Web-Based of The Regency Apparatus Work Unit Application at the Communications, Informatics, and Encryption Service of Bireuen Regency in Aceh Province

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Abstract

The Regency Apparatus Work Unit (SKPK) is an apparatus of the Regional Government (Provincial and Regency/City) in Indonesia. SKPK is the executor of executive functions that need to be coordinated for the success of government administration. The legal basis for the formation of the SKPK is in article 120 of Law No. 32 of 2004 concerning Regional Government. The Department of Communication, Informatics, and Encryption Service (Diskominfosa) is an agency that is fully responsible for processing information within the Government in Indonesia. The purpose of this application is to collect the data in various offices in Bireuen Regency and store it in the database. The system is web-based that uses the PHP framework Codeigniter 3 and also using the Bootstrap framework. Initially, this study applied field research using the interview as the primary data and the Reports of the Evaluation on Accountability Performance at The Regency Apparatus Work Unit of Bireuen District as the secondary data. In developing the application, the waterfall is applied as a software model used. As the result, the application shifted the manual data processing into the system such as filtering the report based on a daily, monthly, and even yearly basis. In addition, they can check the status of their application data by entering the SKPK code that has been made. This SKPK application data collection information system was created with the aim of making data management orderly and checking the status of the Regency Apparatus Work Unit (SKPK) application easier and more precise.

Keywords: Regency Apparatus Work Unit, SKPK, Information System, Data Management, Application.

1. Introduction

Regency apparatus work units (SKPK) are part of the regional government that can carry out regional government activities as well as public services, both directly and indirectly[1][2]. To be able to carry out these main tasks and functions, SKPK can be allocated funds (budget) and goods or assets needed. Therefore, SKPK heads are referred to as Budget Users (PA) and Goods Users (PB). SKPK as an accounting entity which basically displays that SKPK can carry out the accounting process to prepare financial reports which will later be submitted to the regional head as a form of regional financial management accountability report (which includes budgets and goods, accompanied by funds managed by the treasurer as a functional official)[2]. Transparency is a need for transparency regarding account-ability for public resource management activities in the preparation of financial reports [3]. Department of Communication, Informatics and Encryption (Diskominfosa) is an institution that is fully responsible for the management of information in the government in Bireuen Regency. In the data processing information system currently running, it still uses manual recording, everything is still processed in the form of data.

This system is very sensitive to fraud and data loss [1]. Likewise for offices that want to check the SKPK application they have to contact the Bireuen Diskomnfo or come directly to the place so it is very ineffective and wastes a lot of time. Based on the background above, there is a title that can be taken for this practical work report, namely "Information System for Application Data Collection for Regency Work Units at the Web-Based Communication, Informatics and Encryption Office of Bireuen Regency". It expects that this information system can help facilitate data management in order to avoid data loss problems, shorten recording time and make it easier for other agencies to check SKPK applications.

Basically an information system is a system created by humans which consists of components within the organization to achieve a goal, namely to provide information[4]. Information is a combination of work procedures, information, people and information technology that is organized to achieve goals in an organization. Alter argues for information systems as a special type of work system[5]. Databases is organization data which designed for make data more easy saved and accessed[6].

2. Literature Review

2.1. Application of Regency Apparatus Work Unit

Regency Apparatus Work Units (SKPK) are the tools of regional (provincial and district/city) governments in Indonesia. SKPK is the organizer of implementing functions that need to be coordinated for the success of governance [2]. The legal basis for the formation of SKPK which has been going on since 2004 is Article 120 of Law No. 32 of 2004 concerning Regional Government. Regency apparatus work units (SKPK) are part of the regional government that can carry out the functions of regional government and public services, either directly or indirectly[3]. To be able to carry out these main tasks and functions, SKPK can be allocated funds (budget) and goods/assets needed. Therefore, SKPK heads are referred to as Budget Users and Goods Users. SKPK as an accounting entity which basically shows that SKPK can carry out the accounting process to prepare financial reports which will later be submitted to the regional head as a form of regional financial management accountability report (which includes budgets and goods, accompanied by funds managed by the treasurer as a functional official)[2][7].

