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HUMAN RESOURCE AND ARCHIVE MANAGEMENT APPLICATION FOR THE REGIONAL CIVIL SERVICE POLICE AND FIRE DEPARTEMENT IN TAPIN

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Abstract

The use of personnel applications for data collection and archiving employee information is crucial for every agency, including the Civil Service Police Unit and Tapin Fire Department. Despite having existing means for personnel data collection and archiving, the agency lacks a proficient personnel application. Currently, data collection and archiving are still carried out manually using Microsoft Word and Excel. Additionally, some data is stored in hard copy form and placed in binders, making it susceptible to damage or loss. Recognizing these challenges, the idea of developing a website-based personnel application emerged to streamline the personnel department's processes. The chosen programming languages for this application are PHP, HTML, and the Laravel Framework, with MySQL as the database. The research employed the waterfall model, incorporating data collection techniques such as observation, interviews, and documentation. The research findings reveal that the Tapin Civil Service Police Unit and Tapin Fire Department lack a competent human resources application. Consequently, a comprehensive application has been developed to address these shortcomings. Test results demonstrate that the application's features function as intended. In essence, the creation of this application has successfully met its primary objective of addressing data collection and archiving issues within the Civil Service Police Unit and Tapin Fire Department.

Keywords: *Applications, Filing, Human Resource, Staffing*

1. INTRODUCTION

Personnel information management is an important factor in an agency. Staffing information management is a system that includes planning, organizing, directing, coordinating, and supervising information related to staffing activities in an organization. (Damayanti & Nirmalasari, 2019). In this context, the staffing information in question is related to certain data which includes employee identity and others that are used as important information. So that it requires special management that is neatly stored in the data base of a company or agency.

The first thing to consider in personnel information management is employee data collection. This process of collecting information includes personal data, previous work history, skills possessed, latest education, and even additional skills that support the job when applying (Widyawan & Idris, 2021). These data are then processed so that they can be accessed, managed, and analyzed efficiently, which is covered in the activities of creating and maintaining a personnel database. After processing, existing data must be stored safely and strengthen data integrity and security. The next step is to grant access to information to authorized parties. (Rahayu & Utami, 2021). In other words, employee

data stored in the agency database cannot be accessed by just anyone, so that the data remains safe and confidential.

Personnel information management is very important because it has a direct impact on the efficiency, productivity, and sustainability of the organization through good management and is supported by adequate data security facilities. (Fadilla & Setyonugroho, 2021). So that when needed, these data can be found easily by permitted parties and can speed up certain processes that require personnel data. However, the problem is that personnel data management will not be effective when it is unable to empower supporting technology facilities (Murdani, Nurdyansa, 2021; Murdani, Nurdyansa, & Syaharuddin, 2023). Especially in this digital world, all activities require time efficiency that must be dealt with swiftly and quickly. Therefore, practical and sophisticated information technology support is needed to support personnel information management to be more effective and efficient. (Putri Primawanti & Ali, 2022).

Every agency or company certainly has a personnel information management. The Tapin Regency Office of Civil Service Police and Fire Fighters (*Satpol PP* and *Damkar*) is no exception. These two agencies are government agencies tasked with maintaining peace and order and becoming a center of assistance for the community, especially Damkar. The Satpol PP and Fire Department, which is located on Jl. Brigjend H. Hasan Basery, Rantau Kiwa village, rantau, Tapin Regency, Tapin Utara sub- district, has 39 civil servants and 103 non-civil servants. The Tapin Satpol PP and Damkar Service has about 5 fields such as the secretariat or staffing field, the Community Protection and Capacity building field, the Fire Fighting Field, the Public Order and Community Peace field, and the Regional Regulation Enforcement field. This large number of employees must be managed properly so that there are no mistakes that can harm agencies and employees.

Each field has an important role in an agency, one of which is the field of staffing (secretariat) in this field there are around 9 employees who are a combination of civil servants and non-civil servants (or contracts) and have several sub-fields such as Finance, Planning and Reporting, and Staffing. In this field, it is in charge of collecting data and managing employee data and employee salaries, besides that in this field also carries out tasks such as making SK, making activity letters, monitoring absences, and monitoring or data collection in promotion and periodic salary for civil servants.

In the field of secretariat (staffing) of the Tapin Satpol PP and Damkar Service in activities such as employee data collection still use Microsoft Word and Excel. So that in storing files, it takes up a lot of space on the laptop, and also in searching for data it is difficult because the files being searched are scattered and the placement is mixed with other files. In addition, a lot of data is stored in physical form so that it takes up enough space and takes a long time when needed quickly. In fact, effective and efficient data collection and archiving are needed to support the smooth process in agency activities both for teaching and various other activities needed by agencies and employees. Thus, even though it has used technology in the form of Microsoft Word and Excel, the personnel information management of the Tapin SATPOL PP and DAMKAR Office is still not optimal and effective.

