The development of “Archive Treasure” application for Universitas Negeri Surabaya library

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Abstract. In the digital era, college libraries are increasingly paying attention to electronic archives. Many universities are starting to outsource existing important documents and store them in digital formats to make them easier to access and manage. Overall, the archives in the college library have a very important role in preserving history and understanding the development of universities and their surroundings. By managing archives properly and correctly in accordance with existing regulations, universities can enrich knowledge and strengthen their identity as educational institutions that have a rich cultural heritage. In general, the method used in making this information system uses the waterfall model and previously collected data by observation and interviews. This is done in order to support the creation of information systems. Following are the stages in the Waterfall model starting from gathering requirements, design, development, testing, deployment and maintenance. This research produces an information system that can enrich the archives that are managed and stored digitally, while also providing information about oral history.

1 Introduction

In Indonesia, during the kingdoms of Majapahit, Mataram and Demak, there was already a tradition of keeping archives. Whereas during the Dutch colonial period, the archives kept in the Dutch National Archives (ANB) were separate archives from the archives managed by the Dutch East Indies government. Since the independence of the Republic of Indonesia, the archives contained in the Dutch National Archives (ANB) have been managed by the Indonesian government and the name has been changed to the National Archives of the Republic of Indonesia (ANRI).

At this time the storage of archives is not only the responsibility of the government, but also the responsibility of private institutions and civil society organizations. Several policies regarding the storage and management of archives as references have been drawn up by the government to maintain the integrity and availability of important archives for Indonesian history and culture.

Some of these policies include: (1) Republic of Indonesia Government Regulation Number 28 of 2012 concerning the Implementation of Law Number 43 of 2009 concerning Archives [1]; (2) Regulation of the National Archives of the Republic of Indonesia Number

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6 of 2021 concerning the Management of Electronic Records [2]; (3) Regulation of the National Archives of the Republic of Indonesia Number 2 of 2021 concerning the Transfer of Static Archive Media Using the Conversion Method [3].

Archives have a very important role in preserving the history and culture of a country or region. By storing and maintaining these archives, we can learn about important events from the past, understand existing values and culture, and build a better future. Archival treasures are also found in the college library and also have a long history. At first, the college only kept books in its library, while important documents such as letters, contracts and deeds were kept by certain officials. However, along with the development of tertiary institutions, the archives are getting more and more attention. The Indonesian government requires universities to have archives and regulate their management. In addition, the university library has also begun to expand its archives by collecting documents related to the history of universities and their surroundings.

Based on the Regulation of the Minister of Research, Technology and Higher Education of the Republic of Indonesia Number 15 of 2016 concerning the Organization and Work Procedures of Surabaya State University April 7 2016, articles 99-101 read as follows: The library is a technical implementation unit in the field of libraries which is under and responsible to the Chancellor and coordinated by the Vice Chancellor for Academic Affairs, and led by a Head.

The library itself as a technical implementation unit has the task of carrying out library management and carrying out functions including: 1) preparation of plans, programs and budgets; 2) preparation of needs plan and provision of library materials; 3) processing of library materials; 4) provision of services and utilization of library materials; 5) maintenance and maintenance of library materials; and 6) implementation of administrative affairs. [4].

2 Literature Review

2.1 Archive definition

Archives are records of actions or events in different manifestations and media in accordance with developments in information and communication technology made and received by state institutions, regional governments, educational institutions, companies, political associations, community associations and individuals in the implementation of social, national and patriotic. This definition is stated in Government Regulation Number 28 of 2012 concerning Regulations for Implementing Law Number 43 of 2009 concerning Archives [5].

2.2 Archive treasure

Archive treasure is a term that refers to various types of documents or information that are stored in an orderly and structured manner in archives, including written documents, photos, videos, audio recordings, or other types of data. Archive treasures relate to static archives that are stored both as a whole and thematically [6].

2.3 Archive retention schedule

Archive Retention Schedule in the form of a roster that at minimal contains retention or storage duration and varieties of archives as well as guidance on deciding whether to dispose of, reevaluate or make permanent a variety of archives. The Archive Retention Schedule is also used to guide archive depreciation and archive preservation [7].
2.4 Web-Based information system

2.4.1 Information system definition

The system is an interconnected component to process input into an output [8]. The information itself is in the form of data that is worked on so that it can be used in a more meaningful and useful way for the recipient [9]. Overall, the information system can be interpreted as a combination of components for collecting, storing and processing data. Then the data is used to provide information and has a contribute to knowledge and the results of digitization are used to facilitate decision making [10].

2.4.2 Web definition

The meaning of the word Web is a series of pages containing information on text data, image data, both moving and non-moving images, animation data, sound, video and/or a combination of all of them [11]. Most people know the website with the term WWW (World Wide Web). WWW is an internet service that contains a collection of linked website pages that are interlinked with each other, so that they can form various kinds of information needed [12].

