International Journal Multidisciplinary Science
IJML Vol 2 No. 3 Oct 2023 | ISSN: 2963-8119 (print), ISSN: 2963-7821 (online), Page 57-65

ONLINE LICENSING APPLICATION SYSTEM DESIGN FOR CV. FILADELPHIA TIRTA PERKASA USES CODEIGNITER AND BOOTSTRAP FRAMEWORK

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Article History
Received : September 2023
Revised : October 2023
Accepted : October 2023
Published : October 2023

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DOI:
https://doi.org/10.56127/ijml.v2i3. 1136

Abstract: A website can be interpreted as a document stored on a web server that has a certain type and topic. Websites consist of two types, namely static and dynamic websites. A static website is a website where users cannot change the content of the website directly using a browser. Meanwhile, in a dynamic web, the interactions that occur between users and servers are very complex. One can change the content of a particular page by using a browser. This website application was built with the PHP, CSS, HTML and JavaScript programming languages using the Codeigniter 3.0.6 and Bootstrap 3.3.6 framework. This application was created to make it easier for an employee to get a CV. Filadephia Tirta Perkasa in applying for leave and permission. The research method used is the Waterfall method which consists of planning and needs analysis, design, implementation, testing, installation and maintenance stages. The application is divided into two designs, namely an application for administrators and an application for employees. Based on the implementation and results of trials carried out, it shows that this application can run well and can display all pages.

Keywords: Bootstrap, Codeigniter, Framework, Website

INTRODUCTION

Licensing and leave at a company is one of the company's obligations given to its employees. Matters regarding permits and leave have also been regulated in Law no. 13 of 2003 concerning Employment. At this time, more and more new companies are being established because of business opportunities and job vacancies. Wrong

the other is CV Filadelphia Tirta Perkasa.

This company is a company that operates in the field of providing equipment related to waterways, which is still developing today, but every process is still not computerized, including permits and leave. With the current development of computerized technology, it is hoped that every data and information processing process will become easier to carry out and the information obtained will also be more accurate. More and more agencies and organizations are starting to try to increase the efficiency of their work with this information technology.

So far, the administrative management process for employee permits has been carried out manually, where employees who wish to take permits or leave must manually make a request letter which is signed, then submitted directly to their superior to request approval. This process becomes less effective and efficient considering that each process takes time, so it can cause employee attendance to be empty and without information.

By implementing a licensing information systemonline At the CV Filadelphia Tirta Perkasa company, it is hoped that the processing of permit and leave data can be faster and more efficient in terms of time and energy because it can be accessed anywhere and at any time. Therefore, with the explanation above, the author takes the title "Plan Online Licensing Application for CV. Filadelphia Tirta Perkasa Using the CodeIgniter and Bootstrap Framework".

Research Purposes

The purpose of this writing is to create a website that can be expected to make it easier for CV Filadephia Tirta Perkasa employees to apply for permits and leave.

RESEARCH METHOD

In this writing, the author is guided by one methodSoftware Development Life Cycle (SDLC), namely Waterfall which includes:

1. Planning and needs analysis stage
   This stage begins with collecting the data needed to plan what will be made and analyzing the need for software and hardware suitable for making this application which is obtained from various sources, such as interviews, direct observation, books, journals, and information. from the Internet.
2. Planning stage,
   At this stage, the author creates an application concept. Next is the navigation structure of the application. Then database design and interface design.
3. Implementation stage
   At this stage, the website design that was created in the previous stage is implemented into program code using the PHP, HTML, CSS and Java Script programming languages in the Codeigniter and Bootstrap frameworks.
4. Trial stage
   At this stage, the program has been created and testing is carried out on the feasibility of the application being created. This test is carried out to find out whether the software created is in accordance with its design and there are still errors or not.
5. Operation and maintenance phase
   This level is the level where the web application is installedweb server and the computers of the relevant agencies for further application maintenance, including database maintenance, problem handling, and adding features to the application.

RESULT AND DISCUSSION

System Overview

The system that will be built is a network-based employee licensing application that can be accessed anywhere and at any time by end users to make it easier to apply for leave, as well as help personnel administration officers integrate every data and information obtained from end users so that every information Once obtained, it can be processed easily and stored properly in the database.

Users of this system are divided into two. The first is the System Administrator whose job is to process data on leave applications and permits from employees, so that applicants can obtain the status of their leave applications and permits. Second is the end user, namely every employee who has registered and hasusername as well aspassword This licensing application will also use every facility provided by the system.

