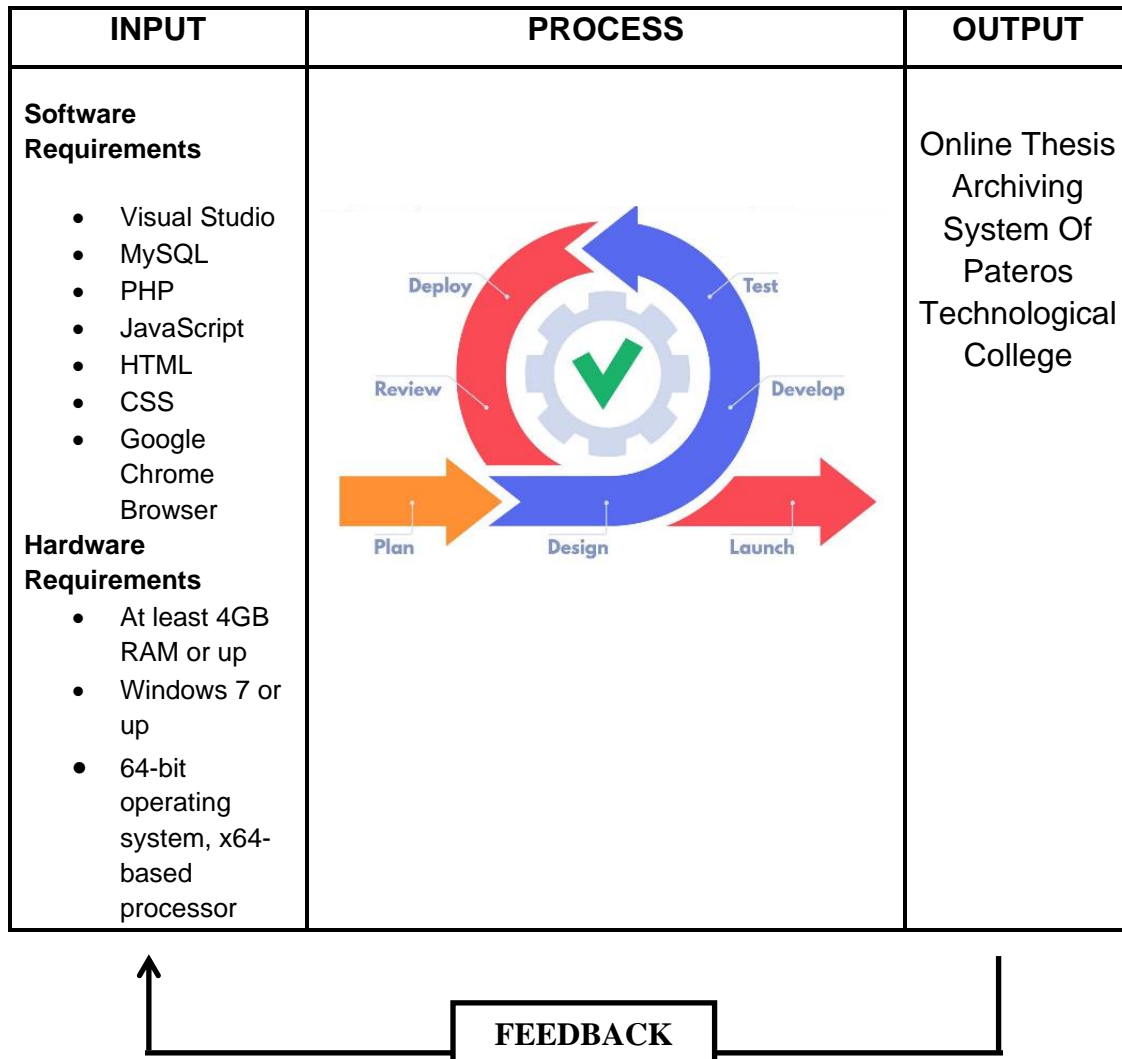
### **Specific Objective**

- Provide security for the records.
- It can easily search the thesis record of the students if they are already submits or not.
- Provide easy access of information such as the title, names of the group member and the date of submission.
- The system identify plagiarism and also suggest properly grammar.



### Conceptual Framework

The table below is the conceptual framework using the Input, Process and the Output (IPO) model. The diagram below shows the flow of the study:



**Figure 1.** The Input, Process and Output

The figure shows the Input-Process-Output of the study. The Input consists of the raw data needed to address the problem.



### **Significance of the Study**

The Development of Online Thesis Archiving System for Pateros Technological College is significant to the following:

**To the School**, this will be helpful for the said Institution to compile all approved research paper by digitalizing all the documents and stored it into one platform.

**To the Students**, it will help them with their studies and prepare them for their own project proposals in the future by enabling them to access, manage, and keep all approved documentations inside of an online archive system.

**To Future Researchers**, this will serve as a reference for their thesis, and it might suggest ways to improve the study which has already been done. They can also enhance the system by including additional features and designs that are relevant to the research. The goal and ambition of the researchers is to reinforce the foundations of online learning.



### **Scope and Limitation of the Study**

The objectives, features, functions, and tasks of this study are typically decided upon by the researchers. To be able to describe the procedure, we include the Scope, in which the features and concepts of the study are inputted. Since the period of time available for creating the study is limited, the researchers also describe the limitations as we find.

### **Scope of the Study**

#### **System Admin Module**

The system admin will be the one to manage the entire system and responsible for managing and monitoring of how many registered students and totally archived on the system.

#### **Manage Thesis Module**

Admin can review the submitted thesis paper of the student before it can be published in the system.

#### **Security Log in Module**

This will implement an account or log in option so the students will have their privacy and store their thesis online.

