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Design and Build an Employee Leave Application System

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Abstract *- The development of science and technology that continues to grow and progress, makes all activities in human life faster and is required to be more efficient in utilizing information technology as a data processing base, in order to be able to follow the flow of information development in the globalization era. Computer technology can be used to support the development of information systems in utilizing information technology in this era of globalization. Likewise, companies that want to develop the quality and performance of each employee by using a data processing support tool, namely a computer.*
With the computer as a data processing tool, the information needed from various fields within a company can be computerized. Speaking of data processing tools, currently the LP3I Jakarta Polytechnic, Depok Campus, which is engaged in education, still has several shortcomings, especially in terms of services to employees that are data processing, namely filing for employee leave. Due to the operational standards that have been set so far in the HRD section for every employee who will apply for leave still using the manual method first, namely by how each employee who will apply must fill out the form manually first and of course this method is less effective and efficient for every employee who will apply for leave.
From the results of the study, it was concluded that the Application for Employee Leave at the LP3I Polytechnic Jakarta, Depok Campus still uses the manual method. The author suggests that institutions can implement a more computerized system in their manual system, in order to make it easier to carry out data processing such as recording leave reports as well as effectiveness and efficiency in the process of applying for leave systematically, so that it can produce useful and useful information.
Keywords: Technology, System, Web Application

I. INTRODUCTION

Computer technology can be used to support the development of information systems in utilizing information technology in this era of globalization. Likewise, companies that want to develop their businesses and achieve success, must follow the development of information by using data processing support tools, namely computers. With the computer as a data processing tool, the information needed from various fields within a company can be computerized.

Currently, computer-based information technology is needed in the development of the business world and companies to speed up and simplify work, especially fast and accurate information. In addition, the information processing process is also important to make the information more useful along with the increasing number of companies that are less effective in using computer-based information technology as a tool to support the development of their companies in this era of globalization.

For companies engaged in services, especially education services, the need for employees is a priority service. This means that every employee who wants leave, either annual leave, sick leave, leave due to marriage, maternity leave and leave for important reasons, is a field that is included in data processing activities in the HRD Section at the Jakarta LP3I Polytechnic, Depok Campus.

Although computer technology has been applied to the Jakarta LP3I Polytechnic, Depok Campus, it still uses the manual process of applying for employee leave in its implementation. For example, filling in complicated leave application data, resulting in data running slowly and the submitted leave not in accordance

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with the minimum time limit specified for applying for leave, resulting in the deadline for processing employee leave data being untimely and messy.

Thus, the authors are interested in developing a system, namely the Design of Employee Leave System at the LP3I Polytechnic Jakarta, Depok Campus. With the development of a good information system, it will be easier for users to operate the information system without using manual methods and more computerized so that the time required is faster, more precise and the data entered is more accurate.

II. RESEARCH METHODS

In this research, the data collection method used is to observe and interview HRD managers about the criteria for employee leave. Research instrument is a tool used in processing data into useful information. The data used in this study is data on employees who want leave either annual leave, leave due to illness, leave due to marriage which is then processed into a website-based application.

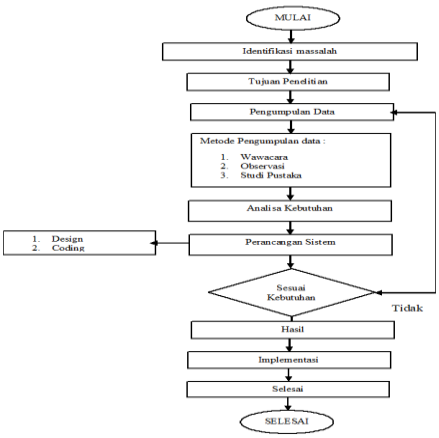

Figure 1. Research Stages

The waterfall method or what is often called the waterfall method is often called the classic life cycle, where it describes a systematic and sequential approach to software development, starting with the specification of user requirements and then continuing through the planning stages. , modeling, construction, and delivery of the system to customers/users (deployment), which ends with support for the complete software produced by (Pressman, 2012). Here is the sequence of the Waterfal method:

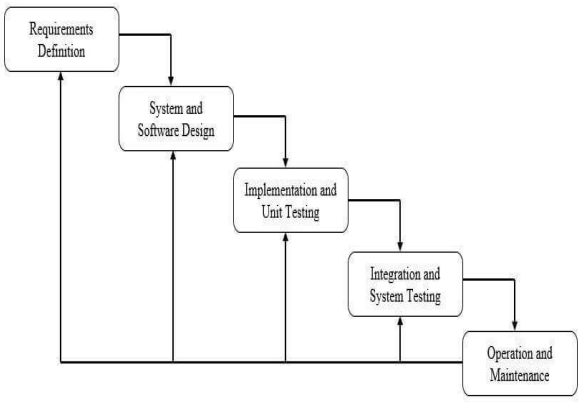

Figure 2. Waterfall Method Flow

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III. RESULTS AND DISCUSSION

A. Use Case Diagram

Use Case describes the actors involved with the software that is built along with the devices in it.

