Jurnal Mantik
Volume 4, Number 3, November 2020, pp. 1397-1403 E-ISSN 2685-4236
https://iocscience.org/ejournal/index.php/mantik

Online Leave Information System Based on Website Case Study at Taman Mini Indonesia Indah

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ARTICLE INFO

Article history:
Received: 12/07/2020
Revised: 22/08/2020
Accepted: 30/09/2020

Keywords:
Design of Information System, Purchase Process of Material, Waterfall

ABSTRACT

Along with the era development and the increasingly advanced technology, demanded speed and accuracy in obtaining information. The use of computers and Sistem-sistemnya has become a major necessity to facilitate human work. Taman Mini Indonesia Indah is an Indonesian culture-themed tourist park in East Jakarta. Leave is one of the employees ' rights. Leave can be used by employees to not be able to enter the work for a particular reason, e.g. refreshing, sick break, childbirth, performing religious obligations, and other purposes in accordance with the provisions of the leave of each organization/agency. Processing of leave data at Taman Mini Indonesia Indah is still done manually by using the leave paper to HRD which resulted in the approval process and the report has not been efficient. With the online website-based and make with method waterfall leave submission system, make it easier for employees to apply for leave and generate fast, precise and accurate data for HRD in obtaining and making employee leave reports

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1. Introduction

Taman Mini Indonesia Indah (TMII) is a tourist park with the theme of Indonesian culture in East Jakarta. An area of approximately 150 hectares or 1.5 square kilometers is located at the coordinates of 6 degrees 18'6.8"LS, 106 degrees 53'47.2"E. In Indonesia, almost every ethnic group has different building shapes and styles, and it is not uncommon for one ethnic group to have more than one type of traditional building.

Leave is one of the rights of employees. Leave can be used by employees to be unable to come to work for certain reasons, for example refreshing, taking sick breaks, giving birth, fulfilling religious obligations, and other requirements in accordance with the provisions of leave in each organization / agency.[1]

At Taman Mini Indonesia Indah, for filing employee leave, and making employee leave reports still use paper and Microsoft Excel, where processing like this is less effective for storing employee leave data, because employee leave data storage is still stored in filing and Microsoft Excel.

The problem that arises is the difficulty in processing leave data due to manual processing of leave data, sometimes human errors occur, because recording is sometimes done improperly. Another problem that arises is that the preparation of annual leave reports requires a long time and requires large storage space.

According to Fattah concludes that: An information system is a system within an organization that brings together the needs of daily transaction processing, supports certain operations with the required reports. Information system design is the development of a new system from the old system, where the problems that occur in the old system are expected to be resolved in the new system.[2]

The web is a collection of pages used to display text information, still or motion images, animation, sound, and / or a combination of all of them, both static and dynamic which form one a series of interconnected buildings, each linked by a network of courtyards

To make it easier for employees to carry out the leave process and get complete and detailed information related to leave.[3] So the authors are interested in creating a system to solve the problems at Taman Mini Indonesia Indah.

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The design of this information system is web-based to present information on attendance data processing and taking leave from work in the industry using PHP and MySQL programming. The purpose of this system is to design, manage and implement work leave takers at the company. This information system design uses data flow diagram modeling, relation diagrams. The implementation of this information system is intended to make the process of obtaining leave work permits more effective and efficient. This system is based on HTML 5 programming, so it can be accessed using a browser device.[4]

The processes and procedures for managing employee leave of most companies still use manual methods. From the leave application process, information on the remaining leave and approval of leave submissions is still carried out based on filling in data using paper or cards available at each company. This usually results in the process of applying for leave that is quite long and long so that employees cannot use time management properly. In this research, a website-based employee leave information system design will be built.[5]