2.1.2. Application of Regency Apparatus Work Unit at Bireun District

Regency apparatus work units (SKPK) are part of the regional government and can directly or indirectly carry out regional government functions and public services[8]. To be able to carry out the main task and these functions, SKPK can provide a budget and allocation of goods/assets needed. There are many skpk applications in the Bireuen district government which are owned by each agency. Information and communication department of Bireuen district collect and manage SKPK data from various offices in Bireuen Regency. The department also has an SKPK application, namely SIPD (Local Government Information System). Bireuen Regency has 17 sub-districts and in each sub-district there is a family planning counseling center, which can help SKPK families prepare budget planning, distribute and monitor the use of operasional assistance funds for family planning (BOKB). This program could produce the accountability report on the use of these funds.

2.2. Department of Communication, Informatics and Encryption

Diskominfosa is the agency that is fully responsible for the overall management of data, information and communication in the government. Diskominfo is a merger of the public relations department with the Inter-Agency Cooperation and Information Technology chart at the Purwakarta Regional Secretariat[8]. After that, the Post and Telecommunication Field at the previous Purwakarta Dishubparpostel.

Diskominfo is involved in providing information systems and data management solutions for local governments. The information system created by Diskominfo is used by other agencies in the region. In addition to city offices and institutions, Diskominfo acts as an integrator for all systems built by the city[9]. More and more information systems are now being used by local governments, resulting in various information and data that are expected to be used by these authorities and provide maximum service to the people[10].

The Public Relations field conducts communication between the government and the public to enable the government to communicate information about the activities of institutions, regulations and laws, organizational policies, and government service obligations and obligations through the publication of all these activities. The Diskominfosa Public Relations Division is tasked with collecting and processing data obtained from the results of the PR team's coverage of the District government's activities. The data can be in the form of photos and videos that have been processed, which will later be published to the public in order to realize the dissemination of information and the formation of a positive image of a government agency.

The Office of Communication, Informatics and Encryption or Diskominsa, is a regional apparatus covering regional government affairs, namely the field of information and public communication, the field of application and informatics, the field of coding and statistics. This discount is intended to support regional governments in carrying out government affairs which become the authority of the region[11].

2.2.1 Department of Information and Communication at Bireuen

Diskominfosa of Bireuen is an institution that is fully responsible for managing information in the government in Bireuen Regency. It established in 2018. Diskominfosa of Bireuen has the task of carrying out government activities in the fields of communication and informatics, statistics and coding. It has several fields in it, such as the Secretariat, Information, communication and technology & E-Government, and lastly Information and Communication as well as Encryption and Statistics. The office address is at Jl. Medan-Banda Aceh KM.210 Gampong Blang Bladeh, Jeumpa District, Bireuen Regency.

Information is the most important resource and also one of the needs in a government agency {[12]. Diskominfosa of Bireuen is fully responsible for data processing to turn it into useful information to support the improvement of the quality of life of the people of Bireuen Regency[7]. One of the duties of the Bireuen Regency Communication, Informatics and Encryption Service is to collect, select, process, disseminate and store information so that it can be used at any time for the public interest and become a guide for the future. Information is an important matter and basically must be maintained, and it is also the public's right to be able to know information addressed to the public.

To realize transparent and accountable information and communication, Diskominsa Bireuen Regency provides an official website: diskominsa.bireuenkab.go.id which can be accessed by the wider community. Apart from the official website, Diskominsa also creates a social media account on Facebook as a means of conveying information and communication to the public[13].

2.3. Information System

System information is system internal organization which Fulfill need processing transaction daily, support operation, represent management and operation strategic organization, and provide report which needed to party external certain. System information is bunch people which work same for reach aim certain From explanation in on could concluded that system information send information form report to bodies which need information administration[14]. System information based web is application based web. Application This also including databases for manage information certain[15].

