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DEVELOPMENT OF ARCHIVES USING SEQUENTIAL SEARCHING ALGORITHMS IN DESIGN DEPARTMENT POLITEKNIK NEGERI MEDIA KREATIF

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ABSTRACT

The quality of service in each organization is one indicator of the success of a business entity or organization. In meeting these indicators, information systems or information applications are a mainstay in a business strategy. In several departments or faculties at various universities, the business process that is often carried out is archive management. Archiving activities are very important because they involve official documents and are important for every institution. Increased technological innovation has empowered institutions to monitor archives in a digital way. The purpose of this research is to create a website-based archive application using sequential searching algorithms that can be used to record and store easily and safely, and be managering every archive for essier access. The system development methodology uses the waterfall method and the PHP and MySQL programming languages. This application can be used to record, store, display archives by category and can be used to display archives by category, preview archives, download archives and archive details in the Design Department of the Polytechnic Media Creative.

INTRODUCTION

The quality of service in each organization is one indicator of the success of a business entity or organization (Maulani & Hamdani, 2019b). In meeting these indicators, information systems or information applications are a mainstay in a business strategy (Maulani & Hamdani, 2019a). Supporting information technology as a support in improving service quality that results in fast, accurate and accurate access to information for management (Maulani & Hamdani, 2018).

In several departments or faculties at various universities, the business process that is often carried out is archive management (Maulani et al., 2019). Archiving activities are very important because they involve official and important documents for every company (Sihotang, 2018). Improving this needs to be carried out by good management as well as improving the management of reports and quick updates (Ito et al., 2014).

Records are a significant resource owned by an organization. There are still many organizations/agencies that routinely record their institutional activities. Advances in technological innovation have empowered companies to carefully monitor documents. Documents are also a source of data and have a significant capacity in supporting the implementation of regulations and administration of an establishment (Barthos, 2013). Every activity completed by the organization as a proposition, letter and report to carry out the exercise will be documented. The data stored in hard copies are evidence and history of the organization. As time goes by, the more complicated the functions and work of an agency, the more the agency archive will grow. The filing process must be efficient by using technology for proper, proficient, and useful organizational administration to develop the organization further (Hasan, 2014). For digital archives, it must be in accordance with the right archiving strategy so that the integrity of data and archives will be actual (Pancaningsih, 2016).

Archive storage in the Department of Design at Politeknik Negeri Media Kreatif is still done manually. Archives are stored in a printed version and stored in a room. The capacity of the printed version is not effective because it is very likely to be eaten by termites or damaged by moisture. Another obstacle is that searching for documents takes up most of the day due to the huge pile of records.

These archival documents are often reused in accreditation, previously being checked by the quality assurance agency and external. To achieve good, neat and accessible archival documents which are expected to achieve this goal. This application software is designed based on the website and database. This database application program intends to improve the security, speed and accuracy of storage and retrieval of archival documents. With a database application, it will speed up access to information that has been stored correctly so that it can produce good decisions. For applications based on the web which allows users to get data indefinitely. The purpose of this research is to create a website-based archive application using sequential searching algorithms that can be used to record and store easily and safely, and be managering every archive for essier access.

RESEARCH METHOD

Globally, the primary tiers of this studies approach are divided into 4 phase, The phase consist of the guidance stage, collect data, stage, processing data, and testing.The following is the go with the drift of the studies phase:

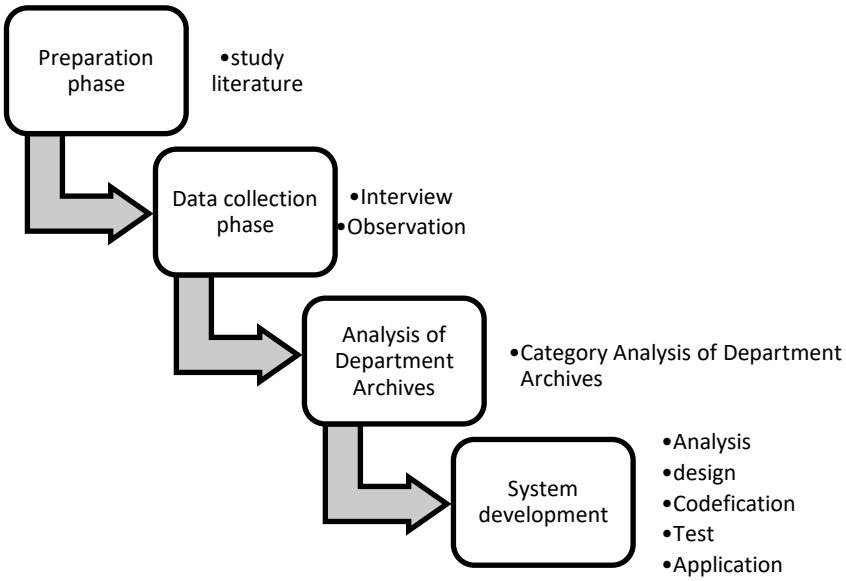

Figure 1. Research phase flow

From the picture of the flow of the research stages above, it can be described at each stage as follows:

(1) Preparation Stage

This stage starts from the problem assessment, as well as conducting a literature study related to archive management and to similar research that has been done.

(2) Data Collection Stage

At the data collection stage, interviews and observations will be carried out. Interviews were conducted with the Head of the Department and the Secretary of the

Department of Design, and the administrative officer of the department related to archived data in the department. As for the observations made on the use of archives and the needs of the archives.

(3) Department Archive Data Analysis

In the analysis phase of the department's archives, an analysis of the department's archives includes decision letters, teaching material archives, lecturer data archives, educational and learning process archives, and departmental activity records archives. This decree archive is issued (signed) by the director of the Politeknik. This decision covers the activities of Tri Dharma, such as education, research, and service. The teaching materials archive contains industrial practice modules and teaching materials by lecturers. The mail archive consists of the mail archive. incoming and also mail. exit as well as the required report that lists all records or a summary of the number of records by type of grouping of records.

(4) System Development

For system development using the standard SDLC (Software Development Life Cycle) method, namely using the Waterfall method or Waterfall (see Figure 2).

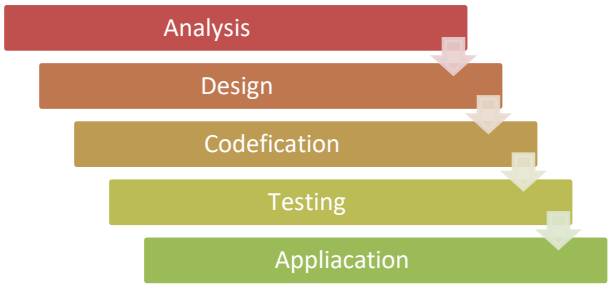

Figure. 2. Waterfall Method

RESULT AND DISCUSSION

In the system design using a usecase diagram. Usecase diagrams are used to describe a system in user view or system user. System design can be seen in the use case diagram below:

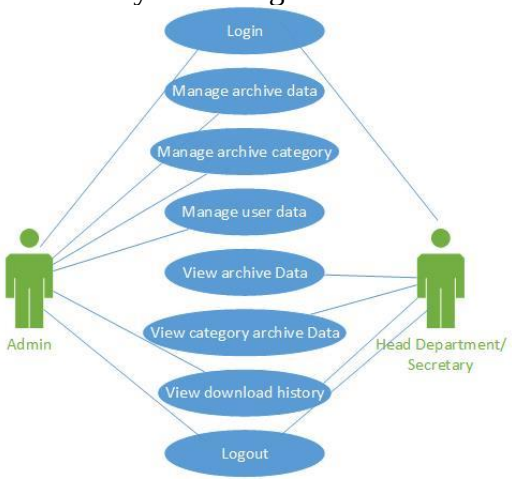

Figure. 3. Usecase Diagram

From Figure 3 above, it can be seen that admin can manage archive data, manage archive categories, manage user data, view download history, and login/logout. As for head or secretary departement , can view archive data, archive category data, download history and login/logout. For the design of the archive system application page view, it can be seen in the figure 4 and 5.

