

A Design of Practice Activities Cloudstorage, Promotion and Protocol

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INTISARI

Peran Humas memiliki andil besar dalam merekam jejak perkembangan dan perjalanan Badan Pengusahaan (BP) Batam dari masa ke masa. Pentingnya dokumentasi kegiatan mendefinisikan dokumentasi sebagai aktivitas atau proses penyediaan dokumen dengan menggunakan bukti yang akurat berdasarkan pencatatan berbagai sumber informasi. Sehingga pengguna tidak harus mencari media penyimpanan dari tahun ke tahun dengan datang langsung ke kantor, tetapi cukup dengan mengakses website dokumentasi kegiatan kehumasan Badan Pengusahaan (BP) Batam dengan mudah dan tidak memerlukan waktu yang lama. Metode perancangan yang digunakan dalam perancangan dokumentasi ini akan menggunakan metode perancangan SDLC (*System Development Life Cycle*) dengan tahapan perencanaan dimana dilakukan identifikasi fitur-fitur yang akan dikembangkan dan sasaran yang ingin dicapai dalam perancangan cloudstorage pada BP Batam, dalam tahapan analisis ini menganalisa system yang akan dijalankan pada cloudstorage hasil analisis berupa kelebihan dan kekurangan system hingga pembaharuan yang dapat diterapkan, perancangan pada cloudstorage ini menghasilkan sebuah prototype yang diperlukan untuk menghasilkan system cloudstorage pada BP Batam, implementasi pada cloudstorage ini menghasilkan bahwa system tersebut dapat bekerja secara optimal, pada tahapan testing system dapat mengetahui apakah system dapat digunakan secara optimal, maintenance dilakukan untuk memantau software dapat berjalan dengan sempurna dan dengan pemodelan UML. Hasil penelitian ini juga diharapkan dapat membantu Kehumasan Pengusahaan (BP) Batam dalam pengolahan data berbasis *cloud*

Kata Kunci : Badan Pengusahaan, Dokumentasi, Kehumasan, *Cloud*, *Metode SDLC*

ABSTRACT

The role of Public Relations plays a major role in recording the development and journey of the Batam Business Administration (BP) from time to time. The importance of activity documentation defines documentation as an activity or process of providing documents using accurate evidence based on recording various sources of information. So that users do not have to look for storage media from year to year by coming directly to the office, but simply by accessing the Batam Business Agency (BP) public relations documentation website easily and does not require a long time. The design method used in the design of this documentation will use the SDLC (System Development Life Cycle) design method with the planning stage where the identification of the features to be developed and the goals to be achieved in the cloud storage design at BP Batam are carried out. will run on cloudstorage analysis results in the form of advantages and disadvantages of the system to updates that can be applied, the design of this cloud storage produces a prototype needed to produce a cloud storage system at BP Batam, the implementation of this cloud storage results in that the system can work optimally, at the testing stage the system can find out whether the system can be used optimally, maintenance is carried out to monitor the software can run perfectly and with UML modeling. The results of this study are also expected to help Batam Business Public Relations (BP) in processing cloud-based data

Keywords: *Business Entity, Documentation, Public Relations, Cloud, SDLC Method*

INTRODUCTION

To implement efficiency and improve system performance, Information Technology (IT) companies have begun to utilize information technology, especially Cloud Computing. However, in its implementation there

are still some obstacles. According to Kaur and Singh, the obstacles that occur in cloud computing can be divided into three types including barriers to its use, obstacles in developing barriers to business continuity and service availability, data locking, data confidentiality or

auditability, data transfer bottlenecks, unpredictable performance, bugs in large-scale distributed environments, data security, fast scaling, reputation fate sharing, and software licensing.

The process of adopting cloud computing will be better if it is done systematically. Therefore, an adopted model is needed to analyze and provide steps in the cloud computing implementation process. In addition, identifying the needs is an important task because the needs will determine how the cloud forms and how an institution can accept it in its system[1][2].

Cloud computing or better known as cloud computing is a form of information and communication technology transformation. Cloud computing itself has a variety of services, one of which is cloud storage. Cloud storage is data storage media that can be accessed by users via the internet. To be able to access the data, the users will be connected to the server on the web page. Creating cloud storage services requires virtualized system processing and storage resources in accordance with the infrastructure as service model. Infrastructure as client service is a model for providing cloud computing infrastructure such as servers, storage media, networks and operating systems as on-demand services[3].