2.4. Aplication

Application is program computer made for done and did tasks routine. Application is series action or Orders which executed by computer information[16]. Use Computer, instructions (instructioniom) or statement which has prepared so computer can process input Becomes output [16]. Application is program user that could used Run command for user application Purpose is for get more many results exact for aim which meant Application which owned program that's what the goal is solving problem with wrong one technique processing normal data application

2.5. Website

Understanding website is whole page Site web including in name domains page information usually built for a number of site one same other. connection between side website could accessed with website another with hyperlinks when text used as name media liaison called Hypertex[17]. website (website) is a place to store data and information based on a particular topic. Site web written in HTML (Hyper Text markup languages), which could used almost in where just links, and user could access link the with web browsers (Trimarah & Arafah, 2017). Based on matter the, website is environment study which effective because could used when just, in where just[18].

2.6. Database

In development System application, writer use Databases Management System for management databases 'DBMS' DBMS is device soft which possible user for define Make, look after, and control access to databases. For manage storage data application, developer use databases MySQL as the database. From MySQL is device soft system management base data (DBMS). Survey Structured a language (SQL) which open source. Writer use tool help for support it System the operation is XAMPP. XAMPP is tool which provide package device soft deep Package. Package including Apaches (servers web), MySQL (databases), PHP, and various tool other[19]. Data is fact about something object, e.g. B. People, object, incident, draft, condition, etc which could saved and have mean implicit. Data could stated as number, character or a symbol, so that when data collected and combined, that called base data (databases). Whereas according to George Tsuder chou, databases is gathering information which useful organized according to rule special. Information this is information which organized in something format which in accordance with need You. According to Encyclopedia of computing and engineering, para researcher at field data, accept definition default from data, that is. H. data which used in search a decision[20]

3. Methods

The unit of analysis of this research is all the Regency apparatus work units (SKPK) in Bireuen district namely Department of Communication and Information (Diskominfosa). The method used in the development of this system is Extreme Programming. Extrame Programming is a software development approach or model that tries to simplify various stages in the development process so that it becomes more adaptive and flexible[21][22].
a. Planning; This stage begins with gathering the activity requirements of a system that allows users to understand the process for the system and understand a clear picture of the system and know the desired output.
b. Field Research; The data collection is gathered from the files at regency apparatus work units (SKPK). SKPK data is used for Diskominsa as form data database that processes existing SKPK data in each sub-district in Bireuen. The SKPK application is used to develop villages in Bireuen district. The data that has been processed by Diskominsa are 30 sub-districts.
c. Interview; The interview is conducted directly with the head of the information and communication technology & E- Government division. The purpose is to obtain the correct SKPK data and information so that the information system design can meet the needs and requirements of users.

4. Results and Discussion

This application is designed to make it easier to manage data, input SKPK data, print SKPK data. With this application, it is hoped that Admin can speed up data collection and avoid the risk of data loss. It is hoped that the head of the service can make it easier to check SKPK data without the need to come directly to the place.

4.1. System Design
Diagram context
The context diagram describes the input, process and output resulting from the system being built. Below is a suggested context diagram.
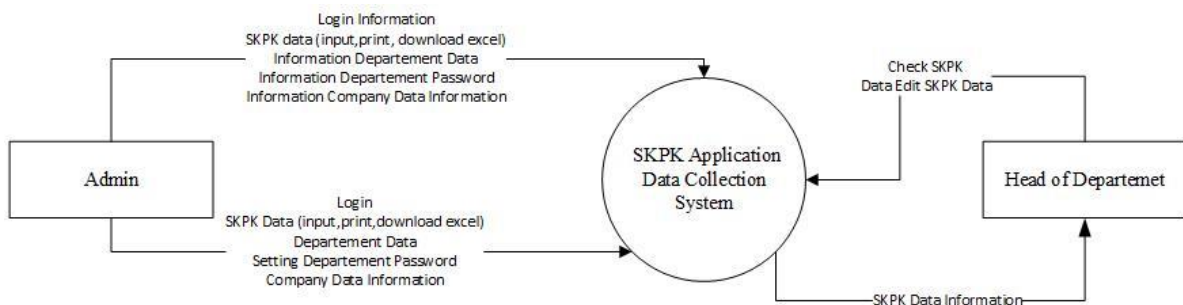

