DESIGN AND BUILD OF PULSE BALANCE DEPOSIT INFORMATION SYSTEM BASED ON WEBSITE AT PT ASIA ADIJAYA PERKASA

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ABSTRACT

The credit balance deposit business is said to be still loved until now, the need for all-in-one online makes it inevitable that device users need to top up pulses, digital wallets, PLN or top up games. This makes transaction requests more and more causing many requests in the deposit process, with this problem the author wants to create a credit deposit information system.

In this study, the method used by the researcher divides it into two, namely for the first method of data collection there are observations, interviews, literature studies, and documentation. The second is the system development method using the SDLC (Systems Development Life Cycle) method, there is a needs analysis using pieces analysis, where there are system workflows, use case diagrams, activity diagrams, Sequence diagrams and the last is testing using black box techniques and beta testing.

The results of the recommendation system consist of three access rights, namely customer service, owner and member. The credit balance deposit information system can assist in the deposit process from transactions, data presentation and reporting. The results of the black box test show that all functions in the credit balance deposit information system can run as expected. The results of beta testing by filling out the questionnaire show the percentage value of the system suitability is 88.79%.

KEYWORDS: Accounting Information System, Systems Development Life Cycle, Black Box Testing, Deposit, Credit

INTRODUCTION

The development of information technology has influenced almost all aspects of life, one of which is in the business world, namely through the internet. Internet technology is a very effective supporting factor at this time and allows people to enjoy the various conveniences that technology provides.

PT ASIA ADIJAYA PERKASA which is engaged in selling electric credit balances, data packages and game top ups, having its address at Jl. Sutowijoyo No. 29, Penumping, Laweyan, Surakarta. This balance deposit business is said to be still loved until now, the need for all-in-one online makes it inevitable that device users need to top up credit, digital wallets, PLN or top up games.

With the factor of increasing demand, top up or counter service providers (members) also experience an increase in balance requirements. Counters usually make deposits to servers that have collaborated with providers. Unfortunately, deposits are still made with a system that is still said to be manual and unstructured. This can hinder the deposit process.

From the above problems to help the counter or member and server the author wants to create a website-based credit balance deposit information system with the SDLC method. This system is expected to assist members in depositing and reporting data on company HR.

RESEARCH METHOD

The method used for the Design and Build of a Website-Based Credit Balance Deposit Information System is the SDLC method. According to (Pricillia & Zulfachmi, 2021) SDLC (Systems Development Life Cycle) method or in systems engineering and software engineering, is the process of creating and changing systems as well as the models and methodologies used to develop these systems. This concept generally refers to a computer or information system. SDLC is also a pattern taken to develop a software system, which consists of the following stages: planning, analysis, design, implementation, testing and maintenance.

RESULT AND DISCUSSION

1. System Analysis

a. Analysis of the running system

Currently the deposit system running at PT ASIA ADIJAYA PERKASA is still manually with the member process meeting the front office to confirm the deposit then the front office will forward the confirmation to customer service to check whether the deposit is appropriate or not then customer service will send a notification to the customer. Owner supervises and reports deposits.

b. Developed System Analysis

PIECES Analysis Table

Analysis	Running System	Proposal System
Performance	Deposits can be made by means of members coming directly to the office so that it takes a long time or through the telegram, wa and sms platforms but such things are still less efficient in data processing. There is no printed version of the proof of payment or if the front office is still manual.	The proposed system is in the form of an application that is accessed online through the website, so that members who want to deposit can make requests through the website. In addition, payments are made anywhere by transferring to an ASIA account and then uploading proof of transfer through the website. The system provides a feature to print proof of deposit payments.
Information	Members get limited information regarding the deposit through the front office or the reply received from what platform was used for the deposit.	The proposed system can provide information quickly in credit deposits that are accessed online, in detail and accurately. In this system there is an email notification facility if the member is successful in making a series of deposit payments.
Economy	The costs needed for the short term are relatively small. However, in the long term it costs a lot to approach the process with members.	The initial costs incurred to create the system are relatively expensive, but this system can be used in the long term and can save costs to provide service satisfaction and efficiency to members when making deposits.
Control	Member data security and deposit is not guaranteed because it is not stored regularly and even the risk of data loss is very large.	Everyone who accesses must enter into the system using a username and password for system security. So that member data can be guaranteed security and search data can be found quickly and accurately.
Eficiency	To get information about deposit members must see the telegram group or ask customer service. Searching for data takes a long time because the data is mixed in many systems.	Members gain efficiency in obtaining information through an integrated online website. Searching deposit transaction data is also fast and accurate for system users.
Service	Service for deposits is still face-to-face, i.e. customers must come directly to Asia or make requests from many platforms.	The presentation of information is done online and this system can connect the customer and the company. Deposits can also be made quickly, accurately and in real time.