Cloud Storage it self is a storage medium that requires an internet network to access it. Files and data are stored on the computer where the user must first create a Cloud Storage account. As long as the computer used is connected to the internet, users no longer need to use flash drives, hard drives or other storage hardware for data storage mobility purposes[4].

The role of Public Relations plays a major role in recording the development and journey of the Batam Business Administration (BP) from time to time. Importance of activity documentation It defines documentation as an activity or process of providing documents using accurate evidence based on records from various sources of information.

So far, in storing documentation of every activity in Public Relations BP Batam still uses flash or other external storage, making it difficult for the Public Relations department to find documentation of an activity so we need a cloud that is connected online, so users do not have to look for storage media from year to year with come directly to the office, but it is enough to access the Batam Business Agency (BP) public relations documentation website easily and does not take long. In addition, security, data availability, and ease of maintenance of network infrastructure are more guaranteed, so users do not have to look for storage media from year to year by coming directly to the office, but simply by accessing the website for documentation of the Batam Business Administration (BP) public relations activities easily and effortlessly. takes a long time. The design method used in the design of this documentation will use the SDLC (System Development Life Cycle)

design method with the stages of planning, analysis, design, implementation, testing, maintenance and with UML modeling [5]. The objectives of this research include:

1. Apply the design of the documentation system for public relations activities in the Public Relations section of the Bureau of Public Relations, Promotion, and Protocol BP Batam.
2. Optimizing system performance that can support the storage of reporting results at the BP Batam Public Relations, Promotion and Protocol Bureau.

METHOD

The system development method in this study uses several stages of the SDLC (System Development Life Cycle) system development method to overcome the problems of the research[6][7].

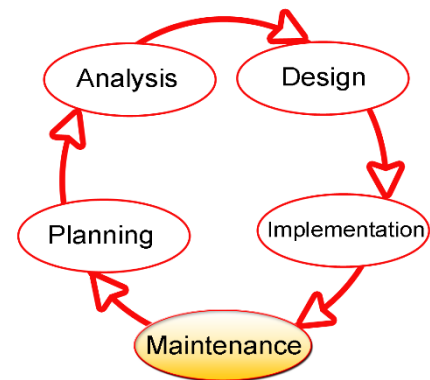


Figure 1. SDLC Method

1. Planning
The planning phase is an initial process to understand a system must be built. At this stage the authors design a system that fits the existing problem. Planning starts from designing the features that will be implemented in the system [8][9]. These features include the design of the information system, and the summary of reports that become data on the system to be built to store documentation information system data at BP Batam Public Relations.
2. Analysis
System analysis or analysis stage is the research stage on the system which has existed for the purpose of designing a new system or updating an existing system [10]. Analysis As long as the author analyzes the system that runs on the Batam Business Board (BP), the author finds problems in each storage/backup process resulting from the documentation of public relations activities in the form of photos and videos that still use a lot of hard disks and do not back up in other storage areas, the

process is not yet effective, causing several problems including:

1. Documentation data on the activities of the Batam Concession Agency (BP) from time to time are difficult to find if you look for documentation data from previous years.
2. Public relations activity documentation data that has been around for a long time has the potential to be damaged because the hard disk storage area is not well organized so that if at any time the data is needed it will take time to search.
3. If activity documentation data is needed in a short time, the user is required to come directly to the office to get the data in question.

Based on these problems, the implementation of the backup system for documentation of public relations activities at the Batam Business Agency (BP) uses the SDLC (System Development Life Cycle) method. Several stages of the method used are planning, analysis, design and implementation.

a. System Analysis

System analysis is the process of sorting out a problem into smaller elements to be studied in order to simplify the problems of an information system. The final result of the system analysis is a way of solving problems that occur in the specification of the new system. At the analysis stage, an analytical approach is needed to avoid errors that may arise at the next stage, namely designing a new system. Because at this stage is a very important stage, the approach taken is to define the problem in the current system and at the same time evaluate each way of working based on existing procedures.

b. System Requirements Analysis

1. Functional Needs Analysis

User requirements analysis describes the process or function that must be owned by the system to meet user needs.

Based on user needs, the following are required:

- a. Login Function This function is used by admins to login to the system before adding, changing, deleting data and making reports.
- b. Logout Function Used by admin to logout or exit the system
- c. Activity Documentation Function This function is used for admins to store all BP Batam Public Relations documentation files.