Departing from the above problems, it is important to make a systemized personnel information management in a sophisticated information technology such as an application

that specifically handles employee data collection and archiving so that it is more effective and efficient to use than just Microsoft Word and Excel. The urgency of this research is as an applicative solution for the Tapin Satpol PP and Damkar Service in managing personnel data with better information technology media than before.

Previous research on the design of personnel information systems at PT Evoteks Jakarta has been carried out. The results of this study indicate that the staffing information system application can help the work world process become faster, especially in the data collection and archiving process. The design of the application aims to make company records no longer done manually. (Permana, Astutik, Hermailani, & Diana, 2021).. The equation with this research is that both make an application that focuses on personnel information management, but different target agencies and specific application designs with their respective functions and advantages. The novelty of this research is that it can function to archive data systematically so that it contributes directly to the Tapin SATPOL PP and DAMKAR agencies. The purpose of writing this article is to describe and report in more detail the personnel information application that has been made by the author to manage the personnel data of the Tapin Satpol PP and Damkar Office.

2. METHODS

The data collection used in this study used observation, interviews, and documentation. These three data collection techniques are used to obtain comprehensive data related to the management of personnel information systems in the Tapin Satpol PP and Damkar Offices. The collected data can then be used as the basis for the creation and development of personnel information system management applications needed by the Tapin Satpol PP and Damkar Service. So that the results of this research can contribute further to the Tapin Satpol PP and Damkar Service. While the approach used in this research is to use the waterfall model. Waterfall model is one type of software development model which emphasizes sequential and systematic phases. For the development model, it can be analogized as a flowing waterfall. According to previous research, the waterfall model is still widely used by companies for software development because it is considered effective. (Petersen, Wohlin, & Baca, 2009). The stages of this waterfall model can be seen in the following chart.

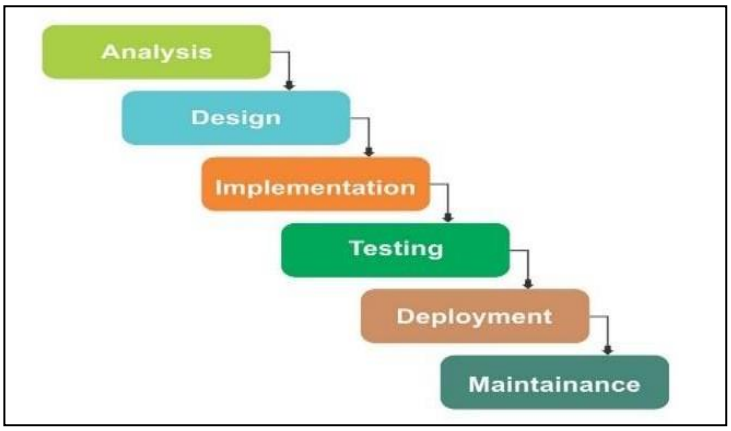


Figure 1. Stages of the Waterfall Model

1. Analysis

The first stage is to prepare and analyze the needs of the software to be worked on. Information and insight obtained can be in the form of interviews, surveys, literature studies, observations, and discussions. In this analysis stage, we will dig up as much information as possible from the source, this is done to find out the needs and limitations of the system to be created.

2. Design

The next stage is making application design. The purpose of this stage is to have a clear picture of the appearance and interface of the software to be created.

3. Implementation

Next is the implementation stage, which is the programming stage. Software development is done using various tools and programming languages as needed.

4. Testing

This is the stage of testing the software to find out whether it is in accordance with the desired criteria.

5. Deployment

After testing, the next stage is the deployment stage. This stage is the release when the software is declared functional and can be used by users directly.

6. Maintenance

The last stage is maintenance, which allows developers to fix errors that were not detected in the previous stages. Maintenance includes fixing errors, improving the implementation of system units, and upgrading and customizing the system as needed.

3. RESULTS AND DISCUSSION

3.1. Profile of Tapin Satpol PP and Damkar Service

Dinas Satuan Polisi Pamong Praja dan Pemadam Kebakaran Tapin (abbreviated as Satpol PP dan Damkar) is a provincial, regional government (regency or city) device in charge of maintaining public peace and order and enforcing regional regulations, and also implementing appeals by the regent. The Tapin Satpol PP and Damkar Office is located at Jl. Brigjend H. Hasan Basery, Rantau Kiwa village, rantau, Tapin Regency, Tapin Utara sub-district. The vision of this agency includes striving for the realization of public peace and order and the enforcement of regional regulations and regional head decisions as well as fire disaster management in Tapin Regency. While the missions they echo include maintaining public order, community tranquility and community protection, realizing Tapin Regency communities that are obedient and obedient to applicable laws and regulations, and controlling the conditions of security, order and tranquility in Tapin Regency.

In particular, the Satpol PP and Damkar Offices are not engaged in the IT field, but in carrying out their duties and functions, these agencies require the role of IT, for example for data collection and personnel archiving. So that the role of IT is indirectly needed for the implementation of work programs carried out by agencies, especially in the field of staffing. Therefore, the design of applications that can specifically make work

more effective and efficient is highly expected to contribute directly to the Tapin Satpol PP and Damkar Service.

