**Section 2**

**2**. **Review of Related Literature**

In an era defined by digital innovation and information sharing, the development of efficient and secure file management systems holds paramount importance. The File Management and Storing System (FMSS) project aims to address the growing need for a centralized platform where students within our school organization can seamlessly upload, store, and access their files. As we embark on this endeavor, it becomes imperative to delve into existing literature to gain insights, identify best practices, and understand the broader landscape of file management systems.

**Introduction**

The emergence of digital repositories and cloud-based storage solutions has revolutionized the way individuals interact with and manage their files. With FMSS poised to serve as a vital tool within our school community, it is essential to contextualize its development within the existing body of literature. This literature review serves as a foundational element in informing the design, implementation, and functionality of FMSS.

**The significance of this review lies in its ability to:**

Inform Design Decisions: By examining prior research and existing systems, we can identify features, functionalities, and user interface elements that contribute to an optimal file management experience.

Address User Needs: Understanding user preferences, behaviors, and challenges associated with file management systems allows us to tailor FMSS to meet the specific needs of our student population effectively.

Ensure Security and Privacy: With data privacy and security being paramount concerns, exploring literature on encryption techniques, access control mechanisms, and data protection protocols informs the development of robust security measures within FMSS.

Enhance User Experience: Insights gleaned from the literature enable us to design an intuitive and user-friendly interface, facilitating seamless navigation, file organization, and collaboration among students.

By synthesizing existing research and drawing upon established best practices, this literature review not only enriches our understanding of file management systems but also lays the groundwork for the successful implementation and adoption of FMSS within our school organization.

**2.1 Local Literature**

**2.1.1 Article 1 - University of the Philippines Manila Institutional Repository**

With the creation of numerous digital materials every day, there lies an inherent problem on where and how to store them in the context of long-term archiving. This institutional problem for the University of the Philippines Manila is further aggravated with the utilization of multiple repositories – creating information islands of digital institutional assets in the process. This greatly hinders data gathering and dissemination of digital materials within the institution. As a solution to the said problem, an online centralized repository system for the University of the Philippines Manila is proposed. The repository system allows users to be able to view, store, and share digital materials while providing functionalities such as material commenting and annotation. The development of the University of the Philippines Manila Institutional Repository made it possible for users to be able to easily search and contribute digital materials with the use of the Internet. On the administrative side, System Administrators are fully capable of moderating content and can even assign moderators to each community to help in the moderation process.

**Similarities**

Both FMSS and University of the Philippines Manila Institutional Repository are designed with the primary purpose of digitally storing files and data, facilitating seamless access, retrieval, and management of digital resources. Additionally, both systems incorporate functionalities for file deletion and offer user registration capabilities to facilitate account creation. These platforms are meticulously crafted to cater to the needs of students and instructors alike, aiming to streamline administrative processes and enhance academic collaboration and resource sharing within the institution.

**Differences**

The key difference between these two systems lies within their scope and limitations. The FMSS project focuses on each student and professor’s problem on their personal storage. These files include but not limited to academic-related files, which varies from the student’s modules, student’s document answers, and the like. Even the images of their daily life, can be stored in FMSS, as long as their designated storage capacity isn’t yet full. On the other hand, University of the Philippines Manila Institutional Repository stores digital resources such as thesis, articles, and documents made by instructors, which are then accessed by their students through the student panel. The students are having no rights to upload their own “personal” or academic-related files, and the professors are only able to upload academic-related resources.

**2.1.2 Article 2 - Cloud-Based College Management Information System for Universities**

Because all colleges within universities are being evaluated for funding and program accreditation primarily in terms of the college’s curriculum, faculty, physical facilities, research, and extension works, it is therefore important that documents and records related to these areas be managed efficiently from the creation, storage, update, communication and dissemination.

**Similarities**

Both the FMSS and Cloud-Based College Management Information System for Universities are created with the main goal of digitally storing files and data, making it easier to access, retrieve, and manage digital resources. Furthermore, both systems include features for deleting files and provide options for user registration to enable account creation. These platforms are carefully designed to meet the requirements of both students and instructors, with the aim of simplifying administrative tasks and improving academic collaboration and resource sharing within the institution.

**Differences**

The main difference about the FMSS and CIMS are their extra functionality and goals. FMSS only covers files for students and professors, meaning that aside from keeping the file’s data, it does not contain features such as department record and student record keeping. Meanwhile, CIMS promotes not only file storing, but the system also has the ability to hold each department’s student records. CIMS is a far more complex system built to run in a school organization’s departments for their students, while also having the ability to store documents and other files in the cloud.

