

Building an Employee Attendance System in Company

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Abstract. This study aims at establishing an attendance system which can facilitate the administration data collection related to employee attendance effectively and efficiently. The method used descriptive scheme, interview and document analysis related to employee attendance to create an effective and efficient attendance system. The results obtained from this study is the establishment of an attendance system that has a function not only for absenteeism but also have the function of saving the status of employee position, working hours of employees, and employment reports of daily and monthly employees. This attendance system serves to assist the secretary to fill employee data, then give the employee daily reports to the vice manager and assist the vice manager in giving the monthly report of employee work to the main manager, so as to make it easier to give an assessment of the performance of company employee for company progress.

1. Introduction

The website is a social networking site that records, various information about each action performed by its members or its users, the website can also generate relevant ones that each member can be connected [1]. One of the most popular attendance systems using technology is RFID. This technique is a very popular wireless identification technique for monitoring attendance [2]. So this system can save time than manually charging absent and more appropriate attendance allocation of score [3-4]. Explain that automated information systems play a role in the growth, progress, and modernization of daily work processes, and with attendance performance graphs delineate consistency with student attendance.

Research conducted by Zulkifli et al explained that one of the attendance systems of students based on the radio frequency technology is Radio Frequency Identification (RFID) which aims to monitor student progress [5]. Research conducted by Shukla and Anjum supports this explained that RFID-based attendance could make the whole process simple, provide a well-structured report and can analyze student attendance pattern and time management so that resource allocation in the organization can be maximally utilized [6 - 7].

Research conducted by Nainan et al found that RFID technology focuses on scalability and security [8-9]. Maramis explained that employee discipline and staff performance could improve on an integrated RFID attendance system with database [10].

2. Method

This research aims to build a system which facilitates the administration of attendance and the attendance of logging employees effectively and efficiently, using the descriptive scheme method, interviews, and analysis of documents related to the attendance employees. So that it can build a RFID-



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based attendance system, which can help facilitate the attendance logging so that it can provide an assessment of the performance of the employees of the company for the progress of the company. This research was conducted because of earlier studies more discussion about the benefits of RFID and has yet to discuss how to build the system attendance clerk in a company.

3. Results and Discussion

Organizational structure the company to manufacture the company's attendance system, which starts from the core leadership up to the employees. (Note Figure 1).