3.2. Organization Structure

The organizational structure of the Tapin Civil Service Police and Fire Department is as follows.

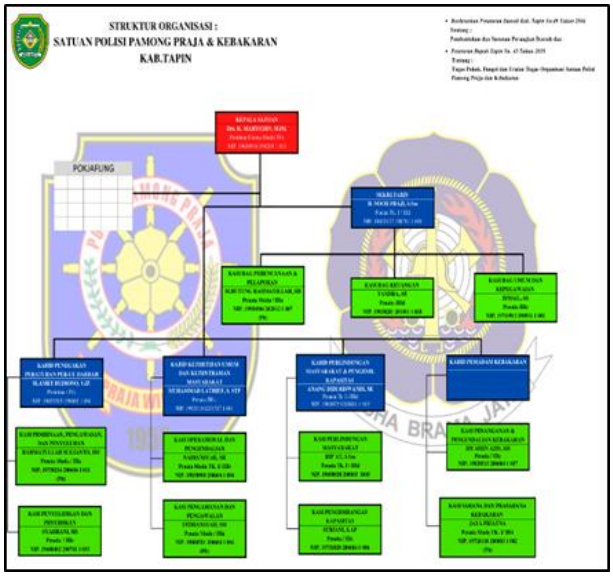


Figure 2. Organizational Structure of Tapin Satpol PP and Damkar Service

3.3. Analysis of the Ongoing Personnel Information Management System

As described in the introduction, personnel information management at the Tapin Satpol PP and Damkar Office is already running. But only using the help of Microsoft Office and Excel. Based on the results of interviews and observations, currently the system used in managing staffing data is divided into several methods, the first is manual, namely staffing section employees collect data using Microsoft office and also make manual records on paper stored in binders.

In addition, staffing information management still uses a very simple and non-owned staffing application. Although it can be used, there are various limitations such as when you want to access civil servant salary data, you must first request access to certain parties to be able to access the required data. In addition, the available application also has several shortcomings such as incomplete data input so that when employees want to save the required data, it must be saved in the form of files or binders manually because the application does not have a form to input the required data.

Based on the analysis of the personnel information management system that has been running at the Tapin Satpol PP and Damkar Service, it is known that the application they need is a staffing application that is able to manage staffing data more efficiently and automatically without having to archive data manually as before. The application in question must be more than just inputting data as in Microsoft office and Excel, but can make other contributions such as monitoring, data management, and archiving employee data more quickly and using an automatic search system.

The procedures for the flow of staffing activities that are currently running at the Tapin Pamong Praja Police and Fire Service are as follows.

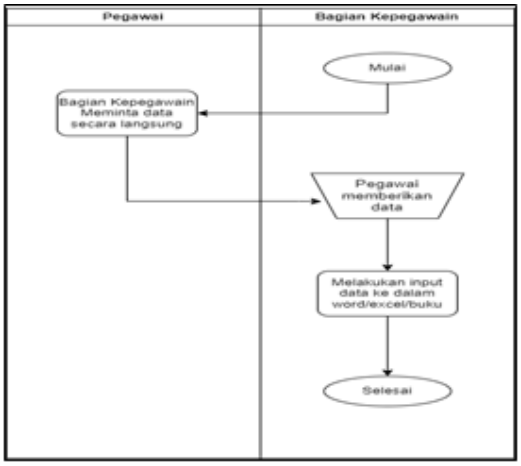


Figure 3. Ongoing staffing activities

Description:

1. The Personnel Officer requests data directly from the employee.
2. Employees provide data to the staffing department.
3. The Personnel Officer accepts the data provided.
4. Personnel staff record employee data into word, excel or books.

While the proposed solution of the new system is depicted in the following flowchart.

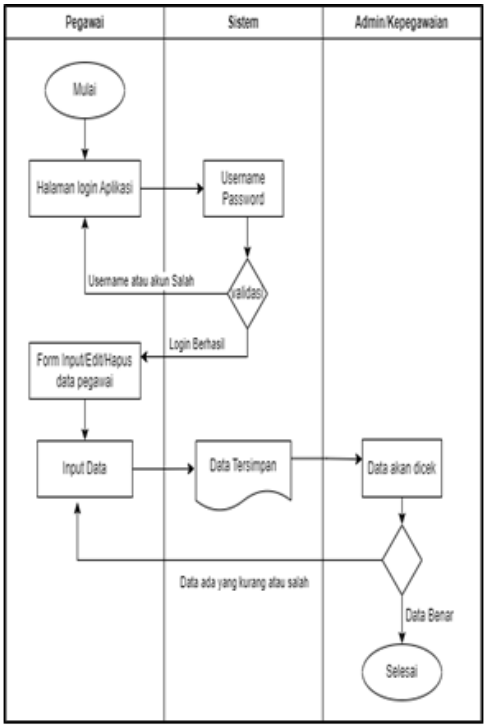


Figure 4. flowchart of the Proposed New System

Flowchart explanation:

1. Login to the app using your account
2. After logging in, employees will be directed to the main page
3. Then the user will select the employee data menu
4. Enter the employee data menu to input employee data
5. After inputting, employees in the staffing section will check the data entered by employees whether it is correct or not.
6. Finish/Logout.