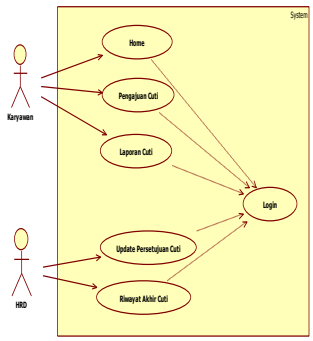

Figure 3. System Use Case Diagram

B. Activity Diagram

Activity diagram is one way to model the events that occur in a use case.

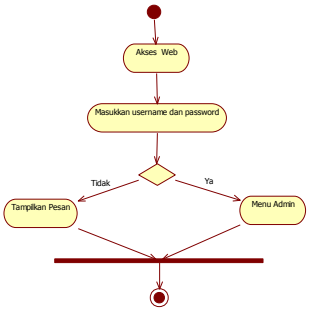

Figure 4. Activity Diagram Login

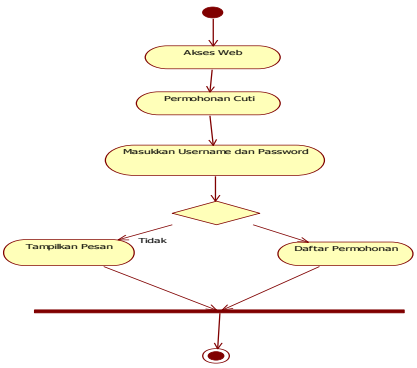

Figure 5. Activity Diagram of Leave Applicants

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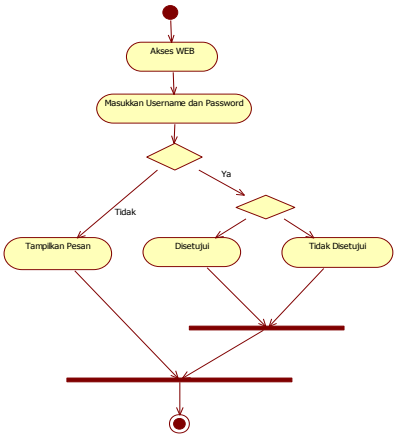

Figure 6. Activity Diagram of Leave Approval

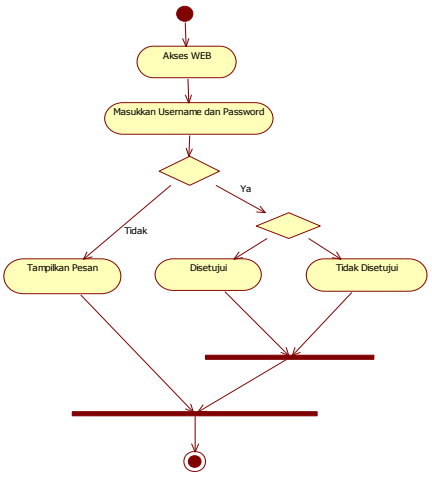

Figure 7. Activity Diagram of Leave Approval

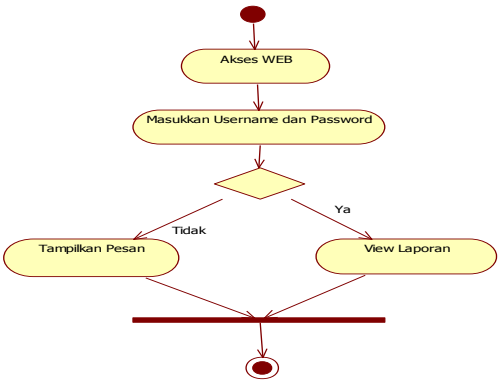

Figure 8. Activity Diagram of Leave History

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C. Sequence Diagram

Sequence diagram is a diagram that describes the interaction between objects and indicates the communication between these objects.