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2. System Design

At this stage the author uses UML to design and design the recommendation system requirements.

a. Use Case Diagram

Use case diagram is a depiction of user interaction with the system that shows the relationship between the user and the system.

1) I dentify Use Case Actors

Identify Use Case Actors Table

NO	Actor	Description
1.	Customer Service	Have access rights to run the system, process profile data, process deposit transactions, view and print deposit reports.
2.	Owner	Have access rights to run the system, process profile data, process bank data, process level data, process user data, process deposit data, view and print deposit reports.
3.	Member	Have access rights to run the system, change profiles, make deposit requests, view deposit data, view and print deposit reports.

2) Diagram Use Case

This diagram shows the set of use-cases and actors (a special type of class). This diagram is very important for organizing and modeling the behavior of a system that is needed and expected by users.

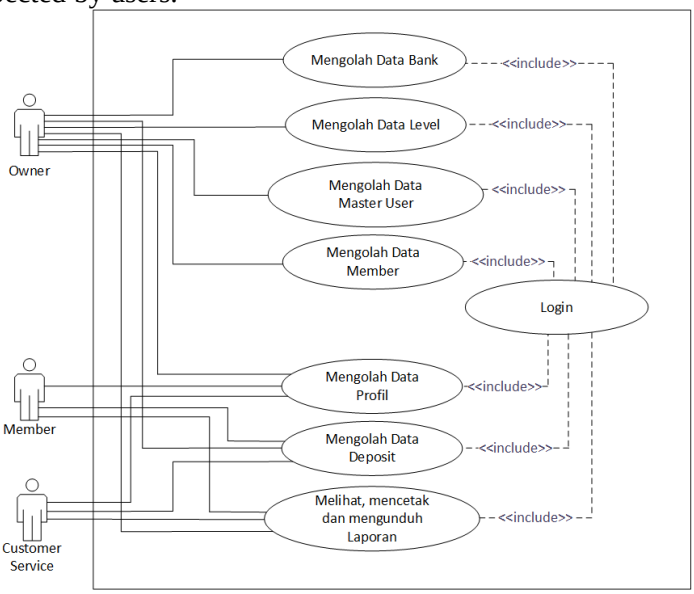

Image of System Use Case Diagram

b. Use Case Scenarios and Activity Diagrams

This activity diagram is a special type of status diagram that shows the flow from one system of activities to other activities in a system. These diagrams are especially important in modeling the functions of a system and emphasizing the flow of control between objects

Use Case Name : Managing Deposit Data
Actor : Customer Service, Owner, Member.
Description : This process is an activity to process deposit data
Pre-condition : User has successfully logged in
Post-condition : The system adds, edits and deletes data in the database

Scenarios of Managing Deposit Data Table

Normal Scenario	
Actor Action	**System Action**
Pressing the deposit menu	
	Show deposit page
Manage deposit data (Add, Edit and Delete)	
	Check the validity of the deposit data
	Deposit data successfully saved to database
	Show message saved successfully
Alternative Scenario	
Actor Action	**System Reaction**
Pressing the deposit menu	
	Show deposit page
Manage deposit data (Add, Edit and Delete)	
	Check the validity of the deposit data
	Showing error message on validity
Correct the error	
	Deposit data successfully saved to database
	Show message saved successfully