3.4. Needs Analysis

a. Interface Requirements

The requirements for the development of this staffing and archive management application are as follows:

1) The application must have a login feature before you can access the application
2) The application can store employee data, especially civil servants in the Tapin Satpol PP & Damkar Service.
3) The application must have 3 access rights: admin, head, and employee.
4) The application has a reminder feature to find out when a civil servant will be promoted or get a periodic salary increase.
5) The application should have a feature where employees can fill in their own data, so that the staffing department can simply check the employee data.
6) The application must have access rights where employees can only input and edit but cannot delete data other than their own data.
7) The application must have data search and data sorting features.

b. Functional Requirements

The functions owned by this staffing and archive management application are as follows.

1) Users can easily search for employee data easily.
2) Users can easily find out when it is time for civil servants to receive periodic salary increases or promotions.
3) The data stored is more effective because it is stored in a MySQL database.
4) In addition to admins, employees can also fill in their own data so that admins or staffing employees can be facilitated in filling in data.

c. Non-Functional Needs

The non-functional needs in this staffing management application include hardware requirements, software requirements and user requirements analysis.

1) Hardware Requirements
   a. Computer or Laptop.
   b. HP or Smartphone.
   c. Printer for printing reports.

2) Software requirements
   a. Browsers such as Mozilla, Google Chrome, Opera, etc.
   b. Windows 7 or above.

3) User Needs
   a. The user understands and is familiar with using a computer or laptop.
   b. Users are employees at the Tapin Satpol PP and Damkar Service.
   c. The application is only used by employees of the Tapin Satpol PP and Damkar Offices.

3.5. System Model Design

3.5.1. Use Case Diagram

Use case diagram is a model that describes how the system interacts with its environment, use case diagram is described with actors as people who interact with the system and use cases as the main part of the functionality of a system. (Indriyani, Yunita, Muthia, Surniandri, & Sriyadi., 2019).

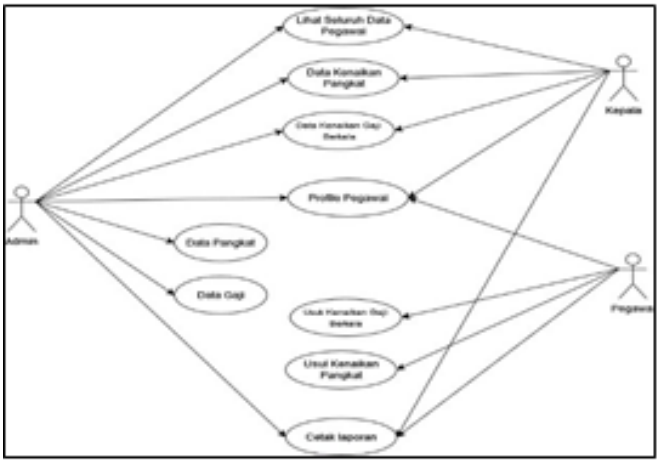


Figure 5. Use Case Diagram

3.5.2. Activity Diagram

Activity Diagram is a design that illustrates activities and relationships in a process using flow. (Indriyani et al., 2019).

a. Login Activity Diagram

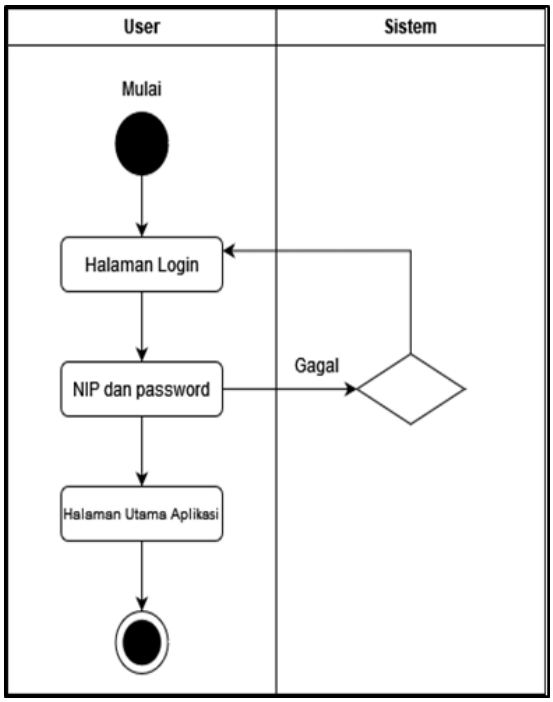


Figure 6. Login Activity Diagram

b. Activity Diagram of Employee Data (Admin and Head)