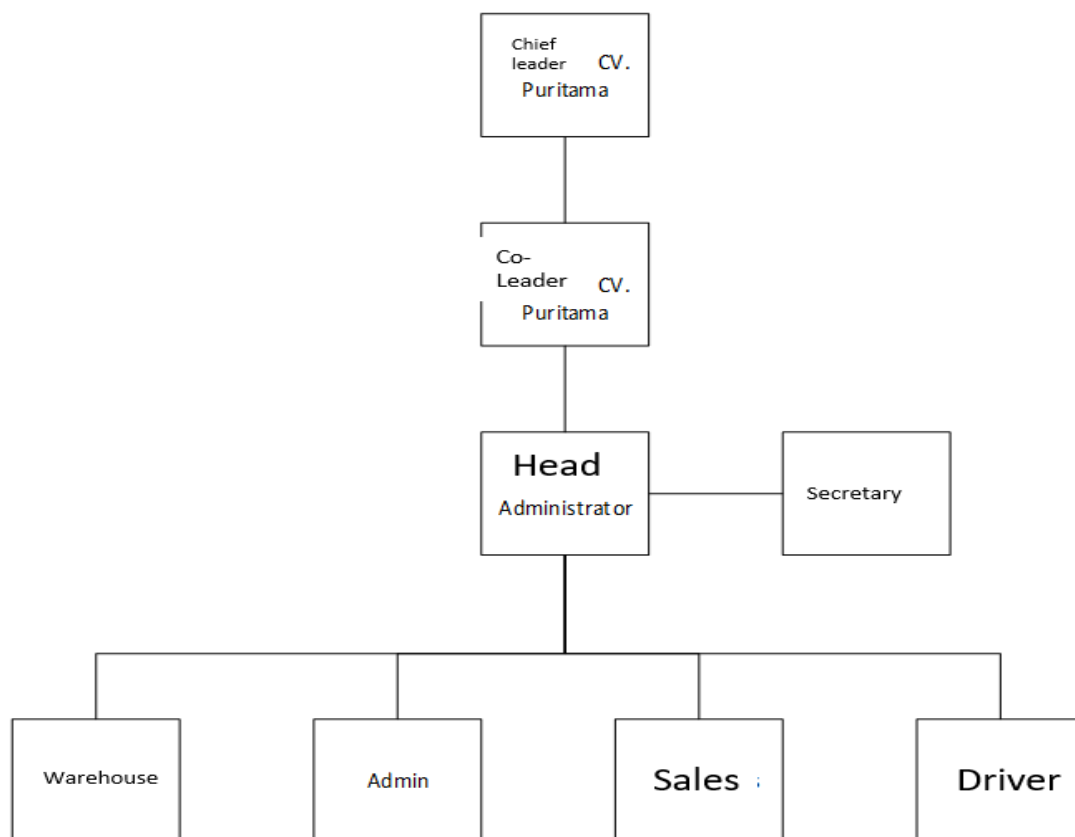


Figure 1. The Organizational Structure of the Company

Design research for the company's attendance system for data collection to design a system that was proposed (Note Figure 2).

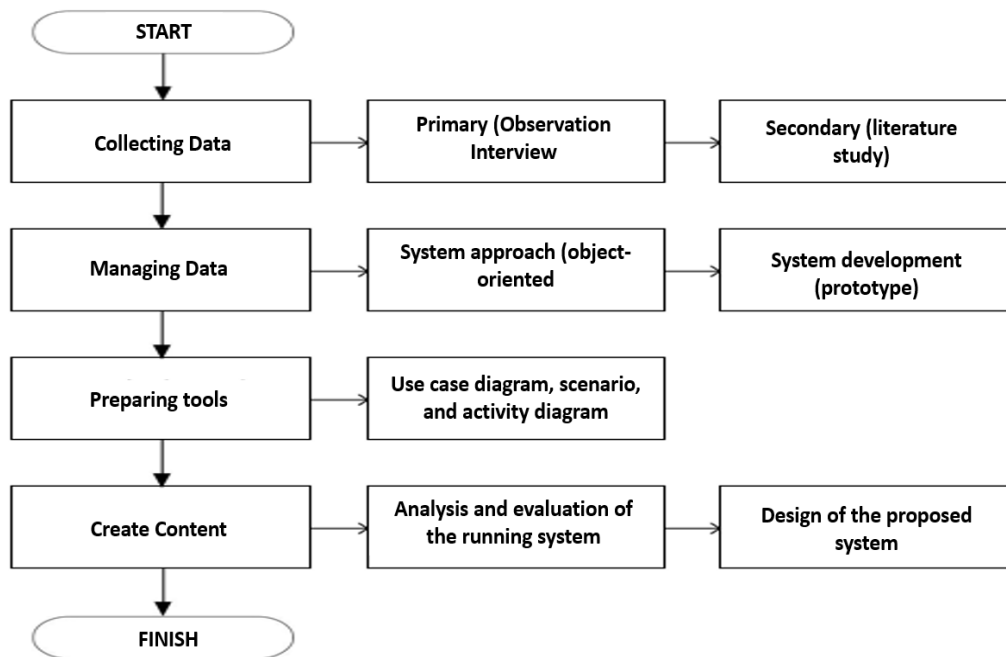


Figure 2. Design Research

The system development method used by identifying the needs of the attendance system user, creating, testing and fixing the prototype, and finally developing the product version (Note figure 3).