#### **Forgot Password Module**

To retrieve the account there will be an authentication that will require a school id option to verify the user's identity.



### **Store Thesis Module**

. Students will be able to use the system to store their thesis documentation online and give feedback or comments on the thesis.

### **Archived Thesis Module**

Student will be able view other thesis paper of other student that stored in the system, if the student is the owner of the thesis, they can edit the document.

### **Plagiarism & Grammar Module**

This might be useful for students to assess the originality of their paper and how properly the words are used in the document.

### **Limitation of the Study**

- Only PTC students has access to the system
- The only person who can edit the uploaded documents is the owner; everyone else can only view it
- Only approved thesis paper by the admin can be published on the system
- The student can't download thesis project for the security of thesis owner



## Definition of Terms

The objective of this section is to help the reader and potential future researchers understand the study's confusing terms.

### Technical Term

**Archive** - a collection of historical documents or records providing information

**Data** - collection of discrete values that convey information.

**Database** - collection of information organized so that a computer application can quickly access selected information

**System** - a group of interacting or interrelated entities that form a unified whole

**Software** - the programs and other operating information used by a computer

**Thesis** - a document submitted in support of candidature for an academic degree or professional qualification presenting the author's research and findings.

**Documents** - a piece of written or printed matter that provides information or evidence or that serves as an official record.



**Account** - the combination of username and password that provides an individual, group, or service with access to a computer system or computer network.

**Administrator** - process of organizing an institution or organization.

**Access** - ability to use, create, modify, view, or otherwise manipulate information on a system.

**Technology** - is hardware and software that detects or causes a change, through the direct monitoring and control of industrial equipment, assets, processes and events.

**Internet** - an electronic communications network that connects computer networks and organizational computer facilities around the world.

### **Operational Term**

**Sublime Text** - A shareware cross-platform source code editor, it natively supports many programming languages and markup languages.

**Google Chrome** - browser an open-source program for accessing the World Wide Web and running Web-based applications.





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**PHP** - An extremely popular scripting language that is used to create dynamic Web pages and combining syntax from the C, Java and Perl languages, PHP code is embedded within HTML pages for server-side execution.

**MySQL** - An open-source relational database management system. It is based on the structure query language (SQL), which is used for adding, removing, and modifying information in the database. Standard SQL commands, such as ADD, DROP, INSERT, and UPDATE can be used with MySQL.

**Xampp** - Is a free and open-source cross-platform web server solution stack package developed by Apache Friends, it consists mainly of the Apache HTTP Server, MariaDB database, and interpreters for scripts written in the PHP and Perl programming languages.

**JavaScript** - An object-oriented computer programming language commonly used to create interactive effects within web browsers.

**Bootstrap** - Is a free and open-source CSS framework directed at responsive, mobile-first front-end web development. It contains HTML, CSS and JavaScript-based design templates for typography, forms, buttons, navigation, and other interface components.

**CSS** - Cascading Style Sheets is a style sheet language used for describing the presentation of a document written in a markup language such as HTML or



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XML. CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript.

**HTML** - The HyperText Markup Language or HTML is the standard markup language for documents designed to be displayed in a web browser. It can be assisted by technologies such as Cascading Style Sheets and scripting languages such as JavaScript.



## CHAPTER 2

### REVIEW OF RELATED LITERATURE

#### Related Literature

##### Foreign

An online archiving is a web-based system that can student stored their thesis online. The challenge of managing thesis is that there is no designated spot where all the mentioned thesis documents are being held, making it impossible for students to identify a certain thesis document that might enable them in preparing for their future capstone proposals. Additionally, manual organization of the preceding papers is a bother for the administrators and may result in a disorganized arrangement of the documents. The researcher is developing a web-based archiving system that will ease the burden of students forced to come in the school in order to have access to the documents they need for their references and make it easier and more convenient for them to browse through various provisions that may help them in their studies. The system will also be able to check plagiarism and grammar assess the originality of their work and how professionally the words are used in the document.



As technology has advanced, the amount of information available grows, outpacing the capacity of archiving. Additionally, an online system would offer a greater possibility to access the data from many locations and would be highly beneficial for study (Ibrahim Atli, et al. 2015). We have outlined three separate user categories due to security considerations. The first group of users can just watch; the second group can view and download; and the third group of users, known as administrators, have access to all three groups of features as well as the ability to manage user accounts.

According to Rahman and Al-Haidari (2019). The availability of primary representation information requires wider support for languages where the first search queries can be supported by any piece of data from any source. Because there are currently a number of cooperative XML search engines established, these approaches are helpful for XML-based retrieval. These search engines analyze XML files containing material that is surrounded by important fields meaningfully. Since competent retrieval of data is the goal, XML files are utilized to store and index the data. The educational domain is the focus of this research's attempt to close the customized representations and retrieval gap. The retrieval of findings has been done using a repository of journals, books, e-books, thesis, and other materials from an institute.



Digital archiving and data management systems have lately replaced the traditional archives used for storing printed materials in order to organize and keep all the information that has been gathered and utilized in universities and colleges. The requirement to create, gather, store, organize, and increase the data that organizations utilize for their everyday operations is the foundation for the usage of information management systems in educational institutions (Maican & Lixandroiu, 2016).

Data must be archived with just enough complementary and enlightening information to allow others to correctly analyze it. To fulfill the responsibility of the data author, the re-user must cite both the work and his package of data (M. Whitlock, 2010). The journal should also think about requiring that all data for published articles be archived. Additionally, archiving increases the chances that the researchers who first gathered the data would be acknowledged.

Businesses today generate and store more data than ever before in history. Database archiving is the process of taking out specific data records from operational databases which aren't likely to be accessed again and storing them in an archive data store where they could be recovered if necessary (Craig Mullins, 2006). There are several ways that data that's also



stored in database different from other forms of data. The main purpose of using a DBMS is to force the data into a logical, organized arrangement.