2. Analysis of Non-Functional Needs

Based on the user needs that have been described previously, it is expected that the designed system is able to meet the functional and non-functional requirements of the system, namely as follows:

- a. Usability The system has an easy-to-use interface design.

- b. Security Have a security system using the login and logout features by entering the Username and Password correctly.
- c. Flexibility Ease of finding the data needed because the system has a good data organization.

3. Design

At this stage, the solutions that have been described globally at the requirements gathering and analysis stage are described in detail in the form of diagrams, layouts, business rules, and other required documentatio [11]. In making a new system using UML (Unified Modeling Language) as the new system design. [12]

a. Use Case Design

The use case diagram is modeling for system behavior information to be built. Use case describes an interaction between one or more actors with an information system that will built. [13]

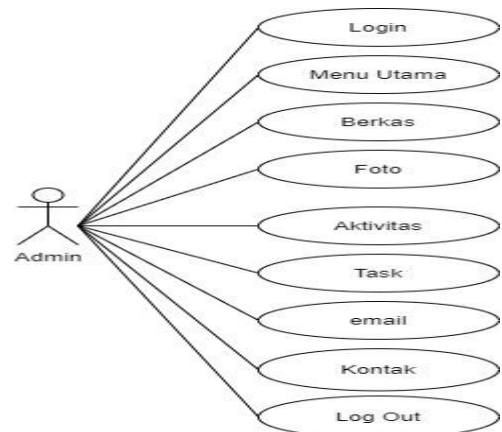


Figure 2. Use Case Diagram

b. Program display design

1. Login Page

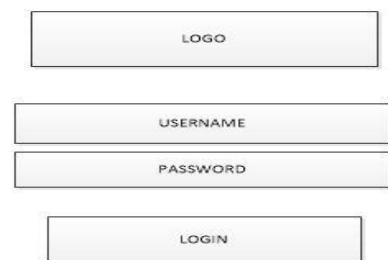


Figure 3. Login Page

2. Main Menu page

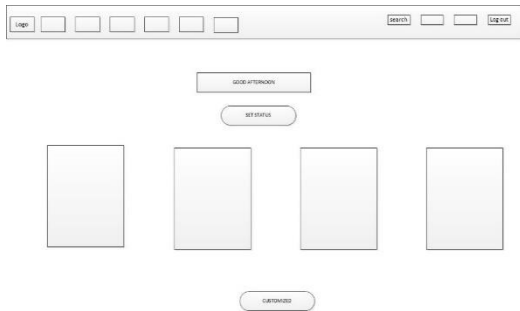


Figure 3. Main Menu Page

3. Documentation Data page

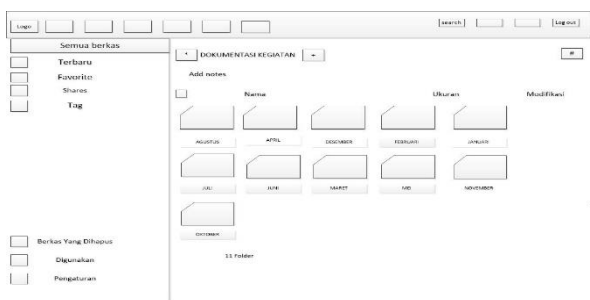


Figure 4. Documentation Data Page

c. Database design

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MariaDB [nextcloud]> show full tables;
+-----+-----+
| Tables_in_nextcloud | Table_type |
+-----+-----+
| oc_accounts          | BASE TABLE |
| oc_accounts_data    | BASE TABLE |
| oc_activity          | BASE TABLE |
| oc_activity_mq       | BASE TABLE |
| oc_addressbookchanges | BASE TABLE |
| oc_addressbooks      | BASE TABLE |
| oc_appconfig         | BASE TABLE |
| oc_authtoken         | BASE TABLE |
| oc_bruteforce_attempts | BASE TABLE |
| oc_calendar_invitations | BASE TABLE |
| oc_calendar_reminders | BASE TABLE |
| oc_calendar_resources | BASE TABLE |
| oc_calendar_resources_md | BASE TABLE |
| oc_calendar_rooms    | BASE TABLE |
| oc_calendar_rooms_md | BASE TABLE |
| oc_calendarchanges  | BASE TABLE |
| oc_calendarobjects   | BASE TABLE |
| oc_calendarobjects_props | BASE TABLE |
| oc_calendars         | BASE TABLE |
| oc_calendarsubscriptions | BASE TABLE |