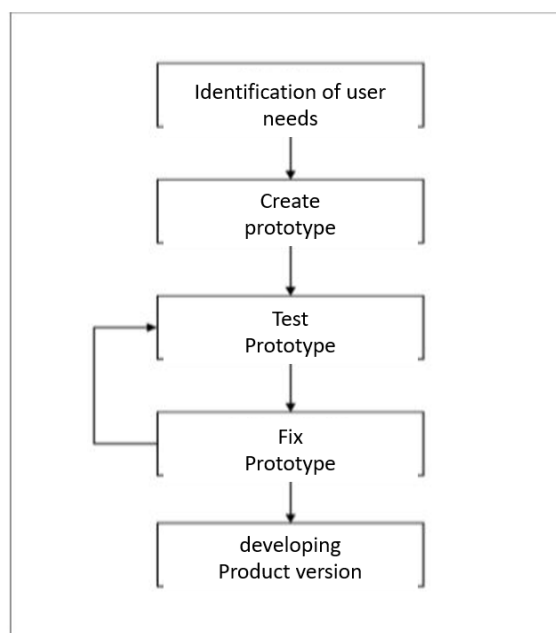


Figure 3. System Development Method

Stages of enterprise attendance system development start with collecting data needs by identifying what is needed by the user so that the attendance information system can run properly. Build a Prototype by designing the proposed system according to the needs of the user and then presenting it to any user that needs to know. Test Prototype by testing the system that has been created taking into account the needs

of the user in the previous step, and if there are errors that occur make improvements to Prototype as needed. The last stage is to develop a production version to get better. Then create a Flowmap flow from the deputy manager, secretary, and manager (Note figure 4).

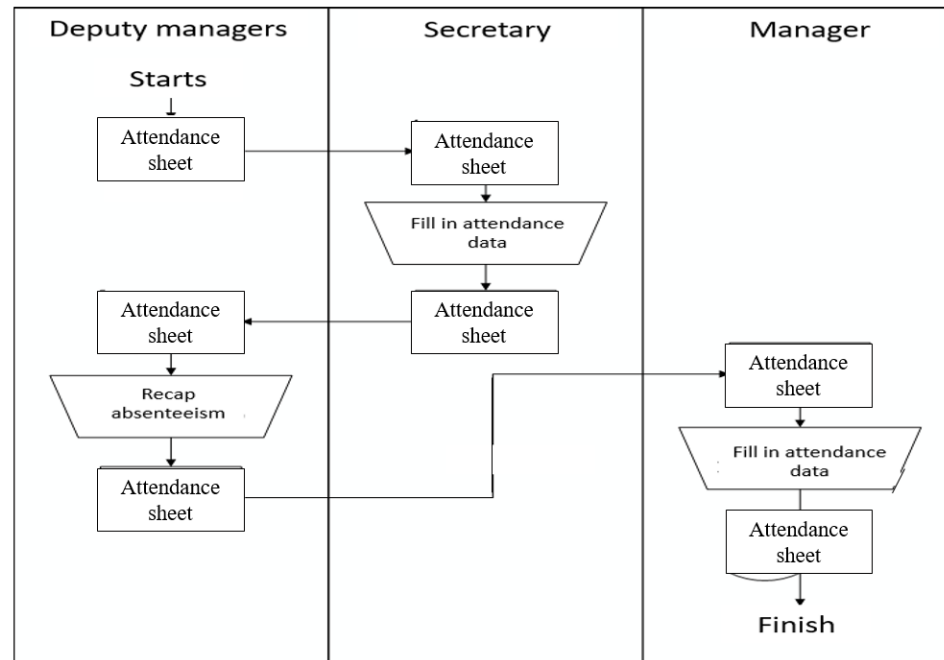


Figure 4. Flow map

Create a context diagram regarding attendance data flow, by first collecting all of the data to be inserted into the employee attendance system.