Fig 1. Context Diagram

The diagram above shows that the Admin can log into the system, input SKPK data, input service data, create an office head password and make company settings to the system. These data will be processed by the system which will produce information in the form of login information, SKPK data information, service data information, service head password setting information, Discominsa agency information settings, SKPK data printing in pdf format which has been inputted and can be downloaded in Excel format. Whereas the head of the service can check the SKPK data and can edit the SKPK data by going to the service head's page using the password that was created by the Admin. The password will be processed by the system and will display SKPK data information in the form of a description of the application name, application maker, application functions, application access, application legal basis and person in charge.

Level 0 diagrams

Below is a DFD level 0 diagram of the skpk application data collection information system at the Communications, Informatics and Encryption Service of Bireuen Regency:
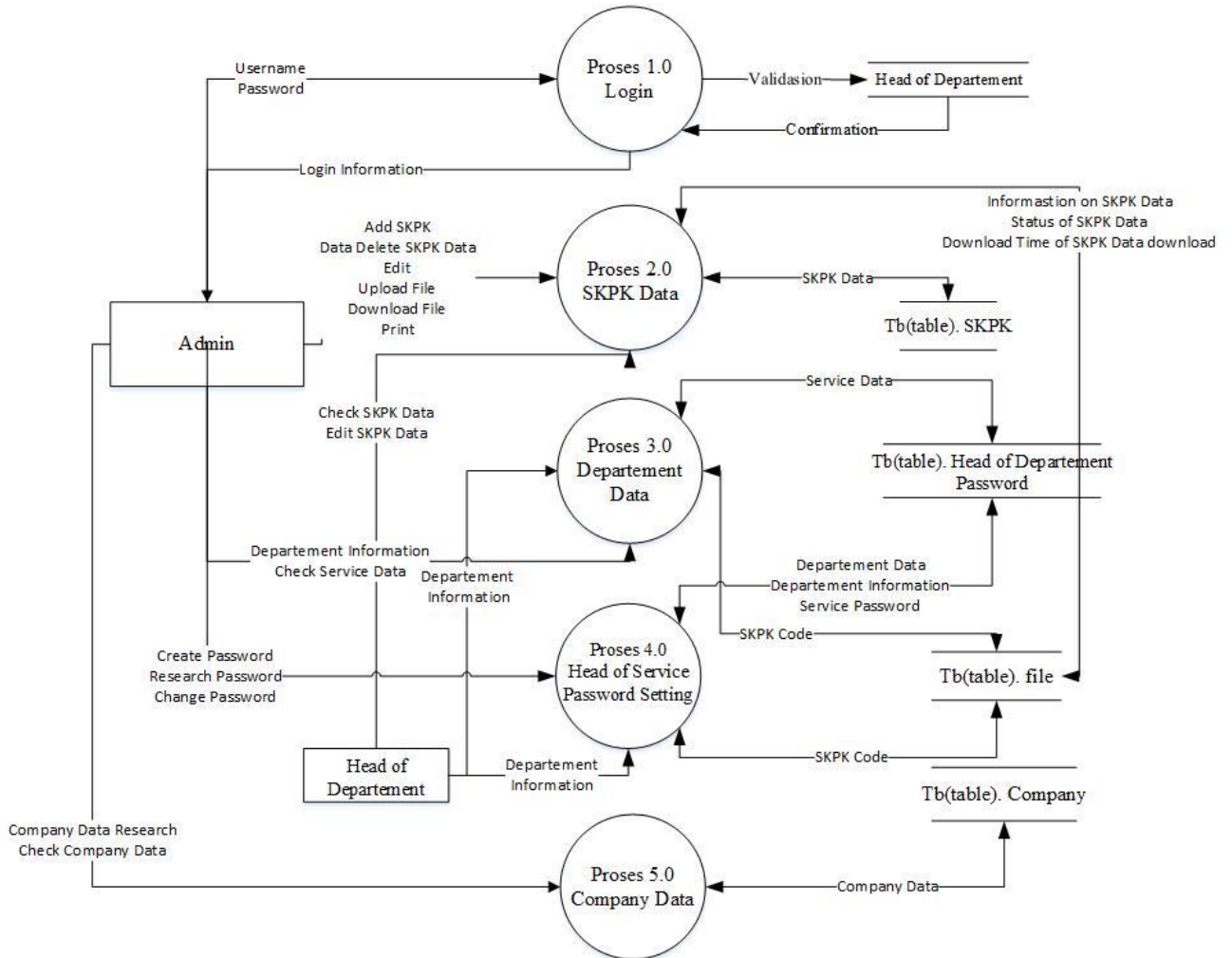