Use Case Diagram

In this section, we will describe the interactions that occur betweenuser both end users (hereinafter referred to as users) and admins with the application system that has been created as shown in Figure 1.

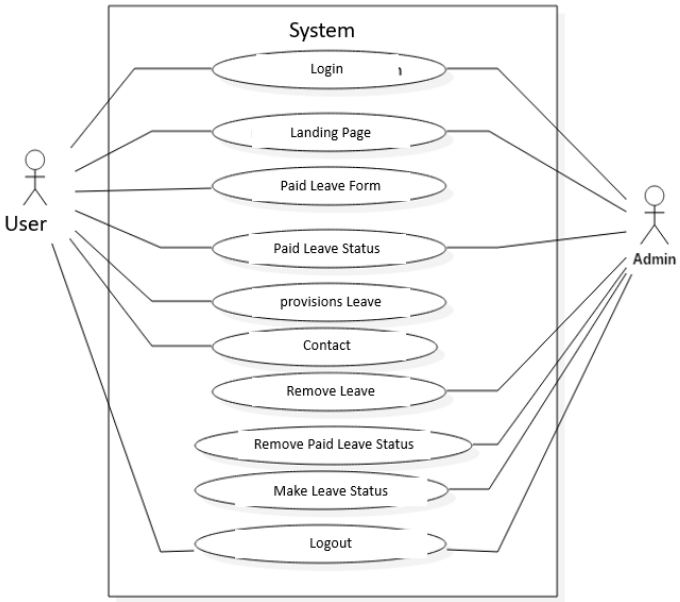

Figure 1. Use Case Diagram

Database Planning

In this section, a list of tables in the database used by the system with the name thesis will be attached with the contents of tables named groups, users, data_kry, form, and status_leave which can be seen in the following table.

Table 1. Group table design

No	Size	Data Type	Information
id	1	Tinyint	Primary Key, Auto increment
name	20	Varchar	Not null

Table 2. Designing the users table

No	Size	Data Type	Information
id_users	10	Integer	Primary Key, Auto increment
username	25	Varchar	
password	25	Varchar	
groups	1	Tinyint	Foreign key

Table 3. Data_kry Table Design

No	Size	Data Type	Information
near	10	Varchar	Primary Key
peg_name	35	Varchar	
jk	1	Varchar	
birthdate		Date	
address	50	Varchar	
tlp	21	Varchar	
salary	20	Integer	
department	30	Varchar	

Table 4. Table form design

No	Size	Data Type	Information
no	3	Integer	Primary Key, Auto increment
no	35	Varchar	
tglm		Date	
tgla		Date	
reason	100	Varchar	
file		Blob	
near	10	Varchar	Foreign key

Table 5. Table Planning status_holiday

No	Size	Data Type	Information
id	2	Integer	Primary Key, Auto increment
no	35	Varchar	
date	30	Varchar	
reason	100	Varchar	
status	50	Varchar	

Class Diagram

In this section, we will describe the structure, description of classes and objects that are interconnected with each other contained in the application system database that has been created. This is shown in figure 2.

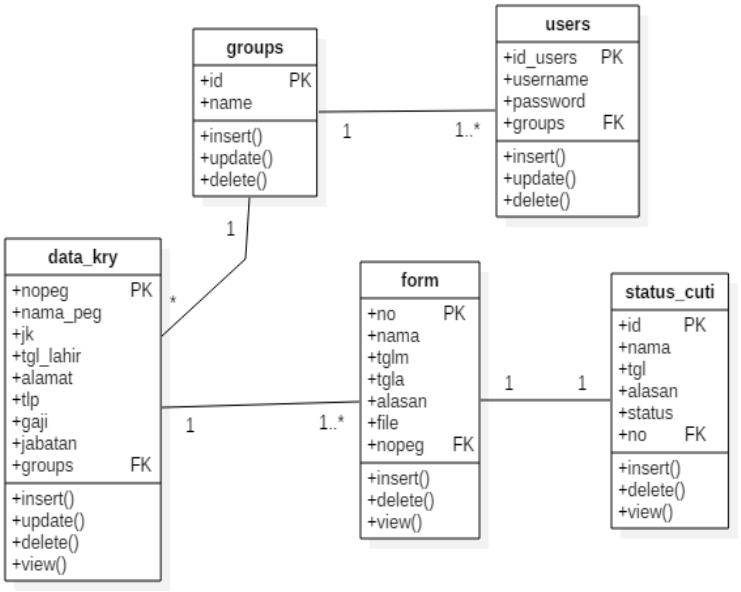

Figure 2. Class Diagram

Navigation Structure

In this section, we will describe the navigation structure of the application website that has been created. This can be seen in Figure 3 below.