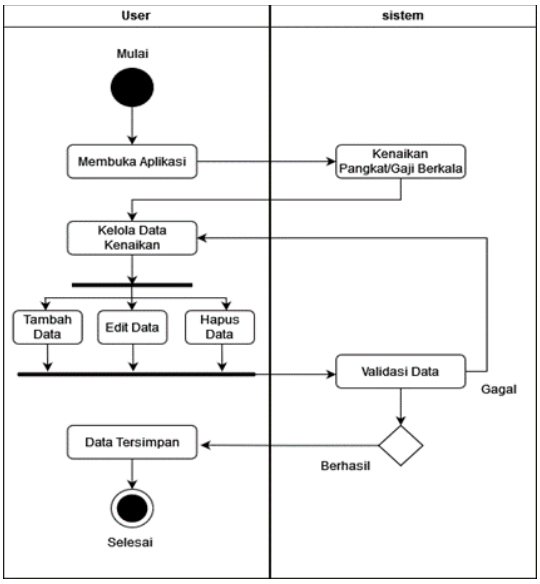


Figure 7. Login Activity Diagram

c. Activity Diagram Manage Employee Data (Employee)

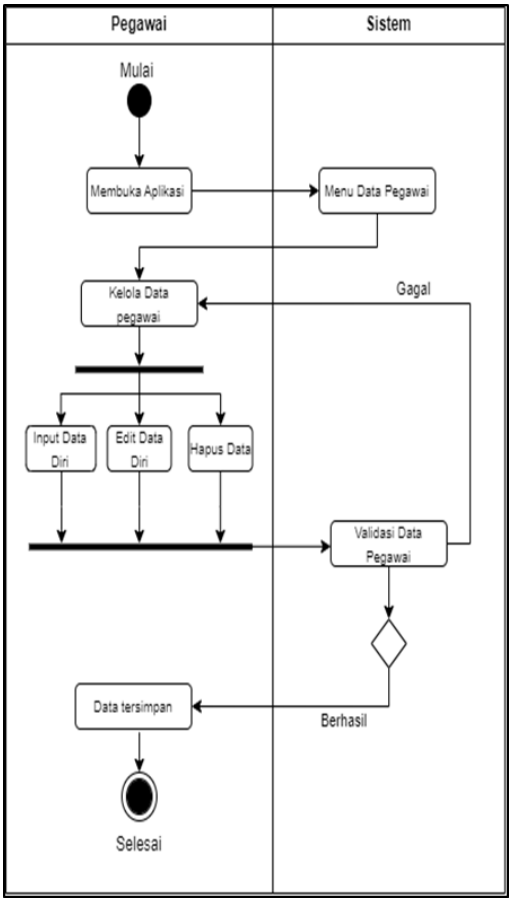


Figure 8. Activity Diagram of Manage Employee Data

d. Activity Diagram of Proposed Periodic Rank /Salary Increase for Civil Servants

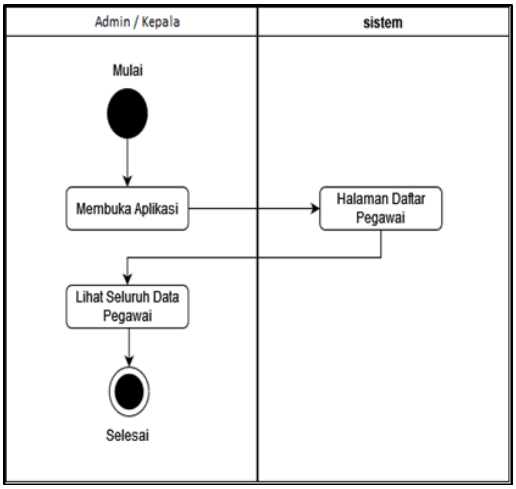


Figure 9. Activity Diagram of Proposed Periodic Rank / Salary Increase for Civil Servants

e. Activity Diagram of Data for Promotion / Periodic Civil Servants

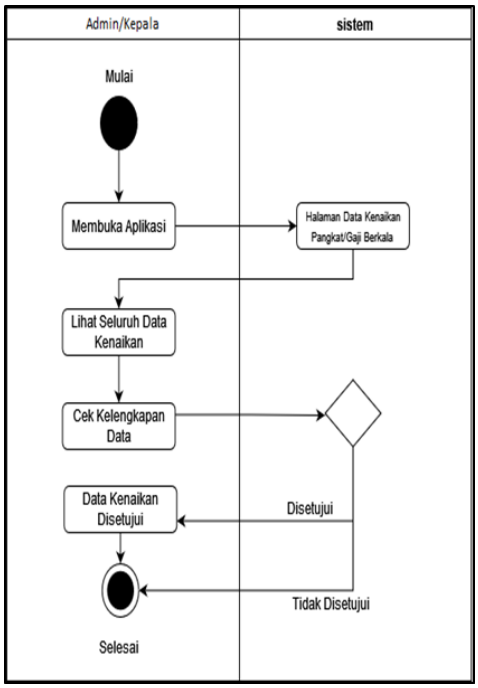


Figure 10. Activity Diagram of Data on Promotion / Periodic Civil Servants

3.6. App View

Some views of the proposed staffing application at the Tapin Satpol PP and Damkar Service are as follows.