Fig 2. Diagram Level 0

4.2. System Implementation

Front page

Front page is the initial appearance of the system where it provides three pages including Diskominfosa of Bireuen regency, Head of Diskominfosa and admin page.

Fig 3. Dashboard

Admin login page

Displays the login form of the SKPK Application at the Bireuen Regency Informatics and Encryption Communication Service. Admin can log in using a valid username and password.
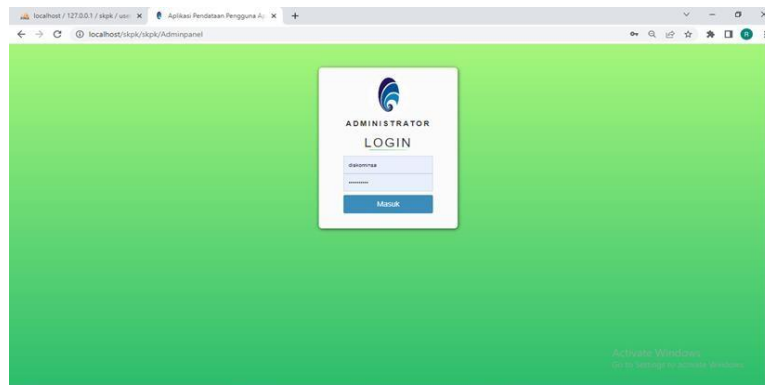

Fig 4. Login page

Dashboard page

On this page, the admin can access SKPK data, service data, office head password settings and company settings. In this view there is also a description of each data that has been inputted.
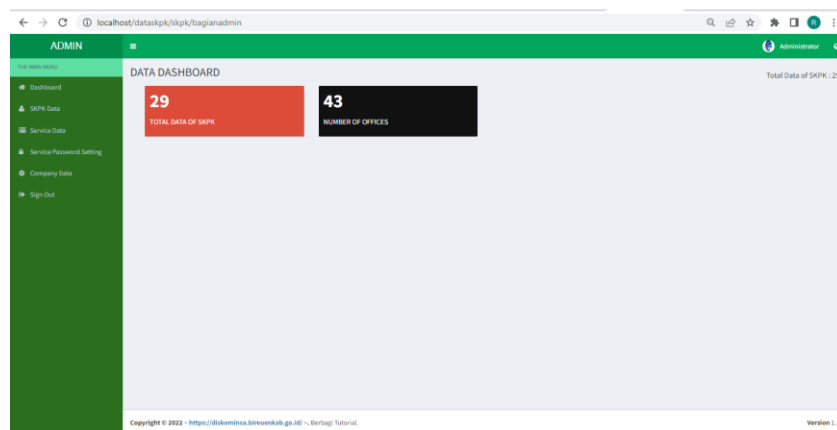