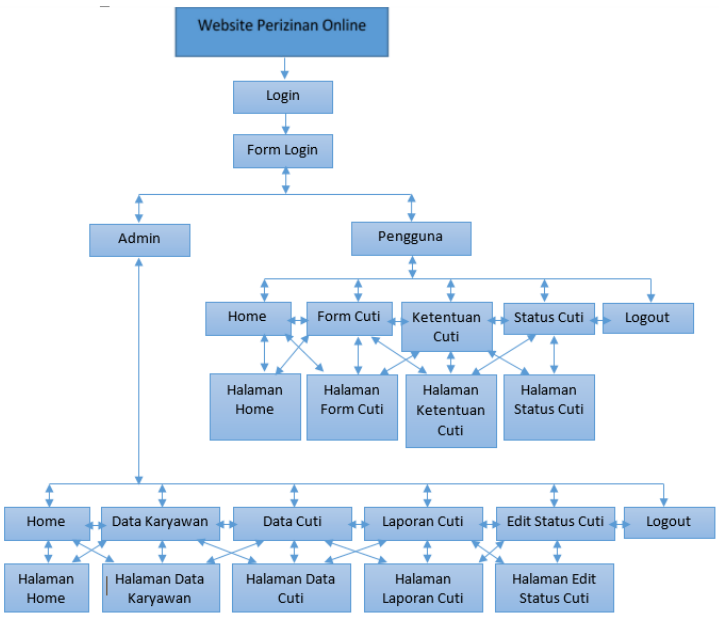

Figure 3. Struktur Navigas

Website Appearance Design

The display design is used to make it easier to create this application system. This display design is divided into 2 parts, namely the end user display design and the system administrator display design. The following is an explanation of the display design that will be used.

User View Design

In this application the interface is dynamic because it can be accessed on device screens with different screen resolutions. The following is a display design for the end user section.

User Home Display Design

The user's home page is the page that will appear when the user successfully carries out the process*login*. On this page, users can see the page content in the form of welcome notifications and information about various types of leave.

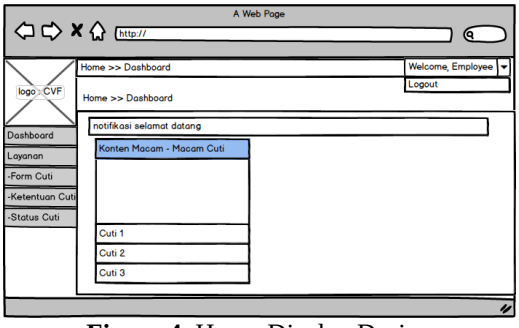

Figure 4. Home Display Design

Leave Form Display Design

The leave form page is the page that will appear when the user selects the sub menu from the service, namely the leave form. On this page, users can carry out the leave application process by filling in the required data.

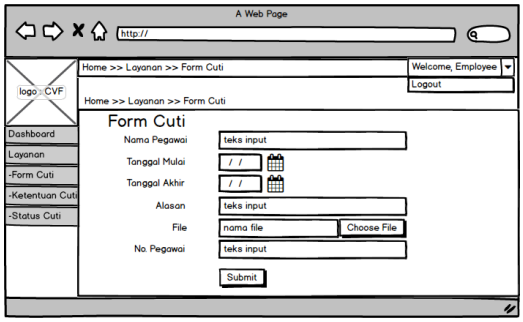

Figure 5. Leave Form Display Design

Leave Status Display Design

The leave status page is the page that will appear when the user selects the sub menu from the service, namely leave status. On this page, users can see a table containing data on the status of each employee's leave application that has been processed by the admin.

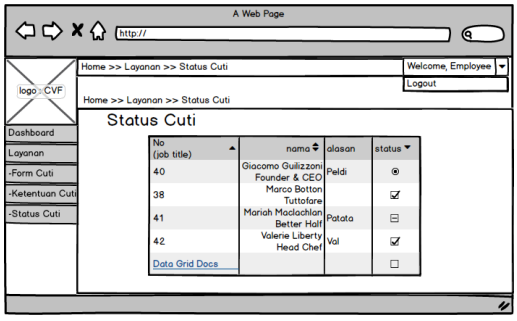

Figure 6. Leave Status Page Display Design

Home Admin Display Design

The admin home page is the page that will appear when the system administrator (admin) successfully carries out the process*login*. . On this page the admin can see the page content in the form of a welcome notification and information about various types of leave.