3.6.1. First, the System Input Interface Display

a. Landing Page Display

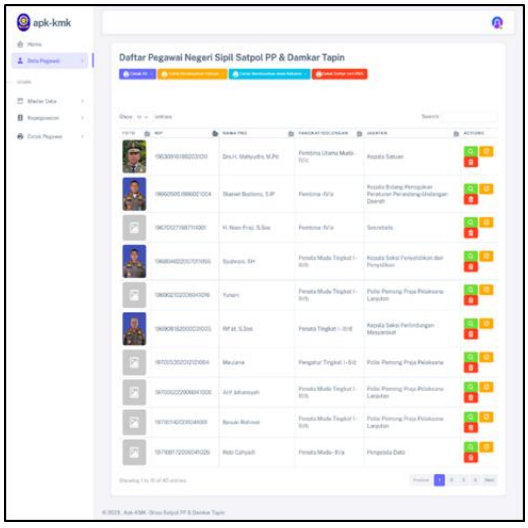


Figure 11. Landing Page Display

b. Login and Register Page Display

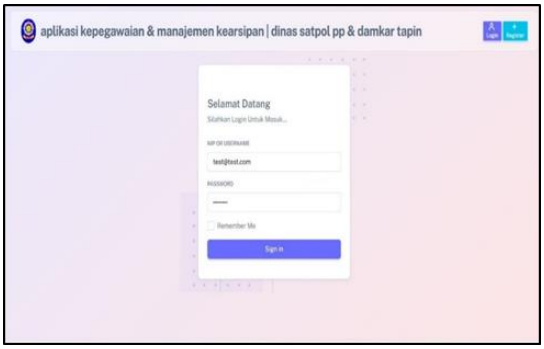


Figure 12. Login and Register view

c. Home Page Display

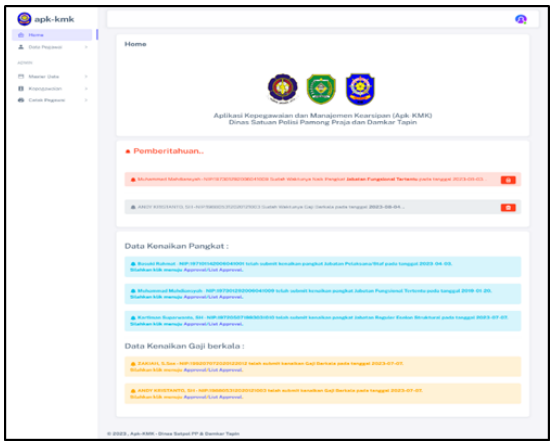


Figure 13. Home Page Display

d. Display of Civil Servant List Page

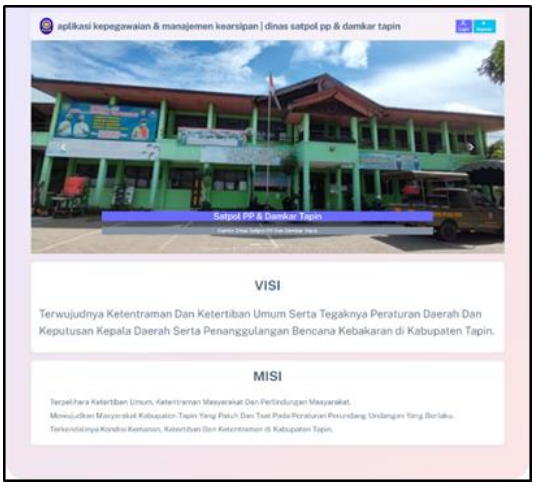


Figure 14. Display of Civil Servant List Page

e. Employee Profile Data Page Display

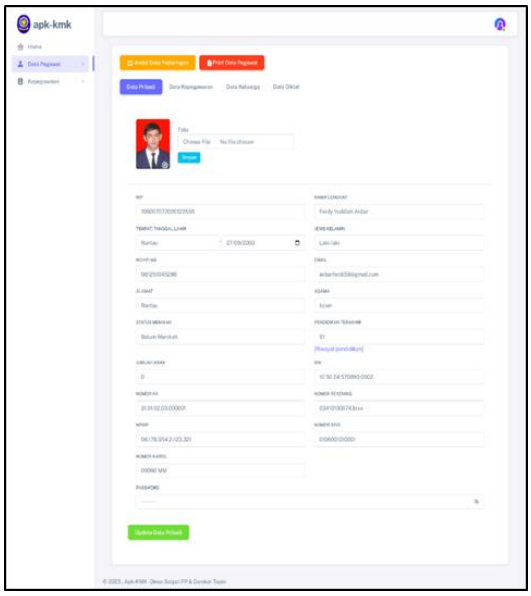
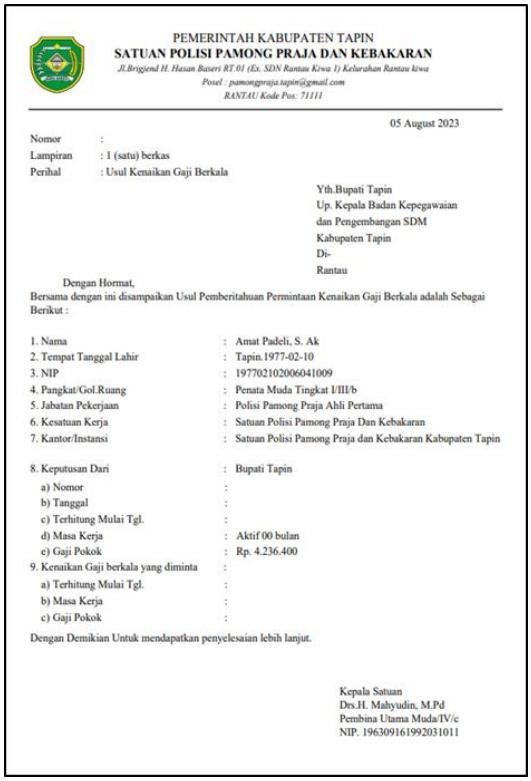


Figure 15. Employee Profile Data Display

f. Display of Civil Servant Periodic Salary Increase Data Page



PEMERINTAH KABUPATEN TAPIN
SATUAN POLISI PAMONG PRAJA DAN KEBAKARAN
Jl.Brigjend H. Hasan Baseri RT.01 (Ex. SDN Rantau Kiwa 1) Kelurahan Rantau kiwa
Posel : pamongpraja.tapin@gmail.com
RANTAU Kode Pos: 71111

05 August 2023

Nomor :
Lampiran : 1 (satu) berkas