| oc_cards             | BASE TABLE |
| oc_cards_properties  | BASE TABLE |
| oc_circles_circle    | BASE TABLE |
| oc_circles_event     | BASE TABLE |
| oc_circles_member    | BASE TABLE |
| oc_circles_membership | BASE TABLE |
| oc_circles_mount     | BASE TABLE |
| oc_circles_mountpoint | BASE TABLE |
| oc_circles_remote    | BASE TABLE |
| oc_circles_share_lock | BASE TABLE |
| oc_circles_token     | BASE TABLE |
| oc_collres_accesscache | BASE TABLE |
| oc_collres_collections | BASE TABLE |
| oc_collres_resources | BASE TABLE |
| oc_comments          | BASE TABLE |
| oc_comments_read_markers | BASE TABLE |
| oc_dav_cal_proxy     | BASE TABLE |
| oc_dav_shares        | BASE TABLE |
| oc_direct_edit       | BASE TABLE |
| oc_directlink        | BASE TABLE |
| oc_federated_reshares | BASE TABLE |
| oc_file_locks        | BASE TABLE |
| oc_filecache         | BASE TABLE |
| oc_filecache_extended | BASE TABLE |
| oc_files_trash       | BASE TABLE |
| oc_flow_checks       | BASE TABLE |
| oc_flow_operations   | BASE TABLE |
| oc_flow_operations_scope | BASE TABLE |
| oc_group_admin       | BASE TABLE |
    
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Figure 5. Database Design

RESULTS AND DISCUSSION

1. Interface design

Interface design describes the communication between the user and the application. Interface design can receive data and is provided by the user and share the data with the user to help show the path of tracing the problem to the solution. The interface design stage is the stage of ensuring and designing the appearance of the system to be created.

a. Login Page

The login page is used by the admin to be able to enter the system using the username and password that has been recorded on the system

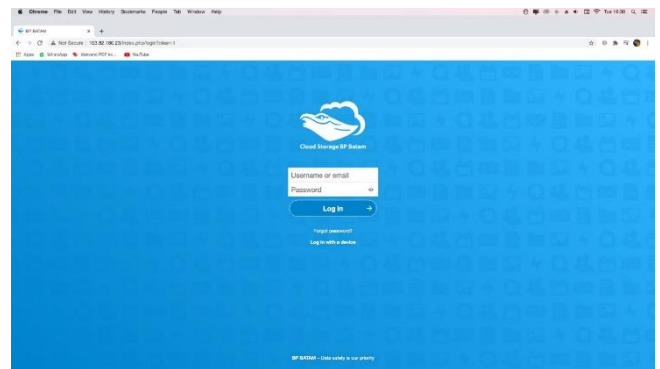


Figure 6. Login Page

4. Main Menu Page

The picture above shows the first page that appears when the admin successfully logs in to the system.

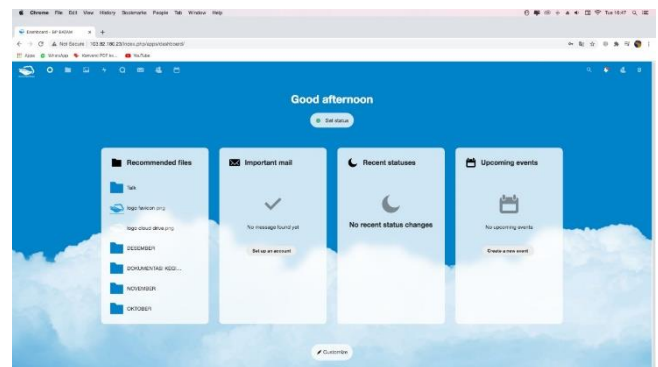


Figure 7. Main Menu Page

5. Documentation Data page on this page displays all documentation data files that have been uploaded to cloud storage.

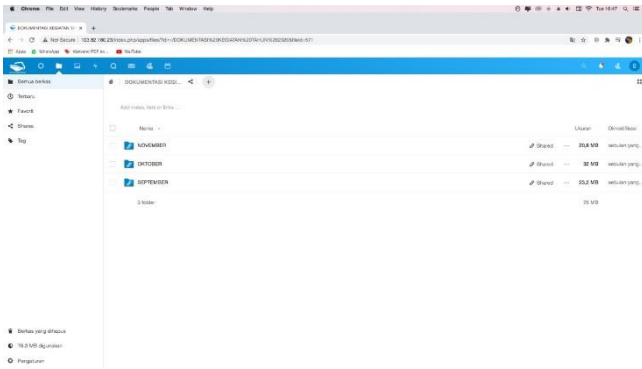


Figure 8. Documentation Data Page

6. Annual Documentation Data Page on this page displays the data folder for the documentation of activities carried out by BP Batam annually