Fig 5. Dashboard

SKPK data page

In this view, administrators can add, edit and delete data skpk. On this page there is a feature to download files in excel format and can also be printed and downloaded in pdf format.
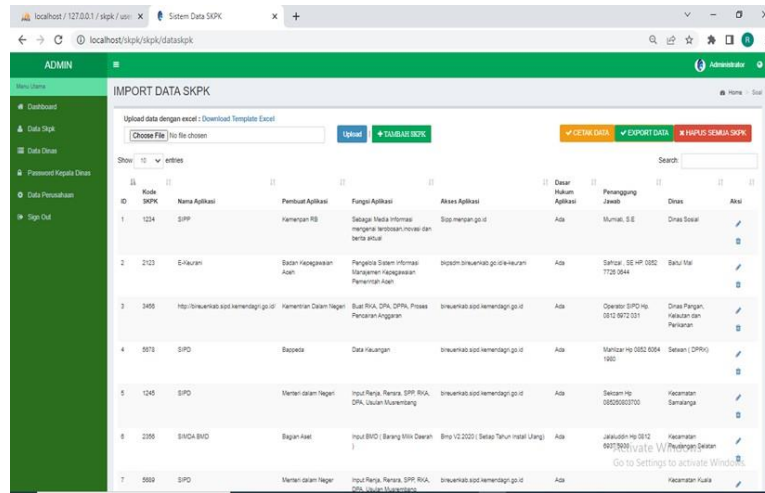

Fig 6. SKPK data page

Add SKPK data page

On this page, the admin can enter the id, script code, application name, application maker, application function, application access, application legal basis, person in charge and agency.
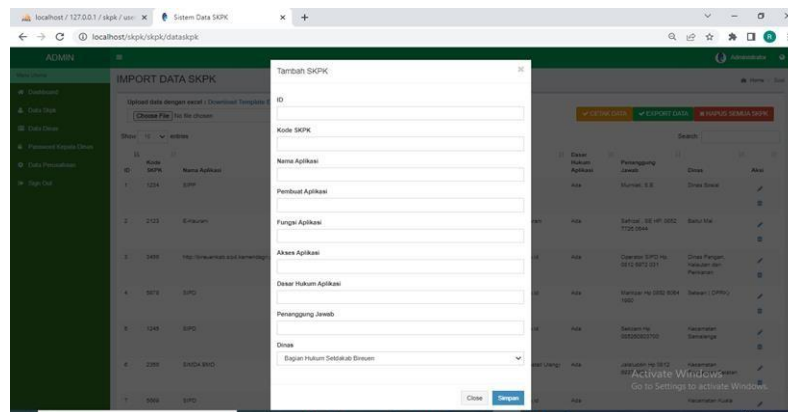

Fig 7. Add SKPK data page

Department data page

The page shows the official data page from the SKPK Application Data Collection Information System at the Bireuen Regency Informatics and Encryption Communication Service. On this page, the admin can view and add service data.
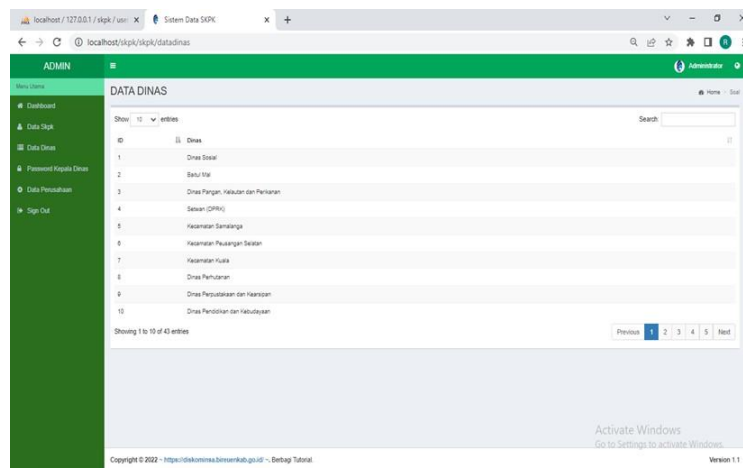