Perihal : Usul Kenaikan Gaji Berkala

Yth.Bupati Tapin
Up. Kepala Badan Kepegawaian
dan Pengembangan SDM
Kabupaten Tapin
Di-
Rantau

Dengan Hormat,
Bersama dengan ini disampaikan Usul Pemberitahuan Permintaan Kenaikan Gaji Berkala adalah Sebagai Berikut :

1. Nama	:	Amat Padeli, S. Ak
2. Tempat Tanggal Lahir	:	Tapin.1977-02-10
3. NIP	:	197702102006041009
4. Pangkat/Gol.Ruang	:	Penata Muda Tingkat I/III/b
5. Jabatan Pekerjaan	:	Polisi Pamong Praja Ahli Pertama
6. Kesatuan Kerja	:	Satuan Polisi Pamong Praja Dan Kebakaran
7. Kantor/Instansi	:	Satuan Polisi Pamong Praja dan Kebakaran Kabupaten Tapin
8. Keputusan Dari	:	Bupati Tapin
a) Nomor	:	
b) Tanggal	:	
c) Terhitung Mulai Tgl.	:	
d) Masa Kerja	:	Aktif 00 bulan
e) Gaji Pokok	:	Rp. 4.236.400
9. Kenaikan Gaji berkala yang diminta	:	
a) Terhitung Mulai Tgl.	:	
b) Masa Kerja	:	
c) Gaji Pokok	:	

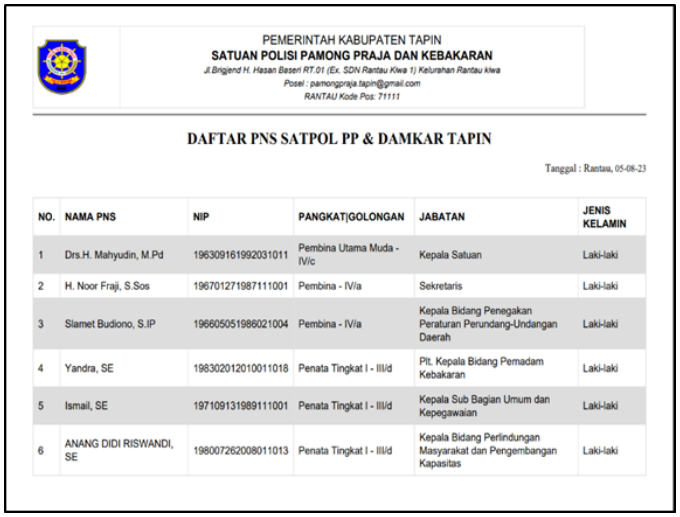
Dengan Demikian Untuk mendapatkan penyelesaian lebih lanjut.