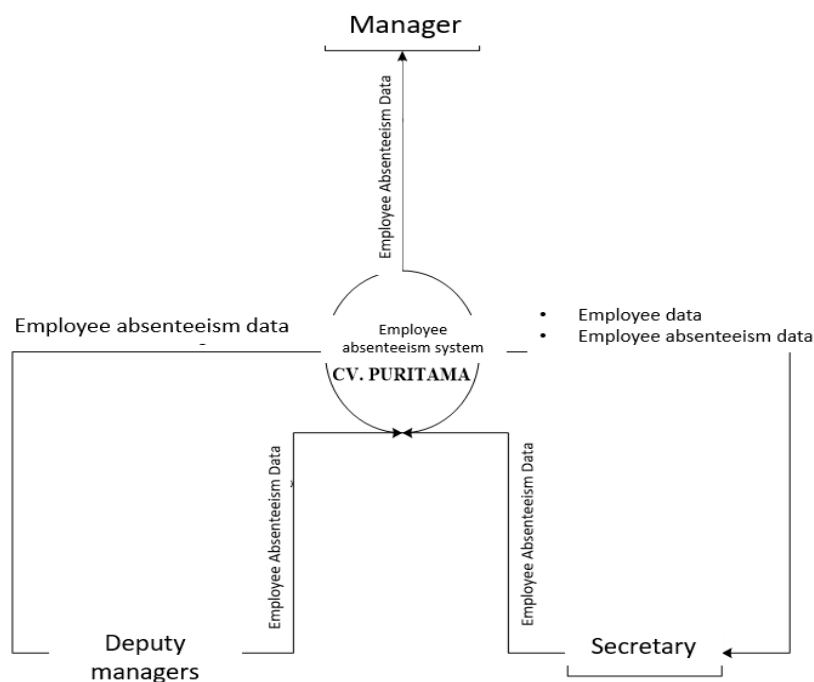


Figure 5. Context Diagram

Create the system data flow diagram of charging absences by the Secretary, then do a recap of absences (daily) from the Secretary to the Deputy Manager, who then gives the Vice manager of attendance recap (monthly) to the Manager (Note figure 6).

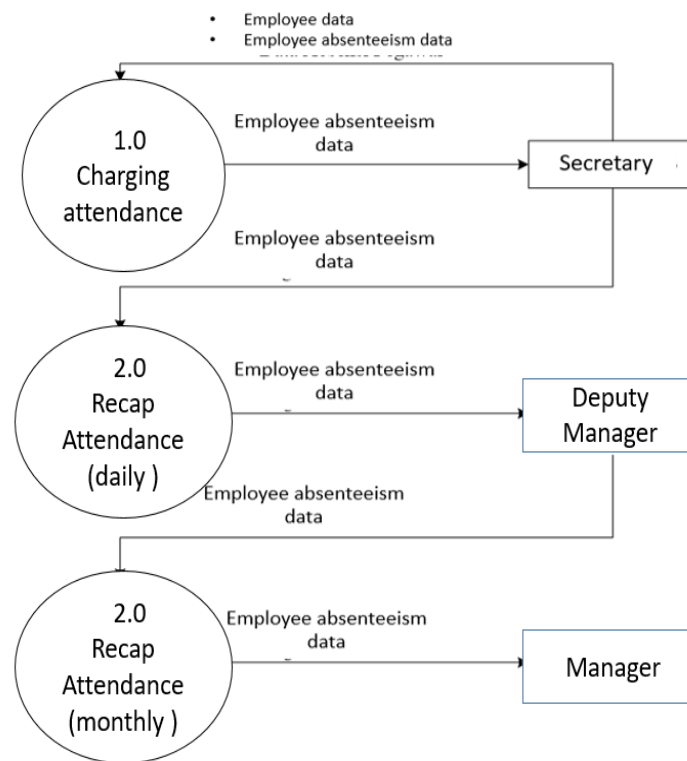


Figure 6. Data Flow Diagram

- a. After creating a data flow diagram, then make an evaluation system that is running (Note Table 1).

Table 1. Data Flow Diagram

Problems	Completion
Less effective in the management of attendance data still must be made in writing/manual.	Information systems that will be designed writers can directly facilitate attendance because it does not have to be written again manually.
If on one occasion, Deputy managers and the Secretary are absent, then the uncertainty can occur in attendance system Because attendance is entirely held by the Deputy Manager who then submitted to the Secretary.	With information systems design, we will solve this problem.
A document is a paper form as there are many rows and columns, it can be inconvenient in case of human error like false marking. So it should be deleted using the correction pen like on the first line of the example document.	With information systems that we designed, problems like this will not happen because the Secretary no longer makes the process of attendance, but the officers themselves.

After creating a data flow diagram, then is the proposed Flow map of data flow diagrams, create a context diagram of the proposed make the proposed data flow, and the structure of the menu (Note Figure 7).