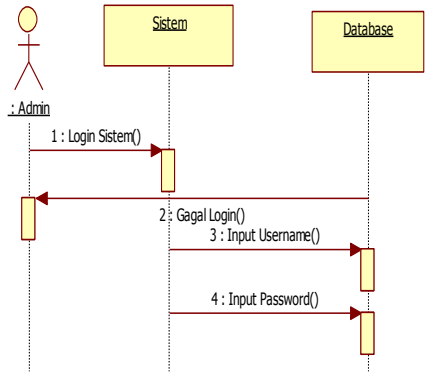

Figure 9. Sequence Diagram Login

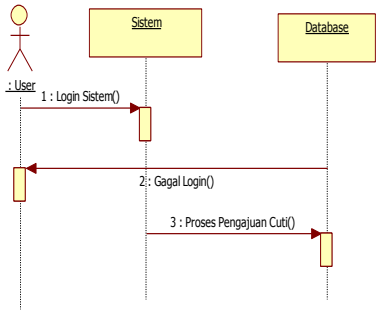

Figure 10. Sequence Diagram of Leave Application

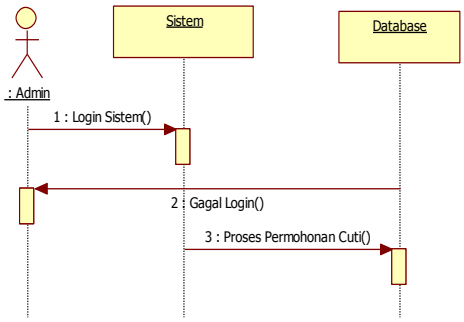

Figure 11. Sequence Diagram of Leave Applicants

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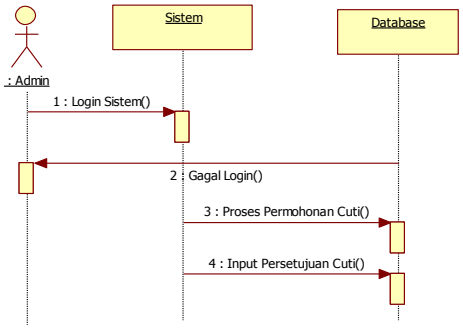

Figure 12. Sequence Diagram of Leave Approval

D. Class Diagram

Class Diagram is a diagram that is used to display several classes that exist in the software system to be developed. Class Diagram shows the relationship between classes in the system that is being built and how they collaborate with each other to achieve a goal.

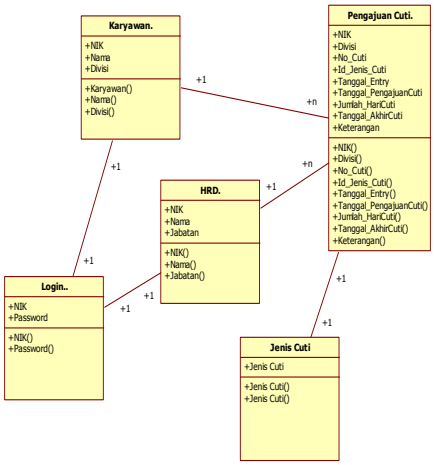

Figure 13. Class Diagram

Relational database is a collection of relationships that contain all information regarding an entity / object that will be stored in the database. Each relation is saved as a separate file. Here is what the ERD looks like:

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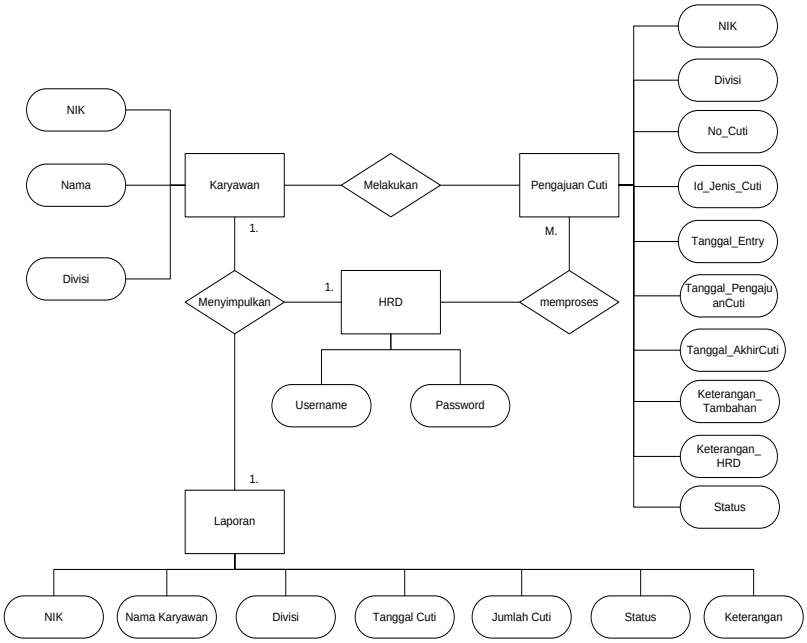