Kepala Satuan
Drs.H. Mahyudin, M.Pd
Pembina Utama Muda/IV/c
NIP. 196309161992031011

Figure 16. Data on Periodic Salary Increase for Civil Servants

3.6.2. Second, System Output Interface View

a. Civil Servant List Report Display



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Jl.Brigjend H. Hasan Baseri RT.01 (Ex. SDN Rantau Kiwa 1) Kelurahan Rantau kiwa
Posel : pamongpraja.tapin@gmail.com
RANTAU Kode Pos: 71111

DAFTAR PNS SATPOL PP & DAMKAR TAPIN

Tanggal : Rantau, 05-08-23

NO.	NAMA PNS	NIP	PANGKAT|GOLONGAN	JABATAN	JENIS KELAMIN
1	Drs.H. Mahyudin, M.Pd	196309161992031011	Pembina Utama Muda - IV/c	Kepala Satuan	Laki-laki
2	H. Noor Fraji, S.Sos	196701271987111001	Pembina - IV/a	Sekretaris	Laki-laki
3	Slamet Budiono, S.IP	196605051986021004	Pembina - IV/a	Kepala Bidang Penegakan Peraturan Perundang-Undangan Daerah	Laki-laki
4	Yandra, SE	198302012010011018	Penata Tingkat I - III/d	Plt. Kepala Bidang Pemadam Kebakaran	Laki-laki
5	Ismail, SE	197109131989111001	Penata Tingkat I - III/d	Kepala Sub Bagian Umum dan Kepegawaian	Laki-laki
6	ANANG DIDI RISWANDI, SE	198007262008011013	Penata Tingkat I - III/d	Kepala Bidang Perlindungan Masyarakat dan Pengembangan Kapasitas	Laki-laki

Figure 17. Display of Civil Servant Data Report

b. Display of Periodic Salary Increase Proposal

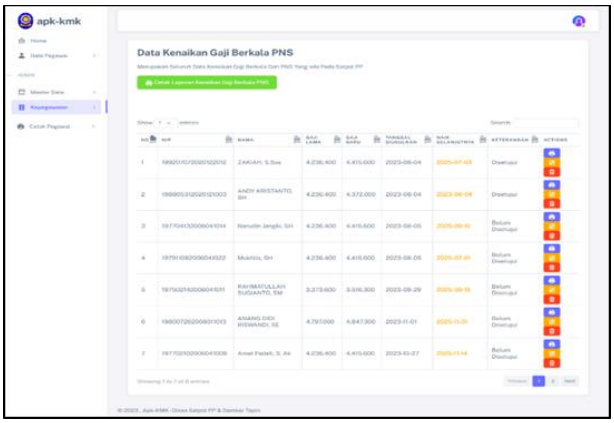

Figure 18. Periodic Salary Increase Proposal Report

3.7. Testing

Testing is an important part of building software. Testing is carried out with the aim of ensuring the system runs well in accordance with what was previously planned and to find out the weaknesses of the system being built. In testing the system using the Black-Box Testing method, which is testing software in terms of functional specifications without testing the program code. Based on the results of the tests that have been carried out, the proposed staffing application at the Tapin Satpol PP and Damkar Service is successful and produces the expected features in accordance with the indicators that have been previously determined based on the analysis of the basic problems of making applications.

The staffing application that has been made is expected to contribute to the performance of the agency effectively and efficiently in the staffing information management system. Some of the benefits of using a staffing information system management application are as follows.

3.7.1. First, Operational Efficiency

Staffing applications can assist in processing employee data quickly and accurately, reducing the burden of manual administrative work. In addition, staffing applications that are designed systematically and automatically can reduce data storage errors that are done manually and can save storage space that previously had to be archived in files in the form of printouts. Companies and agencies abroad have implemented this personnel management application for a long time considering the efficiency and effectiveness of its use which is needed especially in the current era. (Gao et al., 2020).

3.7.2. Second, Performance Management

The staffing application can also perform employee performance management by looking at the history or status of employees while working in an agency or company. This is because the data that has been inputted previously can be traced back without losing any data because it has been automatically stored. (Rasool, Samma, Wang, Zhao, & Zhang, 2022).

3.7.3. Third, Guaranteed Data Security Base

The most important benefit of the staffing application is the creation of data security that is truly guaranteed because this application can ensure that only authorized people have access to sensitive staffing data. Unlike the case with data archiving that is done manually, it is likely to be lost or even damaged or stolen by other parties. In addition, the application also provides security and backup features to protect data integrity. So that when an error occurs or is deleted, sophisticated applications can still find the previously backed up data again (Zarei & Sadoughi, 2016).

4. CONCLUSION

Based on the research conducted, it can be concluded that all data is well documented and safely stored in the database, so that if at any time the data on the laptop or computer is lost, it still has backup data. The process of searching employee data becomes easier to find and access because employee data is not scattered on various devices anymore. Staffing department employees are facilitated because employee data input can be inputted directly by the employees themselves without having to go directly to the staffing department. In the process of promotion or periodic salary, it is facilitated in addition to notifications that can notify when employees will be promoted, proposing an increase is also easier because it can be done online. Some things that need to be improved in the next research include the development of message notifications to employees can be made using WhatsApp notifications, applications can be developed by following the development of agencies, and upgrades to the application to add features that do not yet exist so that the application is more complete.

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