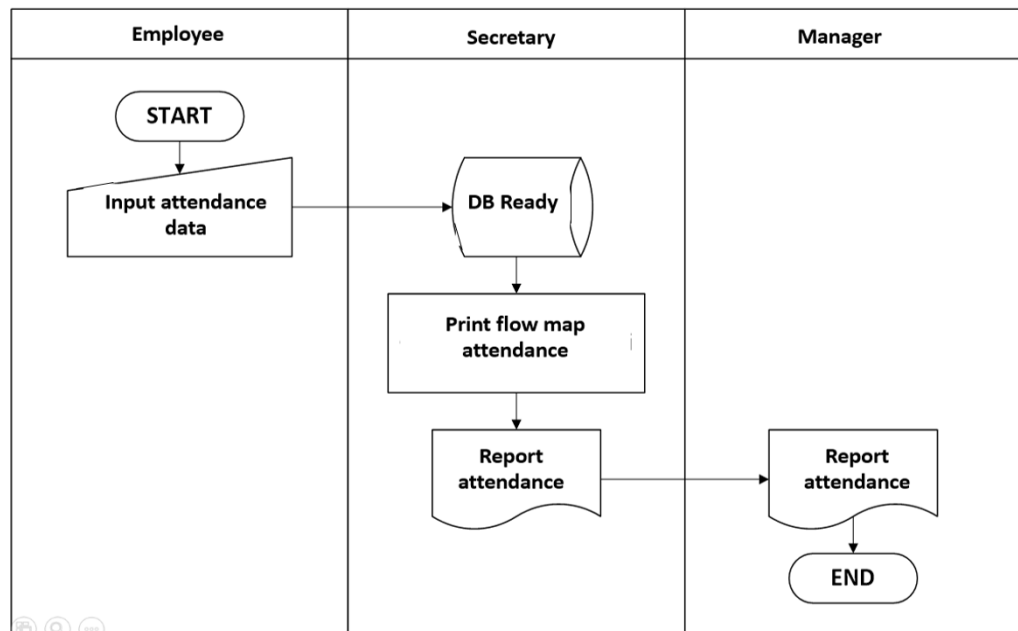


Figure 7. Data Flow Diagram

Then after creating the data flow diagram, the next stage creates the proposed context diagram (Note Figure 8).

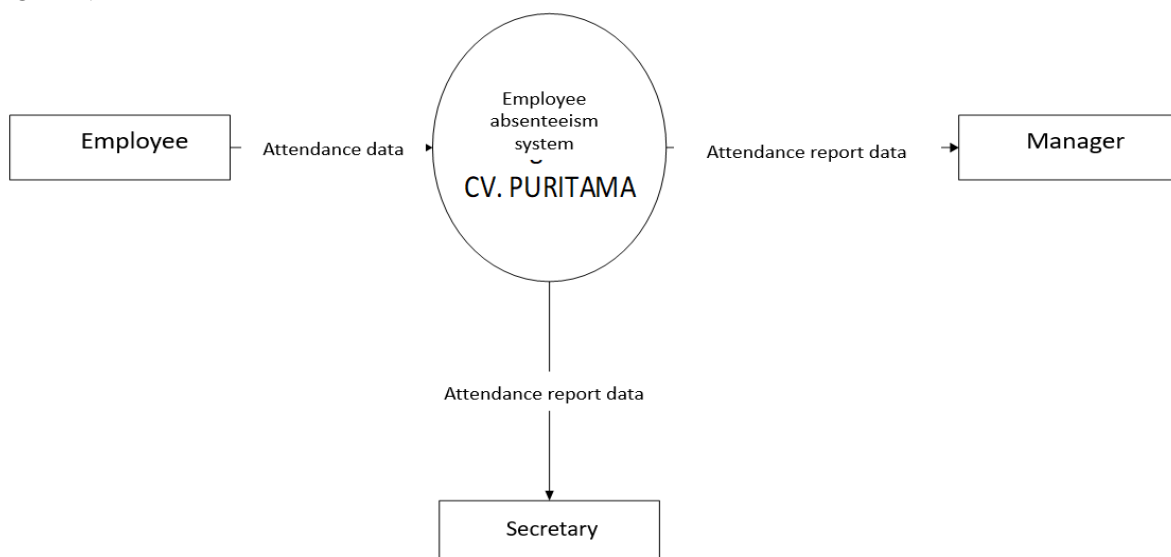


Figure 8. The proposed Context diagram

Then create the proposed data Flow diagrams (Note Figure 9).