Figure 14. Proposed System ERD

E. Interface Design

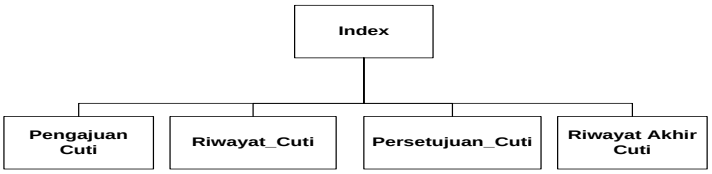

Figure 15. Proposed ERD System

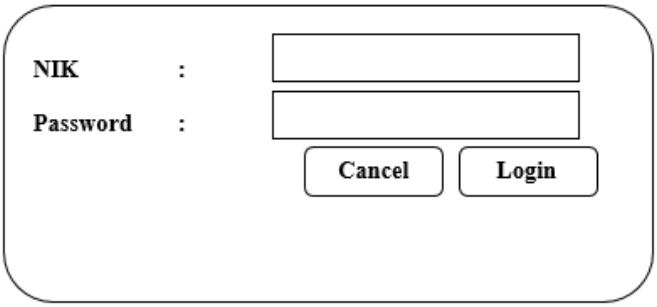

Figure 16. User Login Design

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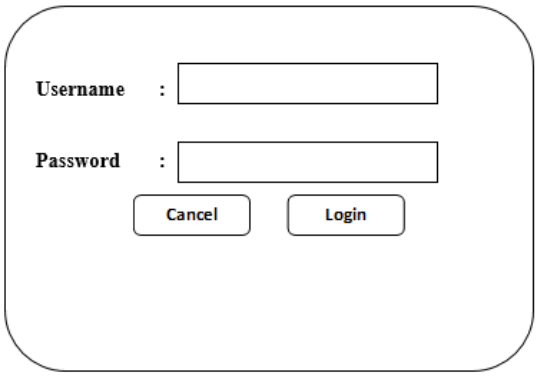

Figure 17. Admin Login Design

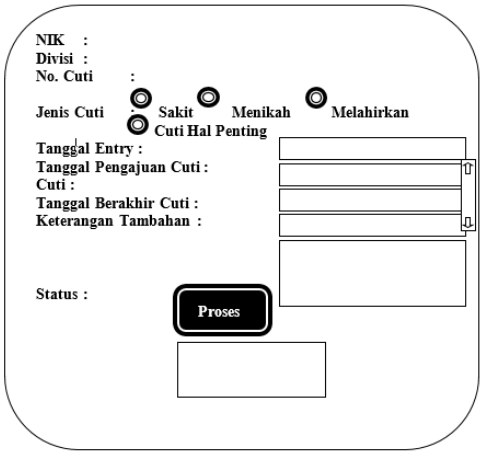

Figure 18. Design of Leave Application Design Form

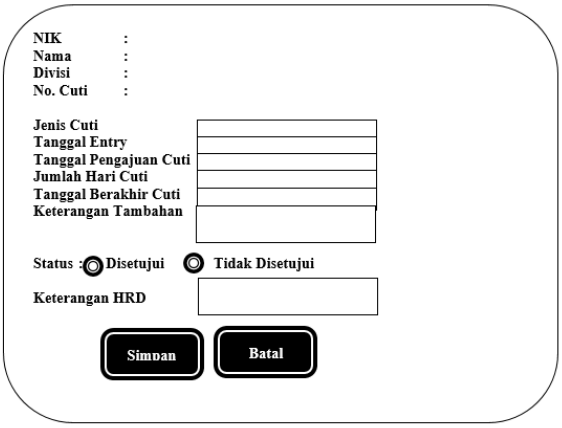

Figure 19.HRD Leave Approval Input Form

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F. Output Design

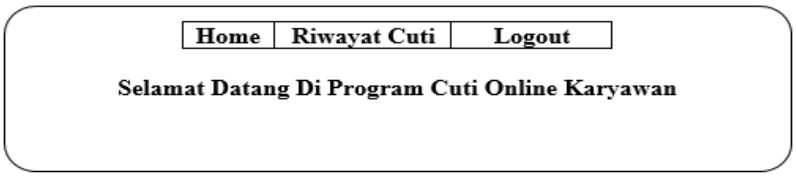


Figure 20. Display of Leave History

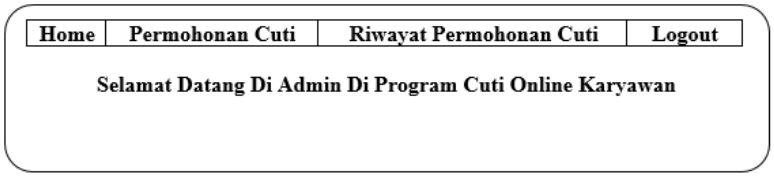
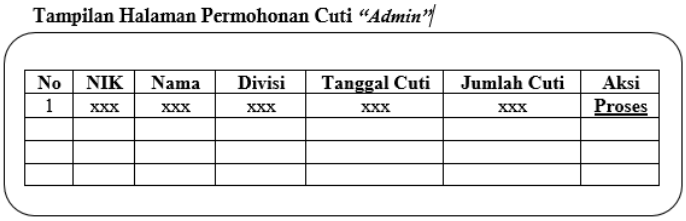