2. Method

In information system development, using the waterfall method. According to Kristanto in (Alfatah, 2018) Waterfall is "a simple classic model with a linear system flow, the output of each stage is the input for the next stage". [6]

a) System Requirements Analysis
   At this stage, an analysis of the documents needed to design a leave application system is carried out at Taman Mini Indonesia Indah. These documents include: A leave application form approved by HRD Taman Mini Indonesia Indah.
b) Design
   This stage is done before coding. This stage aims to provide an idea of what should be done and how it should look. This stage focuses on the database design by describing the design of the ERD (Entity Relationship Diagram) diagram, LRS (Logical Record Structure) and also the file specifications, software architecture. Using UML (Unified Modeling Language) and designing the interface design.
c) Code Generation
   Translating the design into a form that can be understood by machines. At this stage in making the employee leave information system at Taman Mini Indonesia Indah, it uses structured programming with the programming language used PHP and the mysql database.
d) Testing
   At this stage, the authors test the system by testing using the blackbox testing method. The aim is to find problems at the beginning both in system function, system logic, database access and interfaces. Where in the test the main focus is to ensure all functionalities and system interfaces run properly and in accordance with needs. And in terms of the employee leave transaction process, it must be calculated correctly and accurately, this is to solve problems that exist when using manuals
e) Support
   In developing the system, the author seeks to create a flexible application so that if there is a change in regulations regarding leave, the user can immediately make the changes independently. However, if time goes by, there are changes to forms or application interfaces from the previous one, then this must be adjusted in the application. At the system development stage the author uses hardware specifications with 2 gigabytes of RAM and a hard disk capacity of 500 gigabytes while the software used by PHP and MySql with the Xampp web server, for interface design uses Notepad ++ and the operating system used is Windows 8 Pro.

3. Result and Discussion

Online Leave Information System at Taman Mini Indonesia Indah which makes it easier for submissions to find out the remaining employee leave.

a) Business Modeling
1) Employee Access:
   A1. Employees can log in
   A2. Employees can access the leave application menu
   A3. Employees can access the leave application history menu
   A4. Employees can log out
2) Access HRD Administrator:
   B1. HRD can login
   B2. HRD can manage employee data

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B3. HRD can manage job data
B4. HRD can manage location data
B5. HRD can manage status data
B6. HRD can manage leave data
B7. HRD can access leave approval
B8. HRD can access the leave application flow
B9. HRD can access the report menu
B10. HRD can log out

3) Access Manager:
C1. Manager can login
C2. Manager can create users
C3. Manager can access reports
C4 Manager can log out