Fig 8. Department data page

Head of service password setting page

Admin can create or update a password which will later be given to the head of the service to be able to check the SKPK data, and if an error occurs in the SKPK data, the service head can change the SKPK data himself**.**
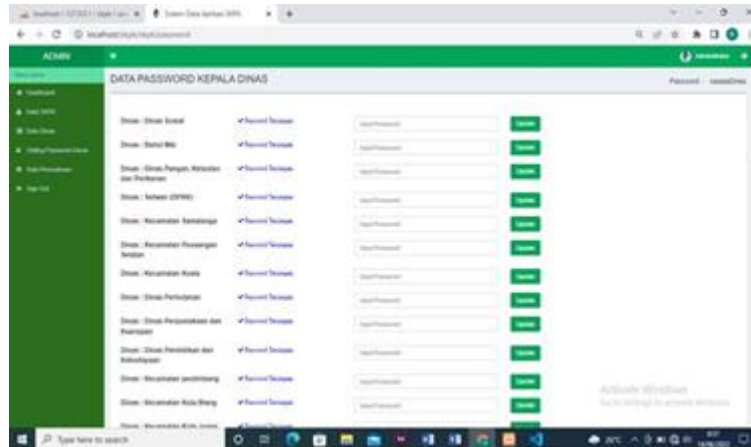

Fig 9. Head of service password setting page

Company Settings Page
On this page, the admin can set the company name, company address and add a company logo
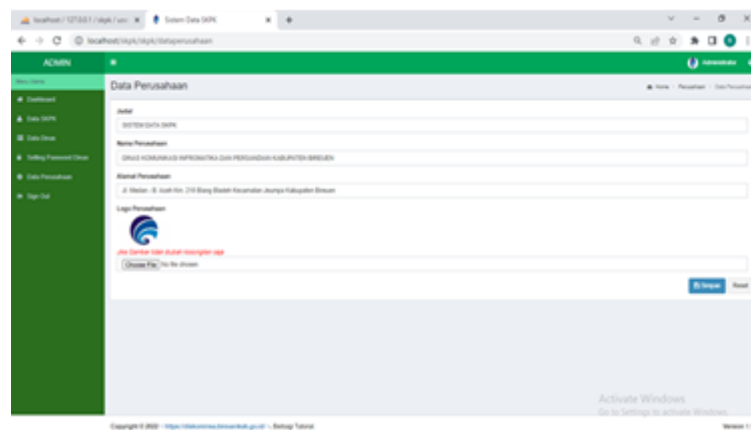

Fig 10. Company setting page

Head of Division Login page

Displays the head of service login form using a valid password. By logging in, the Head of Service can only view and edit the SKPK data

Fig 11. Head of devision login page

Page Head of service page

In this view, the service head can see the skpk data that has been input by the admin and entered into the database. If there is an error in the SKPK data, the service head is given access to be able to change the SKPK data
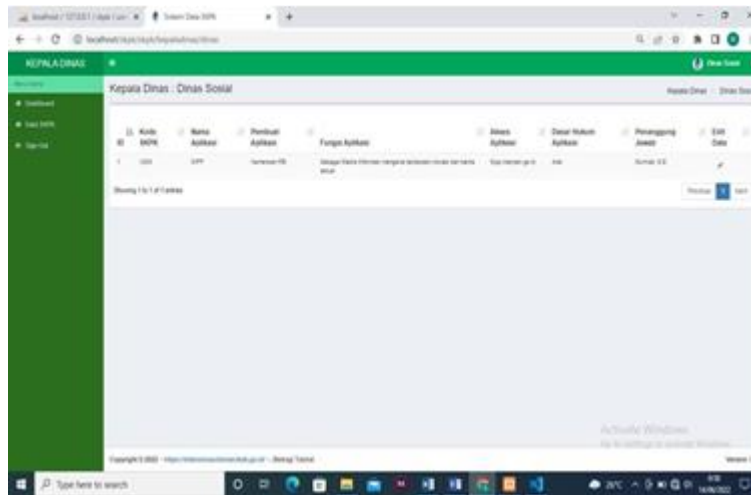