Metadata describing archived online material is commonly given through a variety of discovery systems, such as finding aid compilation or integration into library catalogs (J. Venlet, 2018). They expanded past published articles to include blog posts, slide decks, tweets, and even conference notes in an effort to include the entire range of current research and practice in web archiving because it is a field that is rapidly developing and changing. Archived web data is usually provided in a form that exceeds the technological capabilities of users, resulting in a significant barrier to usage. This might be reduced by creating accessible tools and interfaces that make it easier to access and adapt material.

According to Terry Cook (2009). Archives are not problem-free repositories of records that awaiting historians, but active places of institutions and powers. Until recently, it was in the interest of both professionals to deny, and at least not question, the subjectivity of the archives. Both professions can therefore benefit greatly from new partnerships focused on record history to produce better stories.



### **Local**

Bantolo, et al. (2008) state that the dormitories at Central Philippine University have been implementing a manual approach to gather and store files and records in a cabinet, which takes up too much room for the bulk of documents. They have several difficulties as a result of this manual method of record storage, particularly when looking for a certain record. The researchers get an opportunity with this problem to suggest a web-based records management system that will make it simple for the dormitories to locate a specific document they want at any moment. By doing this, the dormitory is also able to store all of its records in a more organized manner. Additionally, they do not restrict the application of the new system's usage to a single dorm but rather to a group of resident halls. This type of method in providing a solution for a problem is a beneficial technique since, in the present society, all manual transactions have been overtaken by systematized, digital processes as technology has been continuously advancing.

The techniques in wired and wireless networks to assist librarians and researchers inside and outside of libraries in accessing electronic archiving, including archives of abstract research papers in wired and wireless networks to view, download in jpeg format for the copyright protection and IPR law, and print in real-time (B. Alpasan, 2022).



According to L.J. Caluza (2017). The usual technique of data storage has proven its importance in document management from security, retrieval, and monitoring. The mass of the records was distributed and decayed in the Registrar's archive/storage area, which was severely damaged.

The importance of archiving in maintaining collections of all sorts and sizes has long been recognized. From books to artifacts, archives preserve items chosen for their authenticity and uniqueness, especially those unlike any other because items of a similar type have been lost or damaged (Nick Deocampo, 2018). The traditional practice of centralizing archiving, whether it was carried out by academic institutions, business organizations, or government agencies, produced what seems to be a linear orientation describing its structure and functions as a record-keeper.

The most of materials are saved and archived for future use after their usefulness has ended. Large storage spaces were needed but they used up important resources and the shortage of further storage space has turned those resources into raw materials (Subia & Corpuz, 2020). As there is no guarantee in handling or transferring to protect physical papers and provide security and privacy, stored records are equally subject to the risk of destruction, loss, or improper archiving.





According to Cuevas & Casauay (2022). Electronic Archiving System was developed to save documents in a secure database that can be simply retrieved and free amount of damage. It should also be emphasized that the most efficient way to have a good process in keeping the records is to have organized manual operations aside from a computerized archiving system to automate it.

The preservation efforts being made to assure the data resources will be accessible to scholars for a long time. Hence, ensuring an indigenous group's memory culture. The goal of the Archives is to collect and make historical records available to academics. The purpose of preserving the pictures, letters, drawings, maps, and other original sources that are part of the collection and knowledgeable of the issue of degradation is directly linked with the acquisition of materials. In order to preserve the archives collection, they are starting a digitizing process (C. Villanueva, 2013).



## **Related Studies**

### **Foreign**

Finding a thesis subject might be difficult, however the work from prior Final Year Projects (FYPs) can be accessed by students to assist them come up with ideas. Nevertheless, past FYP papers are often preserved in designated paper rooms, therefore going to the thesis room to find for the thesis references is rather difficult (MatTaib, Mohd Shukri, Ahmad Zukri and Ghazali, 2020) and hence by offering a web-based smart archive system as a platform to obtain the previous FYP thesis, it facilitates the user.

Digital archiving of manuscripts and other heritage items for conservation and information retrieval (Raman Nair, 2004), organizations such as UNESCO to make it simple for individuals to share and pool information and documents produced by digital archiving systems on a national and worldwide level. It is also emphasized how important it is to create language technology for regional scripts in order to organize and save our cultural heritage.

Digital data archiving assures, at the very least, that a researcher's information is saved and available to the user for decades throughout his or her vocation. Beyond the lifespan or field location of a single researcher, digital archiving has the ability to preserve the entirety of social scientific



information for the benefit of the larger academic community (Cliggett, 2013). The archiving and data sharing movement has encountered opposition within the qualitative social science community.

According to Maja Krtalić, et al. (2016). Students commonly organize their activity when it comes to preservation, but usually just for information and records they consider important and that they might need in the future. Students managing practices typically focus on classifying papers into categories according to the kind and relevance of each document while using particular tools to manage their collections is pretty uncommon.

Archiving is a process of preserving and protecting materials for future use. The only reason the artifacts are maintained after they have outlived their use is to fulfill any historical inquiries or curiosity in the future (Jack Olson, 2010). Their artifacts are stored in archives for a very long time. They are kept around in case somebody needs or wants them in the future. They are also stored in a way that will allow for future usage.

The importance of digital information preservation was emphasized through the use of information technology in archival contexts. Conservation efforts and the development of supporting tools, practices and approaches are essential (Hugo Quisbert, 2006). Digital archiving is a relatively new way of



preserving information It is not excess to say that the discipline of digital archiving or archival informatics is a discipline that evolved from Information Technology and Archival Science.