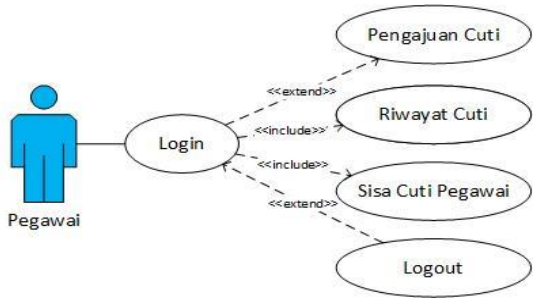

Fig 1. Employee Use Case Diagram

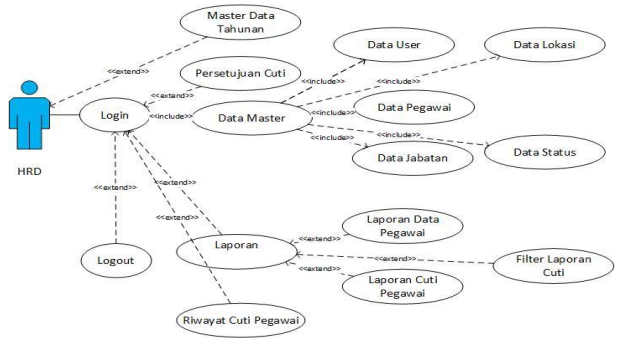

Fig 2. HRD Use Case Diagram

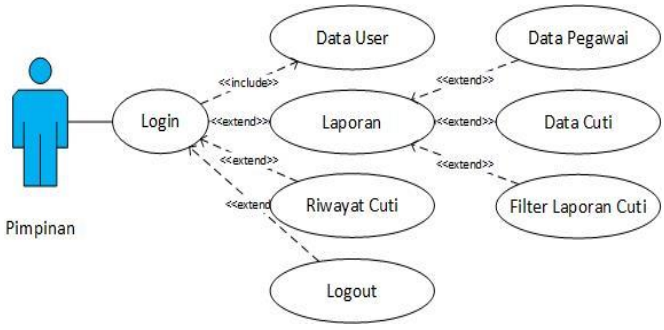

Fig 3. Manager Use Case Diagram

3.1. Data Modeling

The following is data modeling from the online leave system. At this stage the author identifies the attributes of each object and defines the relationship between these objects into a set of data objects in the database, which in this design the author uses an Entity Relationship Diagram (ERD) and also a Logical Relation Structure (LRS).

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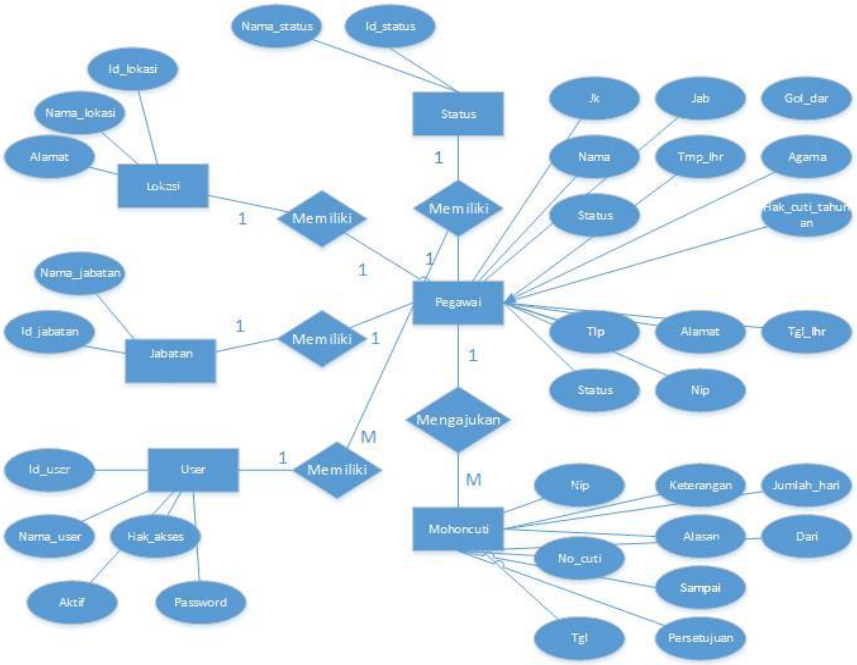

Fig 4. Entity Relationship Diagram

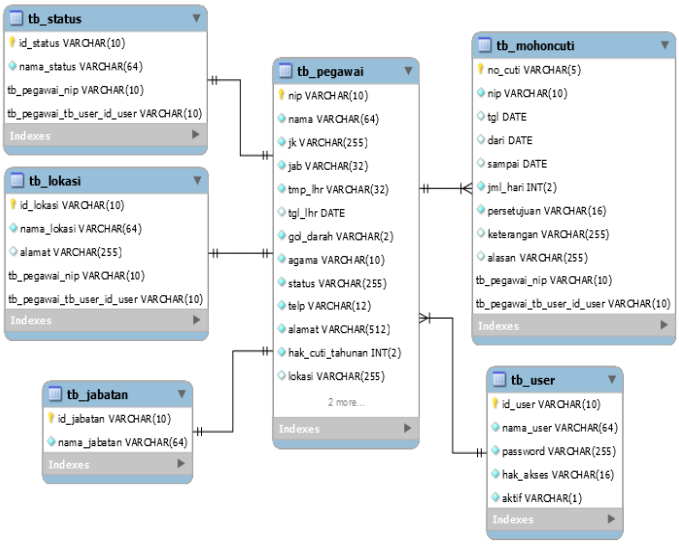

Fig 5. Logical Relation Structure

3.2. Process Modeling

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The following is a process modeling of the online leave system. At this stage the authors transform what has been defined in data modeling and then implemented using an Activity Diagram.