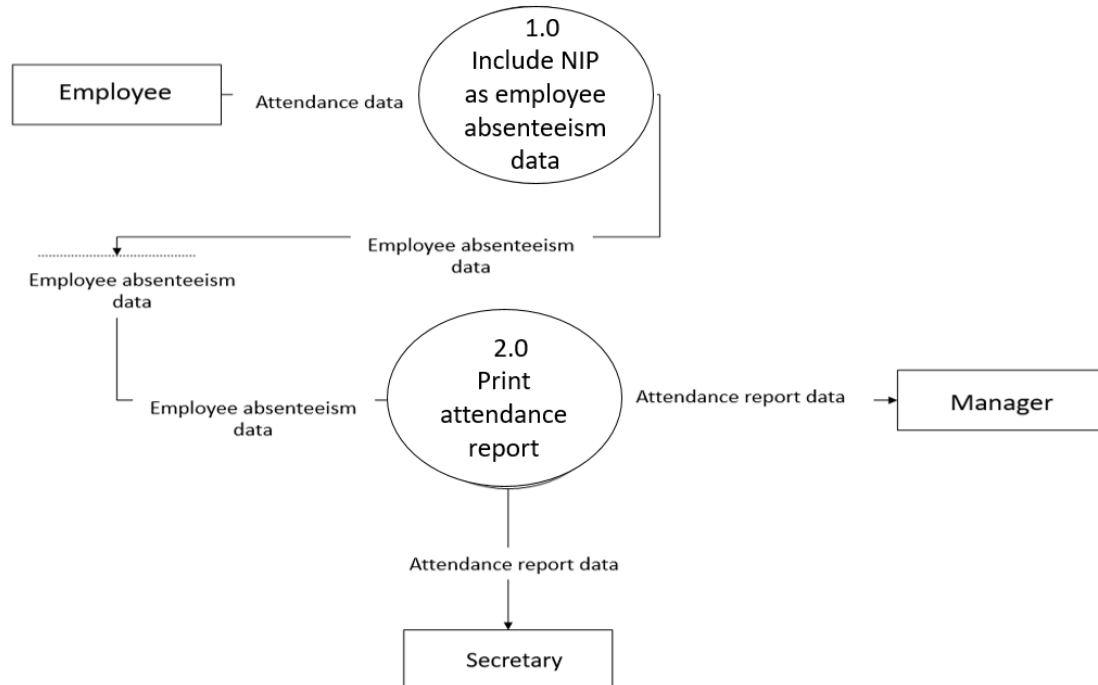


Figure 9. The proposed Data Flow diagrams

Then after creating the data flow diagram, the next stage creates the proposed context diagram (Note Figure 8).

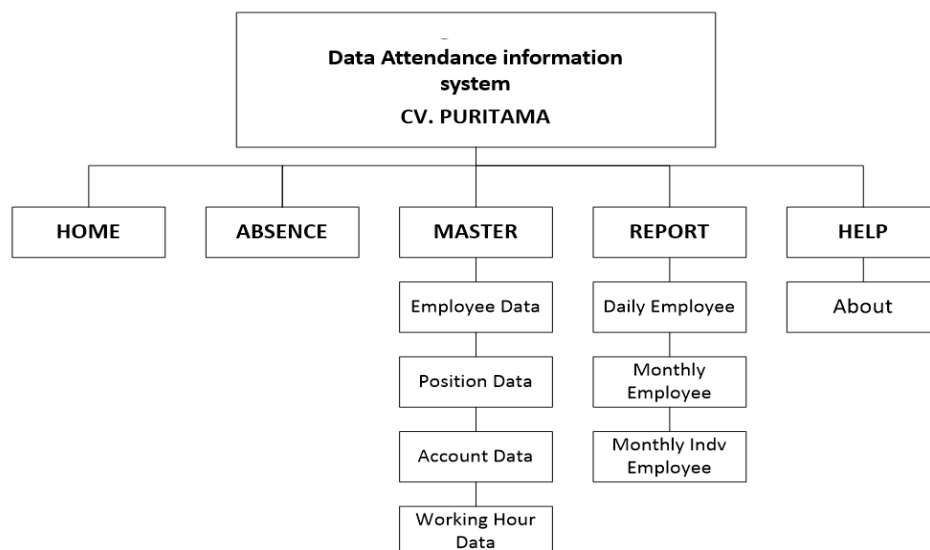


Figure 10. Menu Structure

The next stage is to create a menu form of the selection of activities that want to do on attendance information system (Note figure 11).