The majority of archival education is developed for library school graduate students who want to work as professional archivists (Jessica Wagner, 2020). While most students do not need to understand the specifics of reference requests, organization and description, and archiving, most would benefit from knowing what archives perform and how archivists work affects their lives and the state of the world at general.

### **Local**

Students give a hardbound and digital copies of their thesis and papers for special problems to their respective departments (Armacheska Satina, 2017). Problems such as duplication and missing manuscripts are common with current methods. This is because printed and electronic copies stored on optical discs are easy to lose and difficult to track when borrowed. As a result, the system as a whole is relevant, useful, inexpensive, and performs its function reasonably effectively for the user. However, storing the database is really what presents the most challenge in this situation, not of using the system. To ensure that every manuscript is recorded in the database, adding manuscript data to the system must be a requirement for every department.



Record archiving system development research technique as having two phases: the analysis phase, where the needs are evaluated, and also the design and development phase (Elpidio Villarosa, 2021). A Record archiving system was intended to provide a paperless data management system, speed up data retrieval and recording, and ensure reliable database backups.

According to Cabonero and Barut (2021), Archival records are produced as a result of an organization's operations and activities, they serve as a valuable resource for both individuals and groups as well as the larger community. These records include information and proof concerning the creator's acts and the setting in which they occurred. They are further preserved for long- and medium-term management (Forde & Lewis, 2013). While the terms records and archives are often used interchangeably, records refer to the output of people and organizations current operational processes and activities, while archives are typically reserved for records that can also be used for other purposes, such as historical and other research (Brown, 2014).

The significance of digital preservation is emphasized in light of the music industry's current reliance on digital recording and development. Additionally, it might provide a foundation for independent or new record companies to digitally arrange and maintain their collection in accordance with



archiving procedures (Mirabueno, 2018). The preservation strategy for digital data must be created, along with appropriate file naming standards and organization plans, backup copies for audio recordings, regular maintenance and checks of recording equipment and systems and backup copies for audio recordings.

The development of Personal Digital Archives (PDAs) has been helped by the accessibility of inexpensive digital storage. Future planning, personal accomplishments, and identification are some of the factors behind the creation of PDAs. The integrity and accessibility of PDAs was represented by the creators' knowledge with digital preservation techniques. Schools and colleges that provide video game production programs are the only places where video games may be preserved. While they are given to the institution, it is typical for students and alumni to have private copies of their work on their own storage drives (Toda & Olgado, 2018).

According to Manjares (2018). The management of records and archives is a problem for the school library. The problems include a lack of systematic classification and organization of records, missing records, and ineffective access to and retrieval of records and archives. Some archives have already been categorized by type, but the majority have not and some



have not yet been collected, categorized or labeled. The library lacks any manuals or written instruments for managing documents and archives.

They have obligations, roles, and practices regarding the management of archives and records, as well as the responsibilities and duties of barangay secretaries, treasurers, and heads with regard to the management of archives and records. To come up with guidelines were then made to help the barangays' present condition of records and archives management and their compliance with laws and regulations (Juanson, 2012). Additionally, it is necessary to collaborate with the appropriate government agency, such as the National Archives of the Philippines (NAP), to make sure that their archives and record-keeping procedures follow among all relevant rules and laws. Therefore, it is advised that the barangay head should made to attend sessions educating them of the necessity and significance of setting up formal records offices in their barangays.



### **Existing Related System**

#### **MyTO**

Malaysian Thesis Online (MyTO) is a project to organize the collection of thesis and dissertations from Malaysia's public and private institutions. MyTO offers simple access and retrieval using search engines that return precise search results through simple search, the use of a mix of Boolean operators, full-text search, and the availability of the browsing function.

#### **ResearchGate**

ResearchGate is a platform which goal is to connect the scientific community and help open research to 20 million researchers throughout 190 countries and a wide range of fields. This platform makes a difference and aims to enable researchers to communicate with one another, gain access to the tools they require for success, and accelerate, equitably, discover, and make science accessible to all. Generally, the platform enables for the private storage, private sharing, and public sharing of several kinds of material.

#### **UPMARD**

University of the Philippines Archives and Records Depository (UPMARD) was developed to gather, arrange, and preserve archival materials that support the development and growth of the University. It also offers





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suitable and adequate storage, protection, and preservation conditions for archival material. UPMARD supports research, preservation and conservation programs, exhibits, outreach and publications related to the University's documented history.

#### DA@UPD

University of the Philippines at Diliman's Digital Archives provides online access to digital collections like theses and dissertations as well as associated metadata about the documents. It also identifies, acquires, maintains, and preserves the university's digital institutional records and memory while also providing access to those records.

#### USTDigitalLibrary

UST Miguel de Benavides Library project involves the preservation, digitization, and publishing of the valuable UST heritage library collections that are kept at the library along with the archives collections. The following goals of digitizing the library's valuable heritage collections are to provide access to materials which are no longer accessible due to format obsolescence; to provide access to materials that are unavailable due to format obsolescence; and to preserve original records by reducing frequent handling while in use.



#### LU-eLibrary

Laguna University Library aims to provide students the library and information services that are most relevant and significant for their personal development. The LU Library continues to support and supplements the university's structural program by providing quality, most current, and most sufficient library resources. It also encourages a love of reading and learning, in addition to the use of modern technology for lifelong learning.

#### **Synthesis of Related Literature and Studies**

According to Maican and Lixandriou (2016), digital archive and data management systems are used at universities and colleges to organize and store all of the information that is gathered, and digital archiving has the ability to preserve all of the information that can be easily accessed by students, as stated by Cliggett (2013). Given the increasing number of students from universities who have completed their own thesis, preserving it in cabinets or rooms may result in exceeding the capacity for archiving information, as mentioned by Ibrahim Atli et al (2015). Furthermore, as indicated by Armacheska Satina (2017), maintaining hardbound provided by students has typical issues such as duplications and missing papers. Using online technologies for storing data will allow users to conveniently access it and will be hugely beneficial to students.