Fig 12. Head of devision login page

SKPK Data Print Page

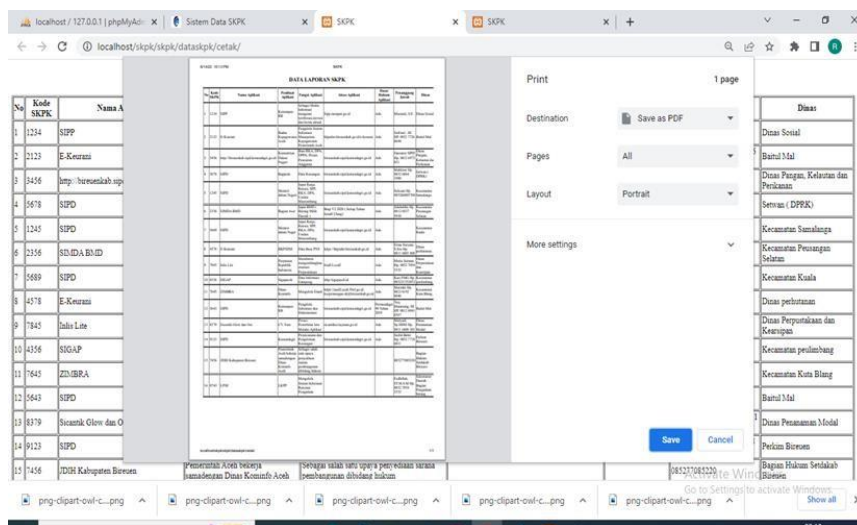This page is the print history of the SKPK data that was previously entered on the Add SKPK menu.

Fig 13. SKPK data print page

4.3. System Testing
Software testing is crucial before deploying the application to customer in order to produce quality product [23][24][25]. It is tested to level up the application to be better[26]. Black box testing is a manual functionality testing that test the function of the system work well as the requirement of users [27][28]. The following are the results of the black-box test.

Table 1. Black-Box Test Results (Admin)

No	Feature	Test Case	Expected Result	Status
1.	Login	Enter valid passsword and username	Display home page	Valid
2.	SKPK data menu	Enter SKPK data in admin page	Data saved and displayed at SKPK data menu	Valid

3.	Department data menu	Enter department data for head of department	Data saved and displayed at department data menu	Valid
4.	Head of service password seting menu	Create password for head of department	SKPK data saved and display head of service page.	Valid
5.	Company setting menu	Manage company name, logo and address.	Display company edit page	Valid
6.	Print	Print input data	Print report	Valid

Table 2. Black-Box Test Results (Head of Office)

No	Feature	Test Case	Expected Result	Status
1.	Login	Enter password that admin created	Display main home page of head of office	Valid
2.	SKPK data check	Mengecek data skpk yang sudahdi input	Data tersimpan dan dapat dilihat oleh kepela dinas masing-masing	Valid
3.	SKPK data edit	Update SKPK data	Head of office can update wrong data input	Valid

5. Conclusion

After conducting black-box testing and all systems running as expected, the SKPK application data collection information system at the Bireuen district information communication and encryption service can be used, so the admin can input data, both SKPK data, service data, head password settings agency, setting up company profiles and being able to print skpk data. The website that was created can change the data if an error occurs, delete the data if it is no longer used and print a report on suspicious data. Besides that, the admin can filter the report period to be printed making it easier to check good data per day, month and even year. The system can also check SKPK data if the head of service wants to know information from their SKPK data. The SKPK application data collection information system for the Information Communications and Encryption Service of the Bireuen Regency was created with the aim of making data management, recording of SKPK data, reporting of SKPK data to be orderly and checking SKPK data easier and more precise, so that the head of the service can easily control the SKPK data and the head the service is easy to check the SKPK data.

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