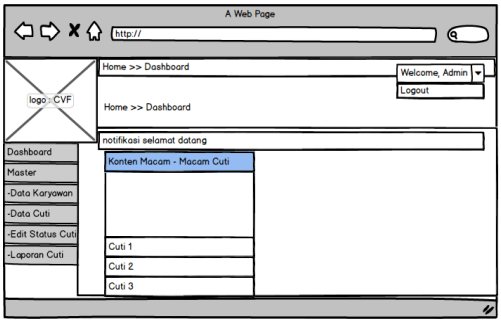

Figure 7. Admin Home Page Display Design

Leave Data Display Design

The leave data page is the page that will appear when the admin selects the master leave data sub menu. On this page the admin can see a table containing data on leave applications for each employee on*database*.

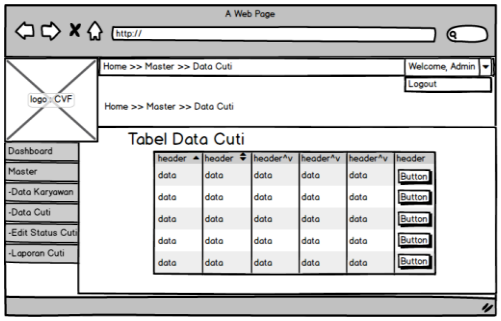

Figure 8. Leave Data Page Display Design

Blackbox Testing

In this section, the results of the trial will be explained*blackbox testing*. *Blackbox testing* is testing that is carried out only by observing the results of execution through test data and checking the functionality of the software. In other words, just look at the external results.

User Home Page Testing

Table 6. User Home Page Testing

No	Observed Data	Expected results	Test result	Information
1	User Home Page	Can display internal content*accordion* when entering the system	In accordance	Displays inner content*accordion*
2	Logout button	Can exit the system when pressing the Logout button	In accordance	Can Exit the system

Testing the Leave Form Page

Table 7. Testing the Leave Form Page

No.	Observed Data	Expected results	Test result	Information
1	Leave form	Can display leave form content	In accordance	Displays the leave form
2	Leave form	Can save data into the database when the Submit button is pressed	In accordance	Data is saved into the database when pressing the Submit button
3	Leave form	Can save photo files into system folders	In accordance	The uploaded photo files are saved into the database
4	Logout button	Can exit the system when pressing the Logout button	In accordance	Can Exit the system

Leave Status Page Testing

Table 8 Leave Status Page Testing

No.	Observed Data	Expected results	Test result	Information
1	User Leave Status Page	Can display the leave status table	In accordance	Displays the contents of the leave status table
2	User Leave Status Page	Can display*pagination* for the holiday status table	In accordance	*Pagination* displayed according to a lot of data
3	User Leave Status Page	Can display*searching box* for the holiday status table	In accordance	*Searching box* can be used to search for data in tables
4	Logout button	Can exit the system when pressing the Logout button	In accordance	Can exit the system

Website Output

In this section, the output results from the website that has been created will be displayed, both in applications for employees and applications for admins.