The online archiving system will be very beneficial for the institution's increasing population because it simply means that more students will need thesis references for their future research, and having an online archiving system would therefore allow the institution to store old and new documents in one platform. This method will allow them to prepare the institution towards keeping a large number of documents in a well-organized and simple-to-use system. As stated by L.J.Caluza (2017), the use of online archiving systems is important for document storage and management.

This Online Archiving System will enable the institution to offer better service to students by assisting them in finding references that will be very important for their thesis. Accessing documents online helps students identify their references and makes it easier for the IT Department to manage and preserve student documentation paper for their capstone project. According to MatTaib, Mohd Shukri, Ahmad Zukri, and Ghazali (2020), finding previous thesis for referencing will help students come up with unique and reasonable solutions to apply to their research. Because finding references is difficult, an online archiving system will help students search up for references because the system will provide better access to share documents and information, as stated by Raman Nair (2004).



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According to Elpidio Villarosa (2021), the goal of this Archiving system is to have a paperless means of maintaining the dissertation from the institutions that will allow for easy data management, speed data retrieval, ensuring database backups, and avoiding potential problems when utilizing a manual method of preserving hardbound thesis papers. The system's primary purpose is to assist students in quickly finding references and gaining access to various dissertations. It is a web-based program where students may submit or save their thesis project, update it, and it also contains a plagiarism and grammar checker that students can use to analyze the originality of their work and how properly the words are used in the document. Students who read the thesis are encouraged to make recommendations, comments, and evaluations. The system will also show how many students have accessed or read that student's thesis. The administrator will evaluate the student's thesis project before it is published on the system.



### **CHAPTER 3**

#### **RESEARCH METHODOLOGY**

This chapter describes the specific methods and procedures for creating a web application. It contains a critical assessment of the development of an accessible web-based archiving system.

##### **Descriptive Research**

It is a method that focuses on design, process, and developing that must applied in the web application entitled Online Thesis Archiving to be able to achieve the desired outcome and criteria of implementing archiving system.

We the researchers used descriptive research to adapt and develop an archiving system that will help the institution as well as the students to find their references easier when doing a thesis. It also contains a plagiarism and grammar checker that helps to the learners to support while doing a thesis paper.



### **Experimental Research**

This method allows the researchers to identify and analyze the factors which affect a certain system.

We the researchers used experimental research to determine how an online archiving system will help the organization by applying a scientific method to develop a reliable web application and better expectations.

### **Developmental Research**

This method focuses on designing, developing, processes and assessing instructional programs within the system. It shows that must achieve the institutional coherence and effectiveness standards.

The purpose of the archiving thesis is to make it easier accessible for the learners to find out references for their doing thesis. The researchers strive to study the step-by-step process of implementing the system to prevent major and minor technical issues.



### Flowchart (USER)

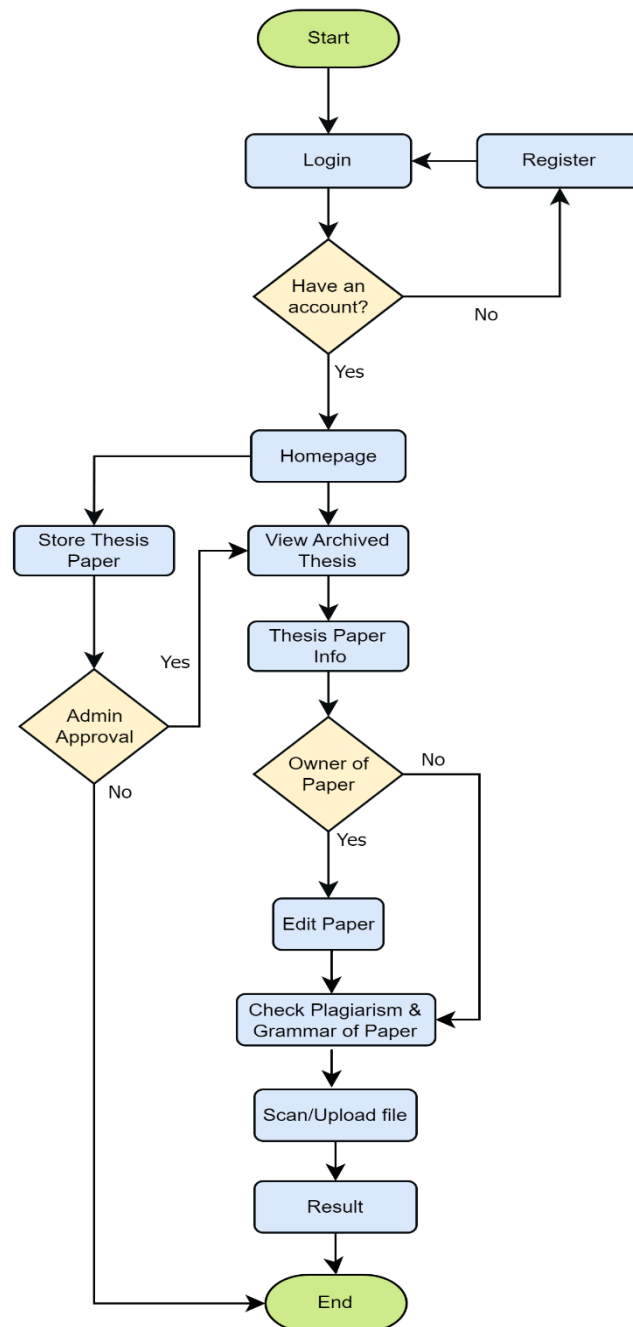


Figure 1. Flowchart (USER)