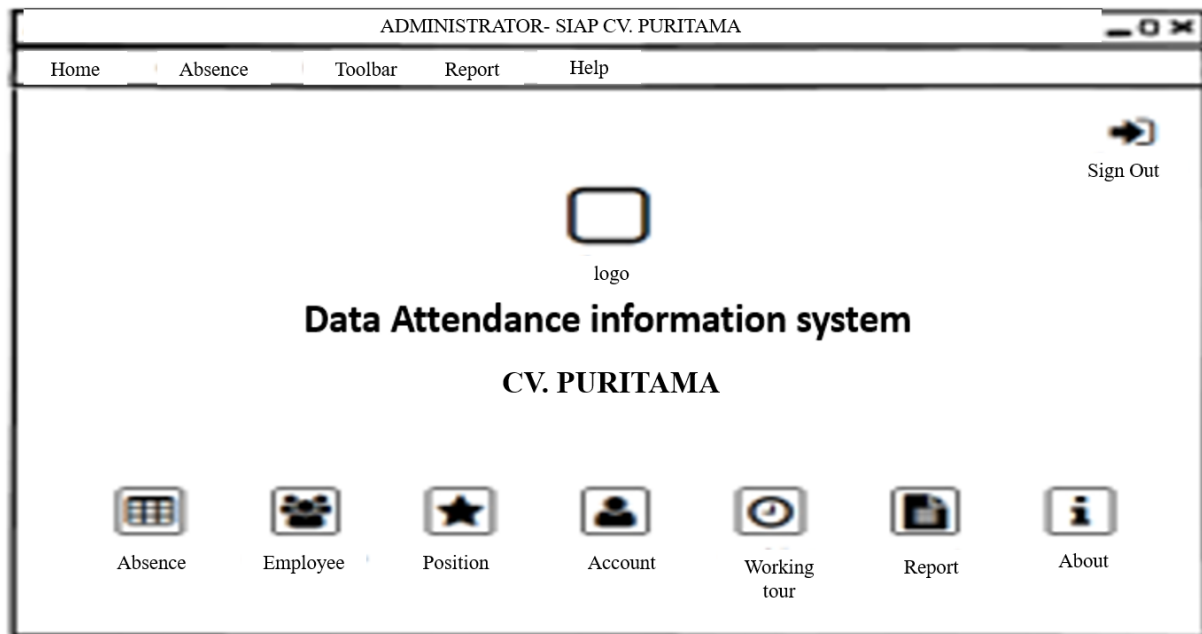


Figure 11. Form Menu

After login the form menu, the next step into attendance forms by entering the number of employees (Note figure 12).

Id	Name	Absence	Hours of entry	Note
0054	Syaridah	Present	07.45	On time
0065	Ade Satiawan	Present	08.00	Late for 45 minutes
0076	Azis	Not present	-	-

Figure 12. Attendance Form

After login in the attendance form by entering the employee number, it will look for the option to input employee data onto the employee data form (Note figure 13).

The screenshot shows the 'ADMINISTRATOR (Secretary) - SIAP CV. PURITAMA' interface. The top navigation bar includes 'home', 'absence', 'master', 'report', and 'help'. The main header displays the system name 'SISTEM INFORMASI ABSENSI PEGAWAI CV. PURITAMA' and a 'sign out' button. The 'Employee Data' section features a table with columns: nip, nama, jenis kelamin, and jabatan. The table contains two rows: (0201, Syarifah, P, Wakil Manajer) and (0301, Ade, ,). An 'add data mode' modal is open, containing input fields for nip, nama, jenis kelamin (radio buttons for laki and perempuan), and a dropdown for jabatan. It includes 'add' and 'clear' buttons. At the bottom of the form are 'add data', 'edit data', and 'delete data' buttons.

nip	nama	jenis kelamin	jabatan
0201	Syarifah	P	Wakil Manajer
0301	Ade		

add data mode
nip:
nama:
jenis kelamin: ☒ laki ☐ perempuan
jabatan:

Figure 13. Employee Data Form

For employees that held positions in the company going into the form position (Note Figure 14).