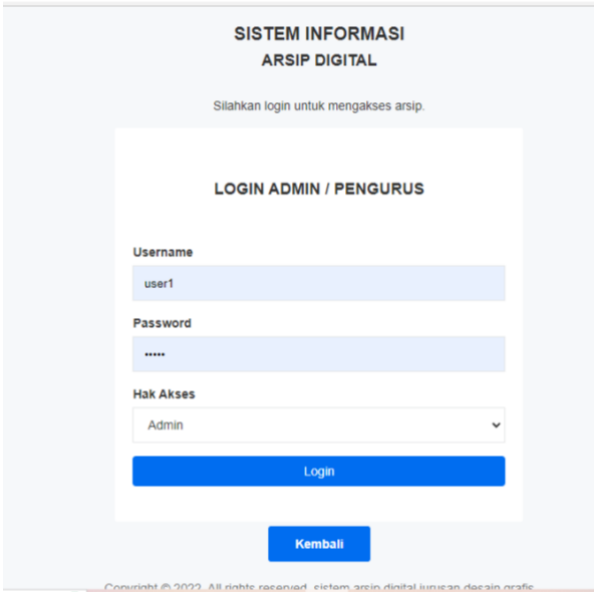

Figure 4. Home Page View

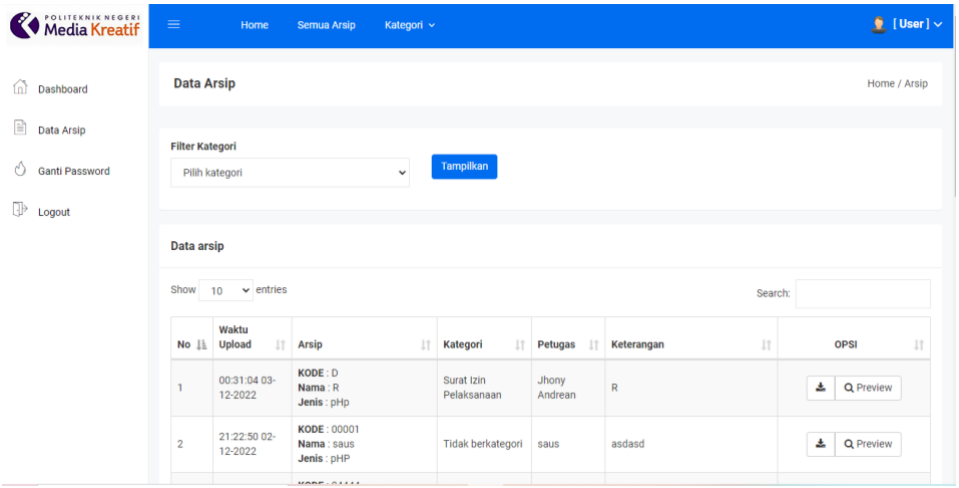

Figure 5. Archive Application System Data Archive

Developmet Sequential Searching Algorithm

On creating an archive application web-based there is a search feature for archival data to facilitate the process of searching for certain archival data. In the search feature the compiler implements the algorithm sequential searching, where the sequential searching algorithm works, namely searching for data based on the input key by comparing the data one by one in succession from the first data until the data sought is found or all data has been compared. Sequential searching method or sequential search can be used to perform data search both in sorted and unsorted arrays. For more details, see the following figure 6:

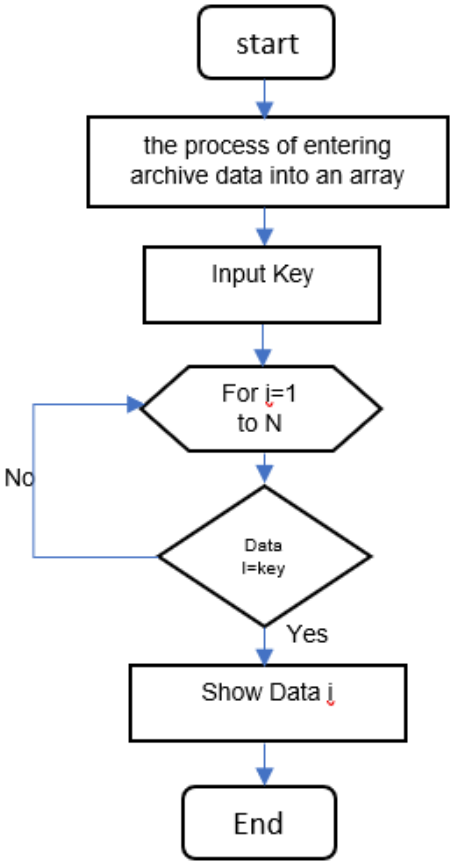

Figure. 6. The Sequential Searching Algorithms Flow

CONCLUSION

The conclution of this research are; (1) To help Politeknik negeri media kreatif developing of effectivity and efficiency management archive in Design Departement by application digital archive, (2) The application archive also can be managering every archive for essier access, (3) The application archive informing access faster and helping to get best decision, and (4) The Sequential Searching algorithm can be applied to applications and can run to perform a search even though there are weaknesses in the search process.

REFERENCES

Barthos, B. (2013). Manajemen Kearsipan (Cetakan Keenam). *Jakarta: Bumi Aksara*.

Batubara, F. A. (2012). Perancangan Website Pada PT. Ratu Enim Palembang. *Jurnal Ilmu Pengetahuan Dan Teknologi Terapan*, 3.

Hasan, L. (2014). *Pengembangan Sistem Informasi Kearsipan Tata Usahamenggunakan Metode Agile Di MTS Arrosyidin Secang Magelang*. UIN Sunan Kalijaga.

Ito, H., Kasugai, K., Kanamori, S., Kanekasu, S., Tashiro, S., Taki, T., Hasegawa, J., & Raita, K. (2014). Structure of a prototype system for managing letters. *Procedia Computer Science*, *35*, 1682–1691.

Juansyah, A. (2015). Pembangunan Aplikasi Child Tracker Berbasis Assisted - Global Positioning System (A-GPS) Dengan Platform Android. *Jurnal Ilmiah Komputer dan Informatika (KOMPUTA)*, *2*.

Kanamori S, Kanekasu S, Tashiro S, Taki T and Raita K. (2014). Structure of a prototype system for managing letters Procedia Computer Science 35 1682-1691.

Maulani, G. A. F., & Hamdani, N. A. (2018). Perencanaan Strategis Sistem Informasi pada Perguruan Tinggi Swasta di Indonesia. *PETIK: Jurnal Pendidikan Teknologi Informasi Dan Komunikasi*, *4*(2), 162–166.

Maulani, G. A. F., & Hamdani, N. A. (2019a). Can universities improve their competitiveness using information technology? *International Journal of Engineering and Advanced Technology*, *8*(6), 456–458.

Maulani, G. A. F., & Hamdani, N. A. (2019b). The influence of information technology and organizational climate on the competitiveness of private universities in Indonesia. *International Journal of Recent Technology and Engineering*, *8*(1S), 142–145.

Maulani, G. A. F., Suryadi, A., Nugraha, Y., Hamdani, N. A., & Purwanti, Y. (2019). Web-based student master book information system in vocational school of Muhammadiyah Banyuresmi. *Journal of Physics: Conference Series*, *1280*(3), 32040.

Muhidin, S. A. (2016). Pengelolaan Arsip Digital. Universitas Pendidikan Indonesia Jurnal Pendidikan Bisnis dan Manajemen 2(3), 179.

Pancaningsih, S. (2016). Manajemen Kearsipan. *Orbith: Majalah Ilmiah Pengembangan Rekayasa Dan Sosial*, *12*(3).

Rifauddin, M. (2011). Pengelolaan Arsip Elektronik Berbasis Teknologi. *UIN Sunan Kalijaga, Yogyakarta*, Khizanah Al-Hikmah, Jurnal Ilmu Perpustakaan Informasi dan Kerasipan 4, No. 1.

Sihotang, H. T. (2018). Sistem Informasi Pengagendaan Surat Berbasis Web Pada Pengadilan Tinggi Medan. *Journal Of Informatic Pelita Nusantara*, *3*(1).