### Flowchart (ADMIN)

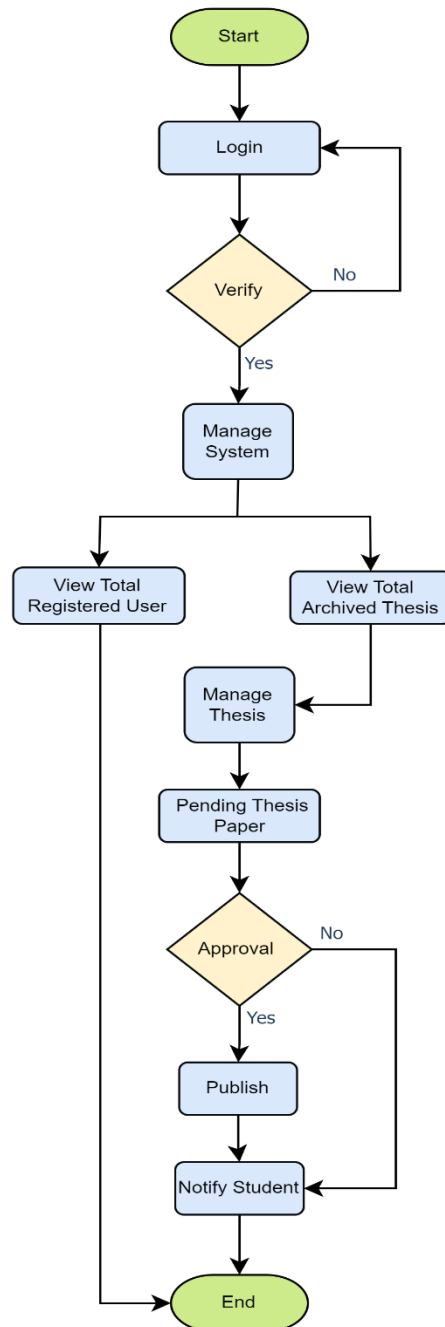
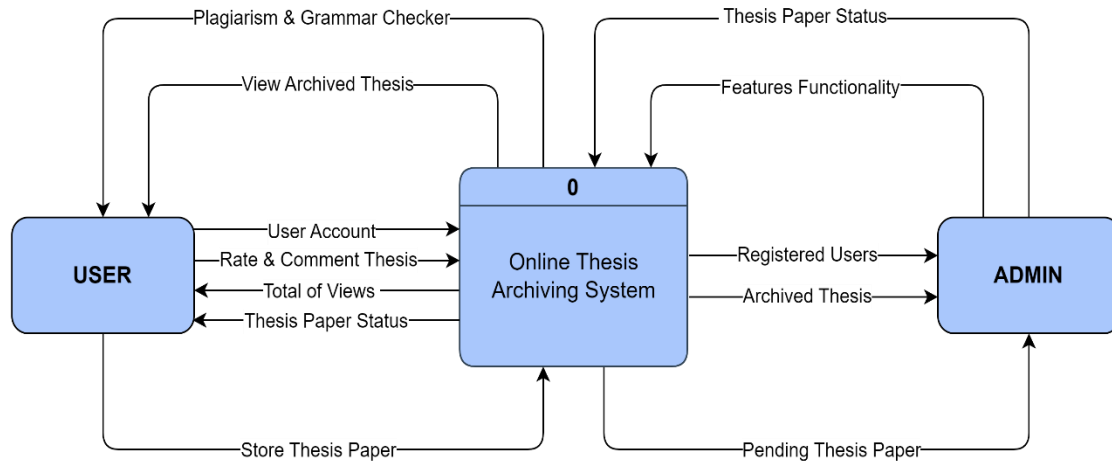


Figure 2. Flowchart (ADMIN)





### Data Flow Diagram (DFD) Level 0



*Figure 3. Data Flow Diagram Level 0*

The diagram above shows the context diagram level 0 (DFD 0) of the Online Thesis Archiving System. Insert the following data flow lines into the context diagram.