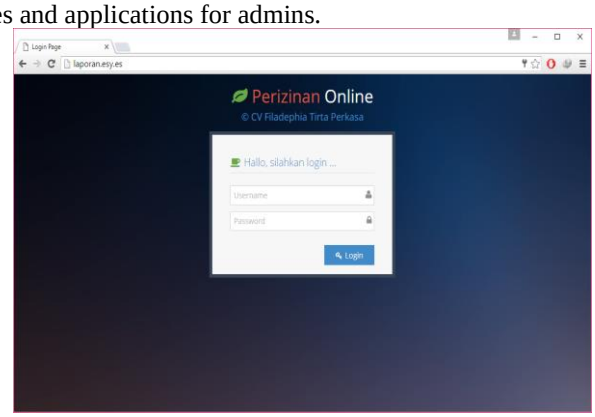

Figure 9. Login Page

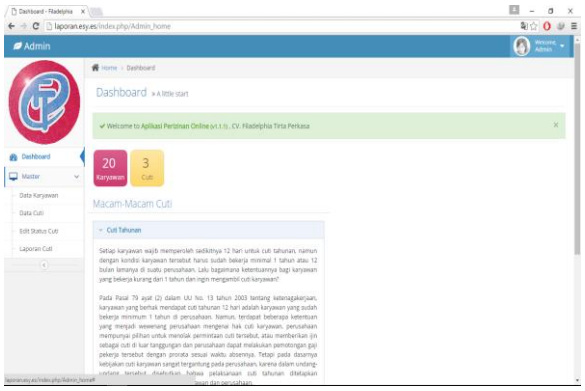

Figure 10. Admin Home Page

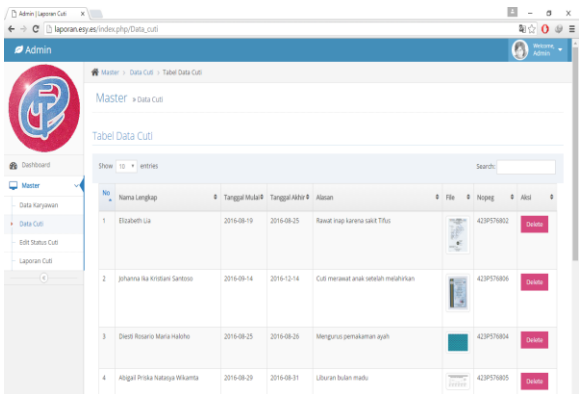

Figure 11. Leave Data Page

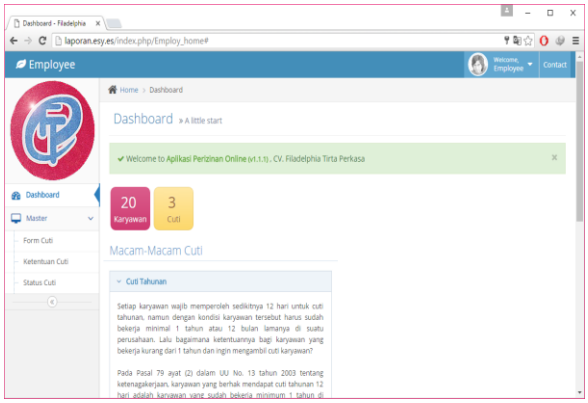

Figure 12. User Home Page

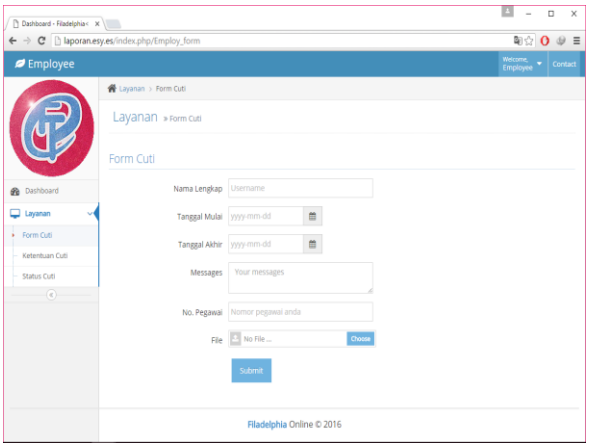

Figure 13. Leave Form page

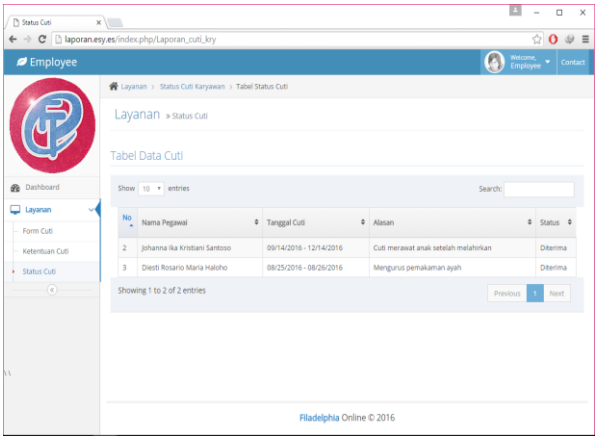

Figure 14. Holiday Status Page

CONCLUSION and SUGGESTION

Conclusion

From the results of the writing in the previous chapters, conclusions can be drawn based on the problem formulation that has been determined, including:

1. Creation of a pnline licensing website for CV. Filadelphia Tirta Perkasa was successfully carried out and can run well on the user's computer or laptop.
2. Based on the resultsuser acceptance testing, website online licensing for CV. Filadelphia Tirta Perkasa provides convenience for 90% of employees.
3. Based on the results of the system analysis, when compared with the old system, the proposed system is more efficient and effective in terms of time and documentation because everything is neatly stored.

Suggestion

Overall, this website still needs further development. The weakness of this application is that it cannot carry out the process of providing leave application status directly on the leave data page, in other words it cannot update tables in specific empty columns, but instead has to fill in new data in a new table. That's the advice the author can convey, hopefully this application can be useful and even better in future development.

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