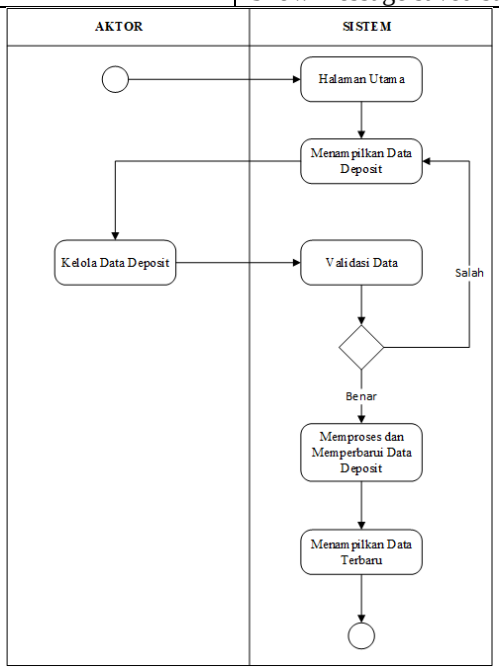

Image of Activity Diagram Managing Deposit Data

c. Sequence Diagram

This diagram illustrates how the system responds to user activities. Sequence Diagrams are made that are directly related to the main activities of the system.

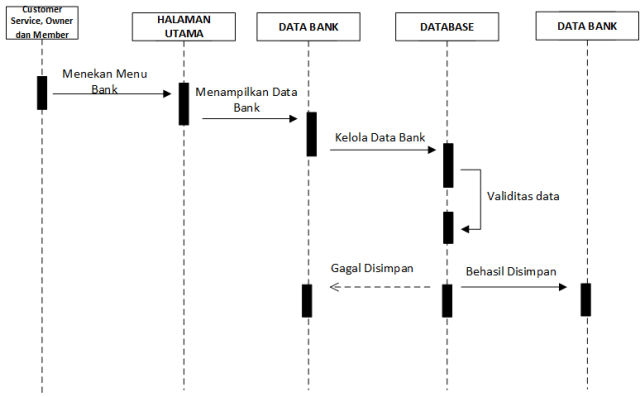

Image of Sequence Diagram of Managing Deposit Data

3. Database Design

The problem faced at the time of design is how the database or database to be built can meet current and future needs. This system was created with the name dcrypt_deposit database with 4 tables namely Level Table, Bank Table, Transaction Table and User Table which are related to each other.

4. Implementation and unit testing

At the stage of implementing the system the author uses the PHP programming language.

a. Database Implementation

Image of Database Implementation

b. Implementation of Relationships Between Tables

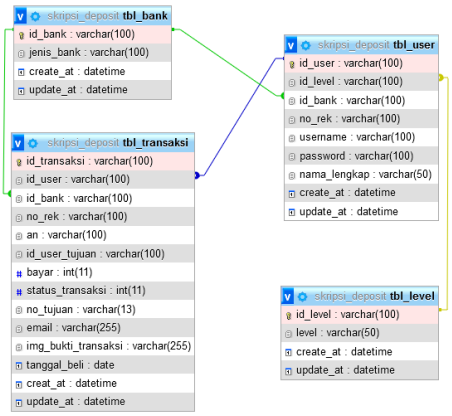

Image of Relationships Between Tables

c. System Implementation

1) Display of Deposit Request Form

The appearance of the Request Deposit Form for access rights includes customer service, owner and member. In this form the user fills in the data that needs to be filled in then saves the data by performing the save action. The display contains actions to reload and save data.

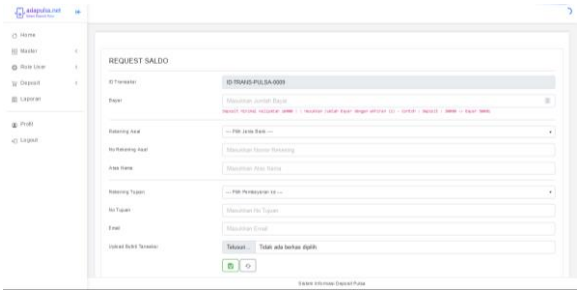

Image of Request Deposit Tampilan

2) Action View Send Email Notification

Action Display Send Email Notifications the user can select data and then save the data by performing the save action. The display contains actions to check proof of transfer, reload and save data.

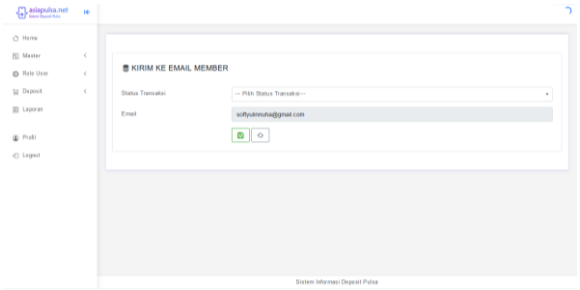

Image of Action Send Notification Email

3) Deposit Details View

Display Details Deposit access rights include customer service, owner and member. On the credit deposit information system. The display shows the details of the contents of the deposit and has an exit action.