- User
- Admin
- Online Thesis Archiving System



### Data Flow Diagram (DFD) Level 1

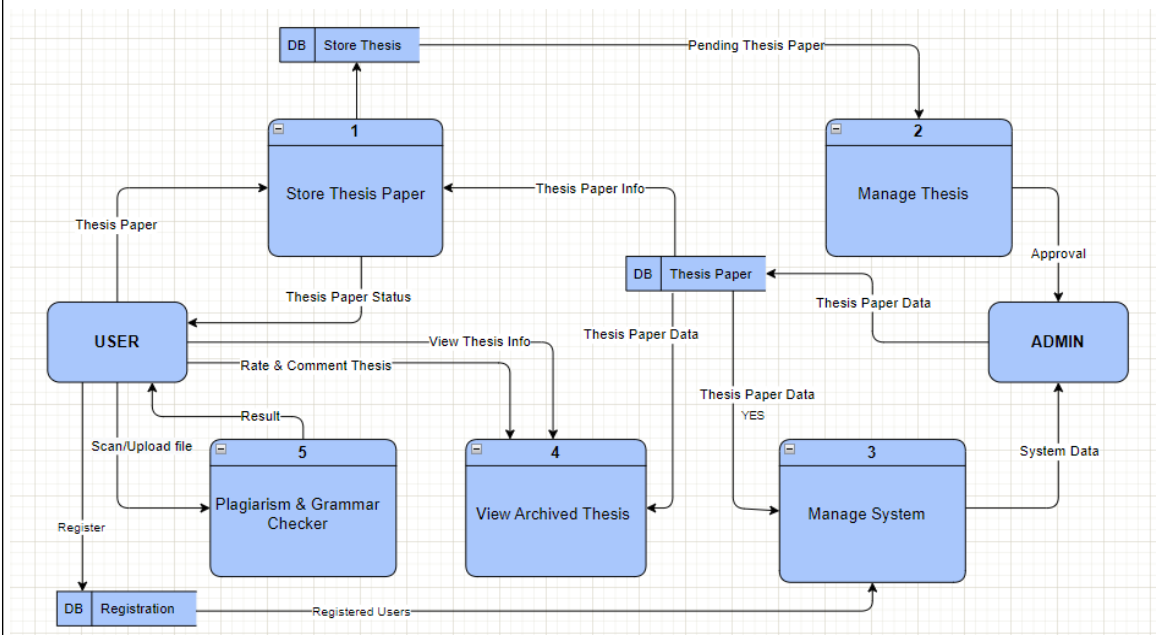


Figure 4. Data Flow Diagram Level 1

The main functions of the following processes and data stores are identified in the Online Thesis Archiving System.

- Store Thesis Paper
- Manage Thesis
- Manage System
- View Archived Thesis
- Plagiarism & Grammar Checker



### Entity Relationship Diagram (ERD)

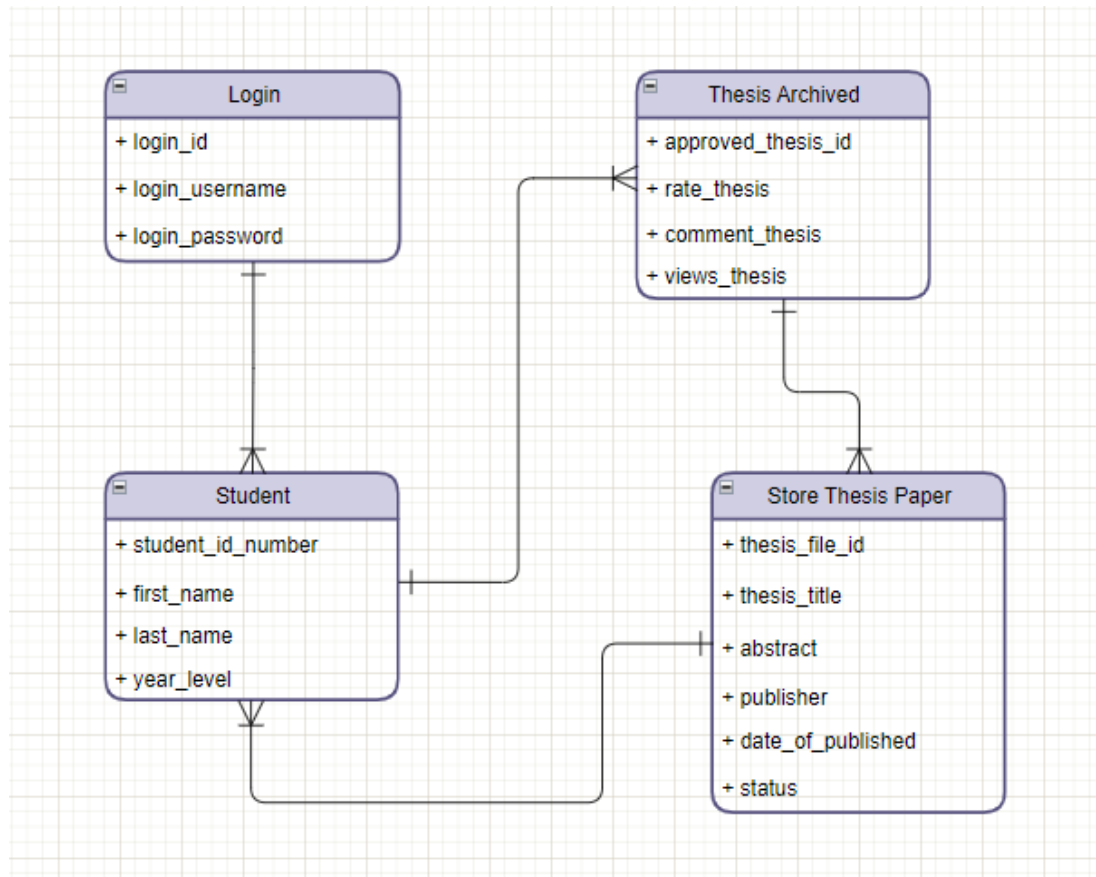
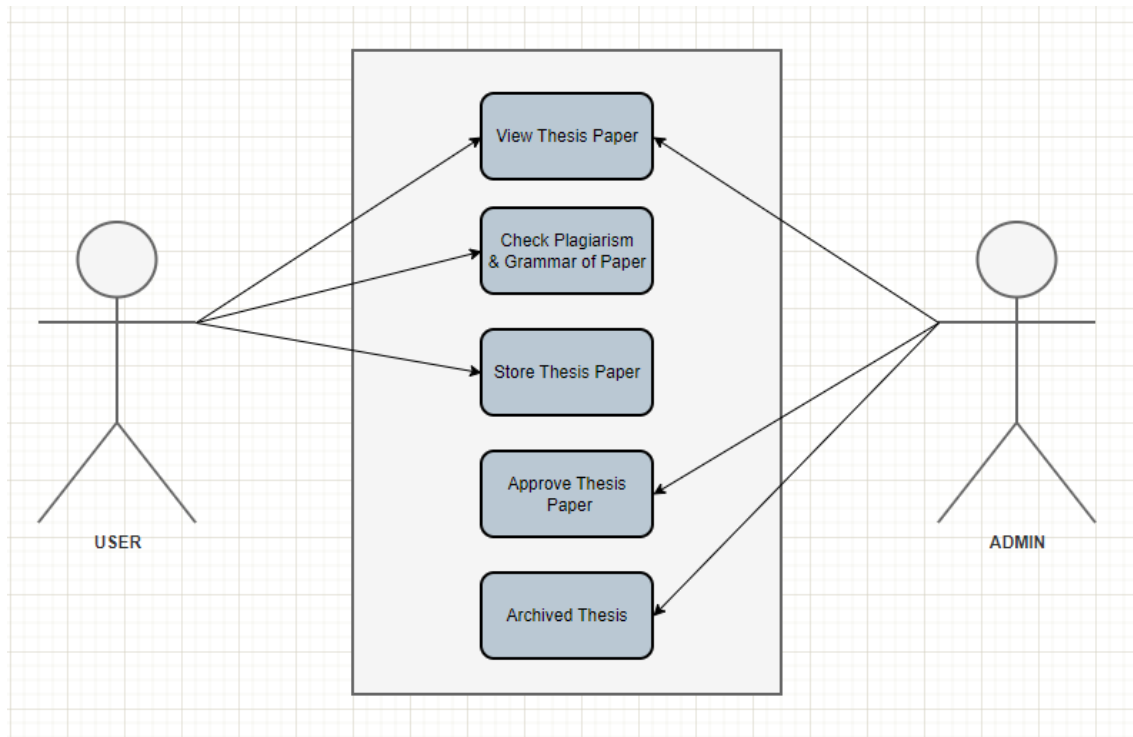