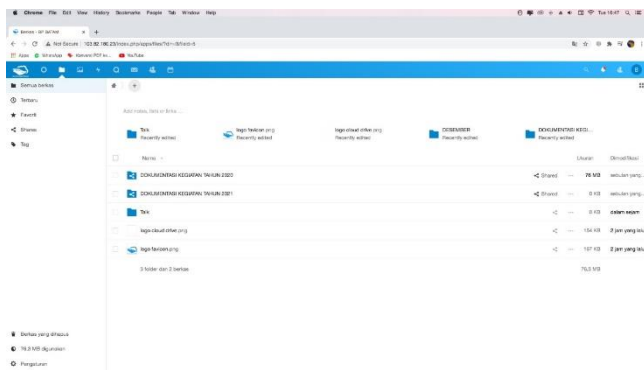


Figure 9. Annual Documentation Data Page

7. Photo Page on this page displays photos of activities that have been carried out



Figure 10. Photo Page

8. Activity Page This page displays all the activities that have been carried out by the admin on the cloud storage system.

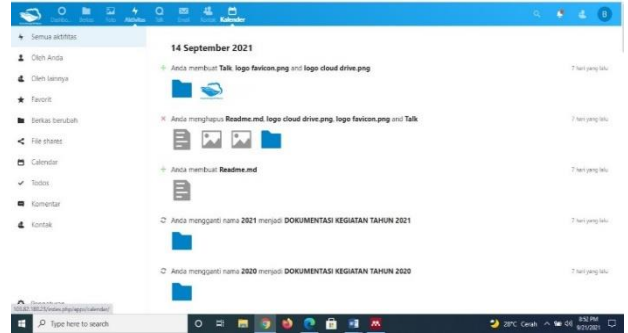


Figure 11. Activity Page

b. System Testing

Testing is part of the stage of the software development process. This test aims to determine the quality of the software that has been made. This test is carried out to find out whether the program made is in accordance with the previous plan and design.[14]

Testing in this system, the author uses the black box testing method. Black-Box Testing is a software testing technique that focuses on the functional specifications of the software. Blackbox Testing works by ignoring the control structure so that its attention is focused on domain information allowing software developers to create a set of input conditions that will exercise all functional requirements of a program. [15]

a. Login Page Test

Testing this login page is intended to check whether the username and password are valid or not and to test the function of the login button.

Login Page Test Results			
Tested module	Test procedure	Results obtained	v
User name : BpBatam Password : BpBatam	open the application, display the login menu page, input the correct username and password, click the login button	User/admin logs into the system and can access	v
Click the Login Button	User enters the main page	The login button works really well	v

Login Page Test Results (Wrong Data)			
Tested module	Test procedure	Results obtained	Valid
User name : BpBatam Password : BpBatam	Empty username and password	User does not enter the main menu	v
Click the Login Button	A warning message appears "Invalid Username or Password"	The user remains in the login menu	v

- b. Testing Documentation Data Menu Page
The Documentation data page is a menu where admins can upload files, create folders, share files, rename files, copy files, and delete files.

Table 2. Testing Documntation Data Menu Page

Test Results Documentation Data Page			
Tested module	Test procedure	Results obtained	Valid
Adding and creating Folders	-click add button -show add folder page -folder added successfully	The message "folder added successfully" appears.	v
Upload files	file is uploaded in the desired folder	The message "file uploaded successfully" appears.	v
Download files	Click the file to be downloaded	Tampil pesan "File berhasil didownload"	v
Copy files	Click the file to be copied	The message "file copied successfully" appears	v
Share files folder	click the file folder to be shared.	The message "File folder has been shared	v

		successfully" appears.	
Rename Files	lick on the file you want to name	The file successfully named according to the admin's wishes	v
Delete Folder	click the folder to be deleted	The message "folder has been deleted successfully" appears.	v

CONCLUSION

Based on the research and test results carried out in this study, it can be said that the Cloud Storage system at BP Batam can run well and the admin can upload files without size restrictions but adjusted to server capacity and the use of cloud storage can help BP Batam in the process share files or data administration without using storage media others such as external hard drives, flash drives and other storage media who are susceptible to viruses, and can maintain the security of the Documentation data in the PR Batam BP Batam

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