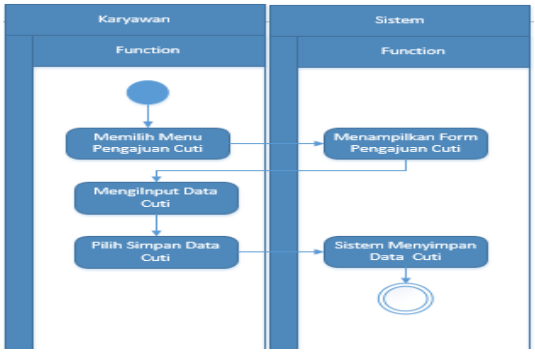

Fig 6. Leave Request Activity Diagram

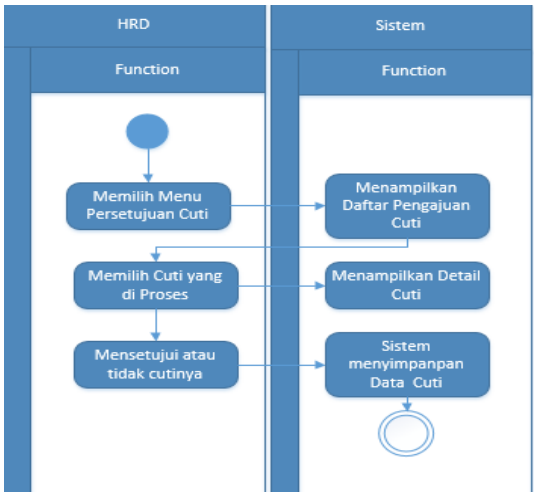

Fig 7. Activity Diagram for Leave approval

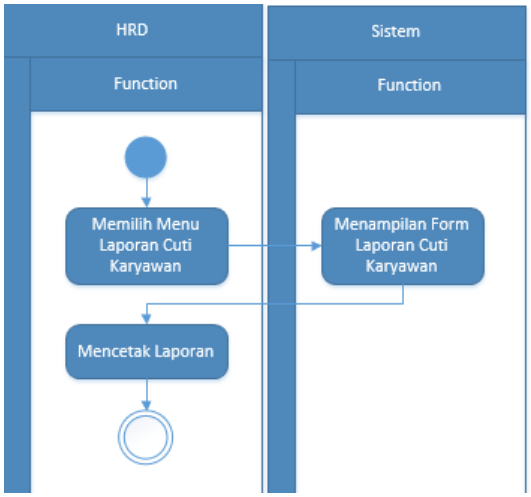

Fig 8. Activity Diagram prints leave reports

3.3 Web Design

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At the stage of making the application the author applies a number of program code from the results of the analysis of the running system at the school that has been researched into a structured program using PHP tools. The following is the making of an application that is built on a web basis, and displays some application development designs including:

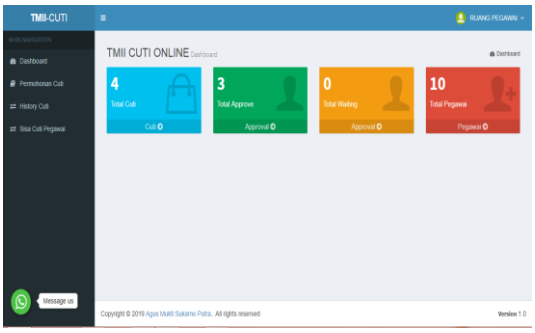

Fig 9. Employee User Interface

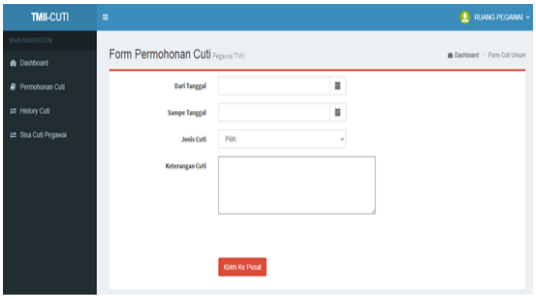

Fig 10. Leave Request User Interface

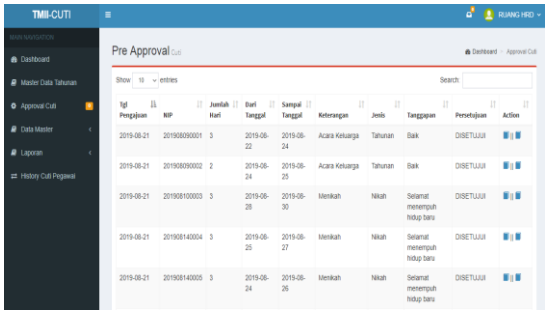

Fig 11. Leave Approval User Interface

3.4. Examination

In the testing and replacement phase, the author tests all interfaces that have been made using the Black Box method.

Table 1.
Black Box Testing Leave Request Results

No	Sekenario Pengujian	*Test Case*	Hasil yang diharapkan	Hasil Pengujian	Kesimpulan
1.	Mengosongkan semua data pengajuan cuti lalu mengklik tombol "Kirim ke Pusat"	Semua data atau *field* kosong	Sistem menolak dan menampilkan pesan "Harap periksa kembali dan pastikan data yang Anda masukan lengkap dan benar."	Sesuai Harapan	Valid
2.	Mengosongkan data "dari tanggal dan sampai tanggal	Data tanggal kosong	Sistem akan menolak dan menampilkan pesan "Harap periksa	Sesuai Harapan	Valid

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No	Sekenario Pengujian	*Test Case*	Hasil yang diharapkan	Hasil Pengujian	Kesimpulan
			kembali dan pastikan data yang Anda masukan lengkap dan benar."		
3.	Tidak memilih jenis cuti yang akan diambil, lalu klik "Kirim ke Pusat"	Tidak pilih jenis cuti	Sistem akan menolak dan menampilkan pesan "Harap periksa kembali dan pastikan data yang Anda masukan lengkap dan benar."	Sesuai Harapan	Valid
4.	Menigisi semua data dengan benar, lalu klik "Kirim ke Pusat"	Mengisi semua data	Sistem akan menyimpan permohonan cuti dan menampilkan pesan "permohonan cuti terkirim"	Sesuai Harapan	Valid

Table 2.
Black Box Testing Results Leave Report

No	Sekenario Pengujian	*Test Case*	Hasil yang diharapkan	Hasil Pengujian	Kesimpulan
1.	Mengosongkan semua data laporan cuti	Semua data atau *field* kosong	Sistem tidak menampilkan data laporan	Sesuai Harapan	Valid
2.	Mengosongkan beberapa data laporan cuti	Mengosongan beberapa data	Sistem tidak menampilkan data laporan	Sesuai Harapan	Valid
3.	Mengisi semua data laporan cuti	Data laporan tidak sesuai jenis atau tahun	Sistem tidak menampilkan data laporan	Sesuai Harapan	Valid
4.	Mengisi semua data laporan cuti	Data laporan sesuai jenis dan tahun	Sistem menampilkan data laporan	Sesuai Harapan	Valid

4. Conclusion

In building the TMII online leave system website, the authors conclude that the leave information system that previously used the manual method, which is done by employees must come directly to take leave TMII's online leave information system can be accessed via the internet making it easier for anyone, anytime and anywhere. Just accessed it TMII's online leave information system accelerates the processing of employee data, employee leave data and the process of making reports, so that the time needed is shorter and more efficient.

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