Figure 5. Entity Relationship Diagram

The student entity can have *many to one* login and *many to one* store thesis paper. The store thesis paper entity can have *one to many* student and *many to one* thesis archived. Thesis Archived entity can have *many to one* student.



## Use Case Diagram



*Figure 6. Use Case diagram of Archiving System*

The figure shows above the use case diagram of archiving system. It explains the process and function of the system such as the user can view and store thesis paper and also use plagiarism and grammar checker to assess the originality of their work and how professionally the words are used in the document. The thesis paper was approved first by admin before it visible to everyone and they can also manage of archived thesis to view how many thesis paper are all stored in the system.



## Software Process

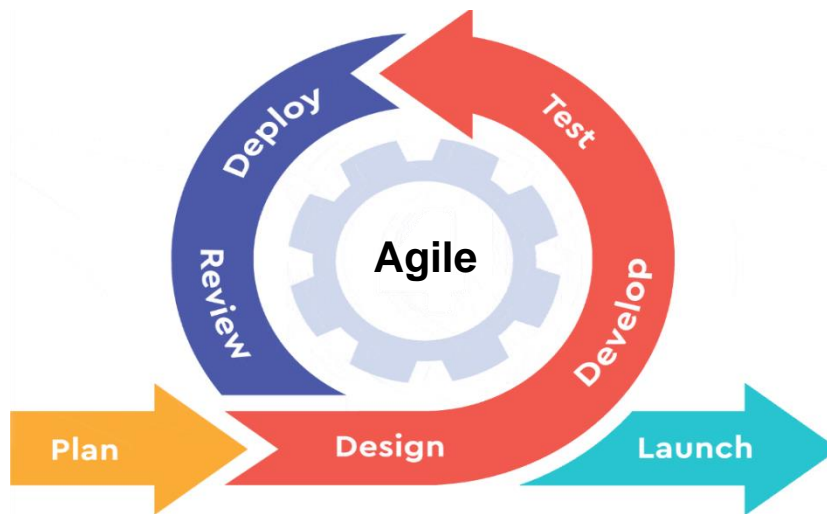
### I. Planning and Data Gathering

					October 2022			November 2022			December 2022			January 2023		February 2023		
No.	Activity	Start	Finish	Duration	Oct-14	Oct-21	Oct-28	Nov-14	Nov-15	Nov-20	Dec-07	Dec-10	Dec-17	Jan-05	Jan-09			
1.	Title Proposal	Oct-14	Oct-14	3hrs														
2.	Planning System Output	Oct-14	Jan-09	2 months, 27 days														
3.	Data Gathering	Oct-17	Jan-09	2 months, 23 days														
4.	Chapter 1	Oct-21	Jan-05	2 months, 16 days														
5.	Chapter 2	Oct-28	Jan-09	2 months, 13 days														
6.	Chapter 3	Nov-20	Jan-09	1 month, 21 days														

*Figure 7. Gantt Chart (Capstone 1)*

### II. System Design & Development

Systems Design and Development is the process of building an application from beginning to end. Depending on a specific requirement of the system, we define the architecture of the system including components, interfaces and data.



*Figure 8. The Agile Method*

The figure above shows the Agile Method, that consists of pattern on how develop a system. It starts from creating a concept, planning, designing, developing, testing, reviewing, and implementation. This process is capable on developing effective software for the users, due to this the researchers take time to analyze and assess the system.

### **III. Coding**

In the development of our system, Researchers use the Visual Studio for encoding the source code of our system and our primary design and coding platform. The MySQL platform will be for our database platform and where data can be edited or deleted accordingly.



#### **IV. Testing**

In this phase, we will run a variety of trials to see if the system has been constructed to specification and to look for any potential issues that may occur during implementation and operation. The documents stored in the system is important that's why the researches spend time to test the credibility and sustainability of the archiving system.

#### **V. Implementation**

The web-based archiving thesis will be implemented to the chosen institution which is the Pateros Technological College. The system will be useful to the institution since it's online archiving and also the learners are the main beneficiaries of this study because it can help where they can get references to their thesis. Giving some user orientation on how to use the system is held at this stage.

#### **VI. Operation and Maintenance**

The system will continue go through operation and maintenance when it is ready to use in order to secure and enhance its features. The researchers will guarantee that this system is accessible anytime needed. Every six months, the system will also undergo maintenance to ensure that it is being monitored and performing without any huge or minor problems.



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