3 Research Methods

This information system development research uses the waterfall model as a method. This waterfall model uses several stages and the completion of the stages is carried out sequentially. One of the SDLC (Software Development Life Cycle) models is the well-known waterfall model with a sequential or linear software life cycle approach [13]. The design drawing of the method used can be seen in Figure 1. Based on figure 1, we can see several phases of the utilized approach in this research as Fig. 1.

3.1 Requirement

This development research activity begins with the stage of collecting the necessary data by observing and interviewing several informants.

Fig. 1. Waterfall process.
3.2 Design

After the data has been collected and processed, the next stage is to design the application. The design is done by determining the site map of the “Archive Treasure” website that will be made. The site map can be seen in Figure 2.

In figure 2 it can be seen that the “Archive Treasure” website has six main menus, namely home, about, head of library, establishment, cooperation and building. The home page describes a brief profile and what facilities the library has. The about page describes the profile, vision and mission of the library. The about menu has two sub-menus, namely profile and vision and mission.


The establishment page displays several library establishment documents. The establishment menu has three sub-menus, namely SK document, OTK document and STATUTA document. The cooperation page displays several collaboration documents that have been carried out by the library with other parties. The cooperation menu has two sub-menus, namely the cooperation document and the MoU document. The building page displays several photos of the library building and its facilities.

![Site map of “Archive Treasure” website](image)

Fig. 2. Site map of “Archive Treasure” website.

3.3 Development

The development stage is carried out after the design has been completed. The “Archive Treasure” website is made using the PHP programming language and the website design uses CSS [14].

3.4 Testing

Testing will be carried out by the head of the library and several library employees. Testing is done to find out whether the website has been running properly and correctly.
3.5 Deployment

After the website is running properly and correctly, the next step is to deploy it so that the “Archive Treasure” website can be accessed by all library visitors.

3.6 Maintenance

The final stage of the waterfall process is maintenance. This stage is carried out to monitor whether the website is running properly. In addition, the maintenance phase can also be carried out if there is additional information on the website.

4 Result

“Archive Treasure” website of Universitas Negeri Surabaya Library produces explanations of data that can enrich archives that are managed and stored digitally, while also providing information about oral history. Apart from that, the “Archive Treasure” website also has functions for library visitors who want to know the history of the library.

This information system will be accessible through the Universitas Negeri Surabaya Library Website, so that users who visit this website have additional information and insights related to the periodicity of the head of the library. “Archive Treasure” website has six main menus, namely home, about, head of the library, establishment, cooperation and building.

4.1 Home page

The home page describes a brief profile and what facilities the library has. The home page can be seen in Figure 3.

Fig. 3. Home page.

Figure 3 is a snapshot of the initial appearance of the "Archive Treasure" website. If a visitor scrolls down, a brief profile of the library will appear.

4.2 About page

The about page describes the profile, vision and mission of the library. The about page can be seen in Figure 4.
Figure 4 is a snapshot of the about page at the "Archive Treasure" website. This page will display the full profile of the library. In addition, the library's vision and mission will also be displayed on the page.

4.3 Head of library

The head of the library page displays several photos of the head of the library. The head of the library page can be seen in Figure 5.

Figure 5 is a snapshot of the head library page at the "Archive Treasure" website. If a visitor clicks on one of the heads of library photos, then the visitor will be taken to the history page of each leader when he was head of library.

4.4 Establishment page

The establishment page displays several library establishment documents. The establishment page can be seen in Figure 6.
Figure 6 is a snapshot of the establishment page at the "Archive Treasure" website. The establishment has three sub-menus, namely SK document, OTK document and STATUTA document.

### 4.5 Cooperation page

The cooperation page displays several collaboration documents that have been carried out by the library with other parties. The cooperation page can be seen in Figure 7.

Figure 7 is a snapshot of the cooperation page at the "Archive Treasure" website. Visitors can view the cooperation documents by clicking on the document they want to read.

### 4.6 Building page

The building page displays several photos of the library building, both the position of the old and new buildings as well as existing facilities. The building page can be seen in Figure 8.
Figure 8 is a snapshot of the building page at the "Archive Treasure" website. The visitors can view the details of the library building and facilities.

5 Conclusion

In the framework of processing archives and using access to data sources to become an archival treasure, then, in the end, the material in the form of audio with new digital technology can be used as it was in real-time. This allows researchers to listen to voice recordings and understand their meaning in depth. The interview method used in data collection as an additional narrative requires assumptions related to the context in which the source was created and preserved. The special feature of data collection by interviews is that the archives consist of records that bring together interviewers and interviewees and are included in the context of preservation and access. The results of creating an information system are expected to assist in the process of managing and storing digital records. It can also provide an explanation of archives and the categorization of archives according to their various activities. Furthermore, this information system can be used in the process of developing individual expertise where individuals and groups of people will continue to provide feedback in developing their documentation through a special information system on archives as a form of ongoing activity.

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