Figure 21. Admin Main Page



22. Admin Leave Application Page

Figure 23. History of Leave Applications

G. Display So Input and Output

Figure 24. Display as User Login Input

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Figure 25. Display as Admin Login Input

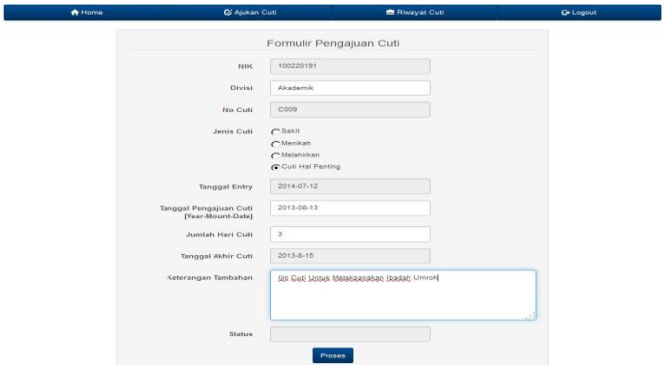

Figure 26. Display as Input Form for Leave Application

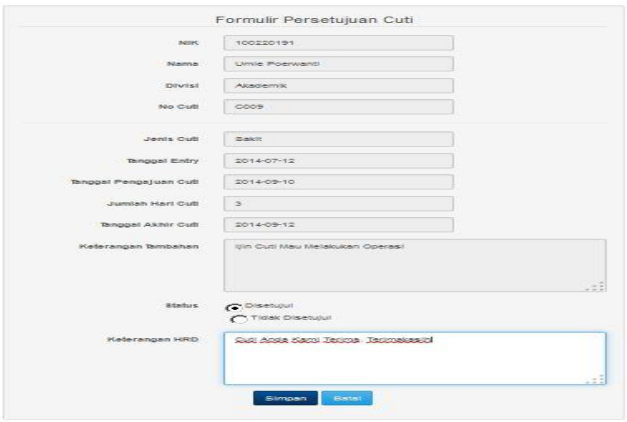

Figure 27. The Appearance of the Leave Approval Form

Figure 28. Display of Employee Main Page Output

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Figure 29. Display of Leave Report Output

Figure 30. The Display is the Output of the Admin Main Page

Figure 31. The Display of the Output Request for Leave

Figure 32. Output History of the End of Leave Application

IV. CONCLUSION

The conclusions from the results of this study are as follows:

1. The current system for submitting leave which has been carried out at the LP3I Polytechnic Jakarta, Depok Campus in carrying out the process is still manual.
2. Obstacles encountered in the current system that is still in use, for example, when employees will apply for leave, they must ask for a manual form to the HRD section who still has to wait for the presence of the HRD section.
3. The design of information systems is a way to streamline work. By using a computerized system, it can avoid the occurrence of duplicate data and also data consistency. So that the processed data becomes of good quality. This Employee Leave Information System is designed with the aim of changing the manual leave

application process into a computerized one, namely to minimize the error rate in recording and managing employee leave application data.

REFERENCES

Akbar,Ali. 2012. 1 Menit Belajar Bikin WEB Sendiri dengan PHP, Mediakom Yogyakarta.
Andi .2010. Shourtcourse SQL Server 2008 Express, Wahana Komputer Yogyakarta.
Anhar.2010. Panduan Menguasai PHP dan MySQL Secara Otodidak, Mediakita Jakarta.
Fatta.2010. Analisis dan Perancangan Sistem Informasi untuk Keunggulan Bersaing Perusahaan dan Organisasi Modern, Andi Publisher Yogyakarta.
Krismiaji.2010. Sistem Informasi Akuntansi, Graha Ilmu, Yogyakarta.
Rusli, Ronald.2013. Membuat Aplikasi GPS dan Suara Antrian dengan PHP, Lokomedia Yogyakarta.
Sutisna, Dadan.2010. 7 Langkah Mudah menjadi Webmaster, Mediakita Jakarta.