**2.1.3**

**2.1.4**

**2.1.5**

**References for Local Literatures**

Article 1 - Co, A. C. K., & Arceo, A. A. 2012. University of the Philippines Manila Institutional Repository. Retrieved from <http://dspace.cas.upm.edu.ph/jspui/bitstream/123456789/60/1/Final%20SP%20Document.pdf>

Article 2 - Tan, M. J. M., Crisostomo, A. V., Villaflor, B., & Faller, J. C. (2014). Cloud-Based College Management Information System for Universities. International Journal of Information and Education Technology, 4(6). Retrieved from <https://www.ijiet.org/papers/460-F017.pdf>

**2.2 Foreign Literature**

**2.2.1 Article 1 – An Online Course File Management System**

In the university education process, everything is being placed online: exams, course materials, presentations, assignments, projects and all types of quizzes. Course File is one of the most important resources used by academic staff, it takes big effort each semester to collect its components: syllabus, teaching materials, assignments, exams, and other components, and it must be ready at end of semester to be checked and transferred to use for next semester, or to be checked by management or by reviewer during academic program renewing process, or for applying for international accreditation. This work provides an online system to help academic staff to prepare and organize course files and store them in an electronic form using very simple and fast processes.

**Similarities**

Both FMSS and OCFMS promotes the ability for instructors to upload documents and files. They share a common purpose: digitally storing files and data to enable seamless access, retrieval, and management of resources. Additionally, both systems allow for file deletion and offer user registration for account creation. Tailored to the needs of students and instructors, these platforms aim to streamline administrative processes and foster academic collaboration and resource sharing within the institution.

**Differences**

The difference between FMSS and OCFMS is that, FMSS is dedicated for the students and instructors to upload their files, be it personal or academic related, for as long as their storage allows it. While OCFMS provides the common functionality of instructors being able to upload resources, being able to be assigned by the admin their classes, have their student’s records. For their students, they can only be granted the access of the files, but not upload their own.

**2.2.2 Article 2 - FileWallet: A File Management System Based on IPFS and Hyperledger Fabric**

Online file management systems enable cooperatively editing and sharing. However, due to the cost of communication and storage infrastructures, traditional online file management services, e.g., Google Drive and OneDrive, usually provide limited storage space and relatively low download speed for free users. To achieve better performance, ordinary users have to purchase their expensive services. Moreover, these file management systems are based on centralized architecture and bear the privacy leakage risk, because users’ personal files are stored and controlled by their servers. To address the above problems, we propose a peer-to-peer (P2P) file management system based on IPFS and Hyperledger Fabric, named as FileWallet, which can serve as a personal wallet for individual users or organizations to store and share their files in a secure manner. In FileWallet, the users form a P2P network and a Fabric network, where P2P network builds the connections and distributed storage network and the Fabric network sustains consistent blockchain ledgers to record file operation related transactions.

**Similarities**

Both the FMSS and FileWallet: A File Management System Based on IPFS and Hyperledger Fabric for Universities are designed to digitally store files and data, allowing for easy access, retrieval, and management of digital resources. They also include features for deleting files and enable user registration to facilitate account creation.

**Differences**

FMSS only focuses on school organization’s storage issues. Moreover, our system does not make use of a peer-to-peer to establish connections between devices. Additionally, our system does not make use of blockchain ledgers to record file operation related transactions. On the other hand, FileWallet makes use of a P2P connection for their users to share, store, and manage their data.

**2.2.3**

**2.2.4**

**2.2.5**

**References for Foreign Literatures**

Article 1 - Odeh, A. H., & Odeh, H. An Online Course File Management System (OCFMS). Retrieved from <https://www.researchgate.net/profile/Ayman-Odeh-2/publication/332864085_An_Online_Course_File_Management_System_OCFMS/links/5ccdcec1458515712e927e5c/An-Online-Course-File-Management-System-OCFMS.pdf>

Article 2 - Chen, J., Zhang, C., Yan, Y., & Liu, Y. (Year). FileWallet: A File Management System Based on IPFS and Hyperledger Fabric. Software College of Northeastern University, Shenyang, China. Corresponding Author: Yuan Liu. Email: liuyuan@swc.neu.edu.cn. Received: 16 May 2021 Accepted: 25 August 2021. Retrieved from <https://cdn.techscience.cn/ueditor/files/cmes/TSP_CMES-130-2/TSP_CMES_17516/TSP_CMES_17516.pdf>