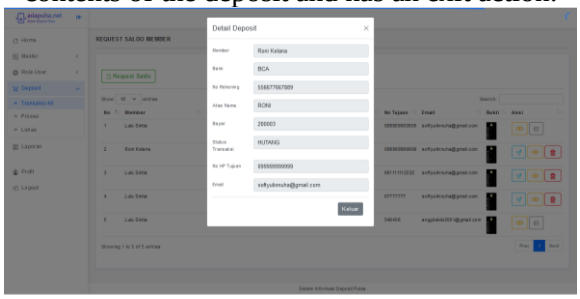

Image of Deposit Details Display

4) Integration and system testing

At the testing stage the author uses 2 tests. Black Box is a testing technique that focuses on the functional specifications of the software, the tester can define a set of input conditions and perform tests on the functional specifications of the program. Black box testing to test all functions on the system. Black box testing can be seen in the table below

Black Box Test Table

Test Case	Test Step	Expected Results	Accurate Results	Description
Login	Fill in the Login Form, Click the Login Button	Displaying the Home page of Customer service, owner and member	Come on stage Homepage Customer service, owners and members	Accordance
Data Bank (*Owner*)	Click Data Bank	Showing Bank Data, Add or Edit and Delete Forms.	Show Bank Data, Form Add or Edit and Delete.	Accordance
Level Data (*Owner*)	Click Data Level	Showing Data Level, Form Add or Edit and Delete.	Show Level Data, Add or Edit and Delete Forms.	Accordance
Master User Data (*Owner*)	Click Data Master User	Showing Master User Data, Form Add or Edit and Remove.	Show Master User Data, Form Add or Edit and Delete.	Accordance
Member Data (*Owner*)	Click Data Member	Showing Member Data, Add or Edit and Delete Forms.	Show Member Data, Form Add or Edit and Delete.	Accordance
Deposit Data (*Customer Service, Owner*, Member)	Click Data Deposit	Showing Deposit Data, Request Form, send email and Delete.	Show Deposit Data, Request Form, send email and Delete.	Accordance
Report Data (Customer Service, Owner, Member)	Click Data Laporan	Showing Report Data and Form Print.	Show Report Data and Form Print.	Accordance
Profile Data (Customer Service, Owner, Member)	Click Data Profil	Showing Profile Data, Form Add or Edit.	Show Profile Data, Add or Edit Form.	Accordance

Based on the results of the black box testing that has been done, it can be concluded that this application that has been built has been running well. However, it is possible that errors can occur when the application is used in a real environment.

Beta testing is testing that is direct in the real environment. In beta testing to test the accuracy and accuracy of the data.

Beta Testing Table

No Pertanyaan	Percentage Value	Description
1	89,41%	Very Accordance
2	89,41%	Very Accordance

3	89,41%	Very Accordance
4	88,23%	Very Accordance
5	88,23%	Very Accordance
Total Percentage	444,69%	Very Accordance
Rata-rata	443,98% : 5 = 88,79%	

Based on the overall calculation of the questionnaire processing, it can be concluded that as many as 88.79% of respondents stated that the credit deposit information system was in accordance with what was desired.

CONCLUSION

Based on the results of the discussion of the thesis above regarding the Website-Based Credit Deposit Information System at PT. ASIA ADIJAYA PERKASA, it can be concluded as follows. This system involves three actors, namely customer service, owner and member.

a. The system development method used is the SDLC method.
b. The method of analysis using PIECES.
c. The depiction of the system flow using UML, namely use case diagrams, activity diagrams, sequence diagrams, and class diagrams.
d. This system consists of 3 access rights, namely Customer Service, Owner and Member.
e. The system has 8 use cases, namely login, managing bank data, managing level data, managing master user data, managing member data, managing deposit data, managing profile data and managing report data.
f. System testing using the Black box method shows that the system is in accordance with what is expected.

The results of beta testing by filling out the questionnaire showed the percentage of 88.79% of respondents admitted that the system was as expected.

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