The screenshot shows the 'ADMINISTRATOR (Secretary) - SIAP CV. PURITAMA' interface. The top navigation bar includes 'home', 'absence', 'master', 'report', and 'help'. The main header displays the system name 'SISTEM INFORMASI ABSENSI PEGAWAI CV. PURITAMA' and a 'sign out' button. The 'Position Data' section features a table with columns: no. jabatan and jabatan. The table contains two rows: (1, Manajer) and (2,). An 'add data mode' modal is open, containing input fields for no. jabatan and jabatan, and 'add' and 'clear' buttons. At the bottom of the form are 'add data' and 'edit data' buttons.

no. jabatan	jabatan
1	Manajer
2	

add data mode
no. jabatan:
jabatan:

Figure 14. Form of Position

After filling the data onto the form data, then employees that have an account will be brought to the login menu (Note the figure 15).

nip	password	privilege
0201	***	
0301	***	
0501	***	
0401	***	
1101	***	

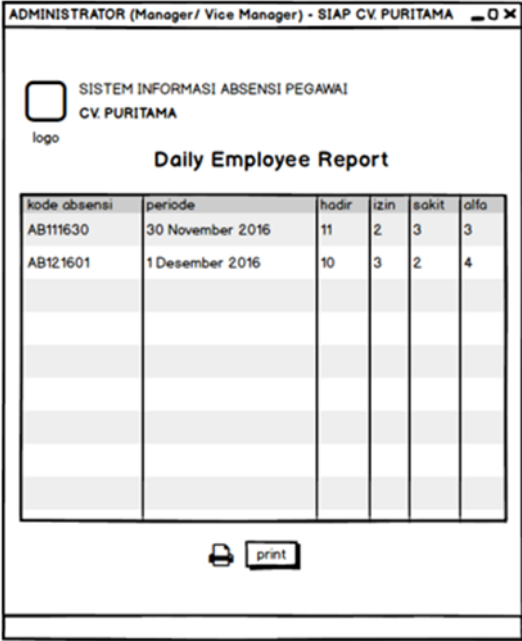
Figure 15. Form Login

After login, then the account owner or employee concerned can see their work schedule every day (Note figure 16).

no. kerja	jam datang	jam pulang	set default	used
1	07.00	17.00	Yes	2
2	07.00	12.00	No	0

Figure 16. Office Hours

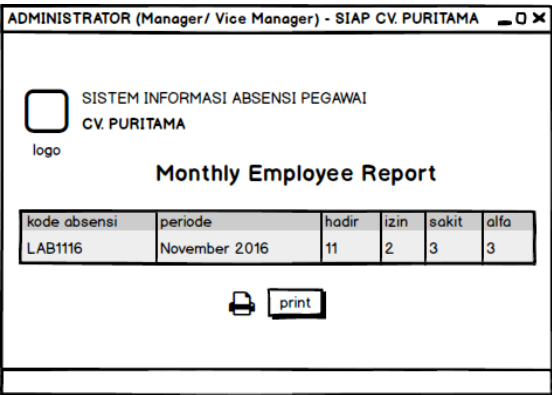
In addition to being able to see work schedules, employees can also see scores of their performance on the menu daily reports employees (Note figure 17).



kode absensi	periode	hadir	izin	sakit	alfa
AB111630	30 November 2016	11	2	3	3
AB121601	1 Desember 2016	10	3	2	4

Figure 17. Daily Employee Report

As well as employees can see monthly attendance reports on each month (Note figure 18).



kode absensi	periode	hadir	izin	sakit	alfa
LAB1116	November 2016	11	2	3	3

Figure 18. Monthly Reports

4. Conclusion

Attendance system is needed by the company to see how big the responsibilities of employees to their work seen from the attendance of employees in the company, so the company can provide the straightforward assessment of employee performance, making employee attendance report and employee salary through attendance data that has stored in database company.

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