Development of a Web-Based Village Asset Monitoring System Application

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Abstract-Web-based asset management needs to be developed to facilitate data collection of goods and documents in higher education because it is related to data security. It is necessary to develop an online information system that is accurate and easy. This research is a software development research that aims to develop web-based asset management applications. The method used is Waterfall. The development model used in this research is a prototype. Based on the results of the research, a web-based application was produced that can be used in managing village asset monitoring.

INTRODUCTION

In PP 72/2005 on Villages, Permendagri 4/2007 on Village Wealth Management Guidelines and Perda 20/2007 on Sources of Income and Village Wealth, Village Wealth consists of: Village Cash Land (TKD); Village Market; Animal Market; Boat Moorings; Village-Owned Buildings; Public Baths managed by the Village, recreational objects managed by the village, fishing spots in rivers managed by the village, village forests, village cemeteries, village fields, village-owned waterways and other village-owned assets, including: 1. Goods purchased or obtained at the expense of the Village / Regional Budget; 2. Goods originating from other acquisitions and or institutions from third parties. 3. Goods obtained from grants / donations or the like; 4. Goods obtained as the implementation of agreements / contracts and others in accordance with applicable laws and regulations. 5. Village rights from balancing funds, taxes, grants from the government, provincial government, regency/city government; 7. grants from third parties that are legal and not binding. 8.Results of village cooperation.

The management of village assets in Purwosari District Purwodadi still uses a conventional information system, so that errors can occur and data is lost. Therefore, the author tries to create a Village Asset Management information system with the aim of storing village asset data stored permananently in the database and not lost so that if at any time the data is needed it can be easily reopened.

Research conducted by Yaakub examines the Analysis of Web-Based Asset Management Information System Modelling at Jambi Polytechnic, this research is used as an analysis of the design of asset management information systems that can be implemented further so as to produce an asset management information system. implemented further so as to produce an asset management information system that can be applied at the Jambi Polytechnic (S.Yaakub, 2017). The next research conducted by Putra examines the Design of an Asset Management Information System at Web-Based Pamulang University, this research aims to facilitate the collection of data on the number of assets, data collection of assets based on their condition, grouping assets based on their type and making it easier to search for asset data (F.D.Putra, 2020).

RESEARCH METHODOLOGY
SDLC (*Software Development Life Cycle*)

Software Development Life Cycle is a conceptual model used in research management to outline the steps involved in a research project. Various SDLC methods have been developed to guide system development including the waterfall model, Rapid Application Development (RAD), Joint Application Development (JAD), Fountain model and Spiral model and so on. The model that the author uses in developing information systems is the waterfall model. Figure 1 shows the classic methodology Waterfall model, which is the first SDLC method that outlines the various stages involved in system development.
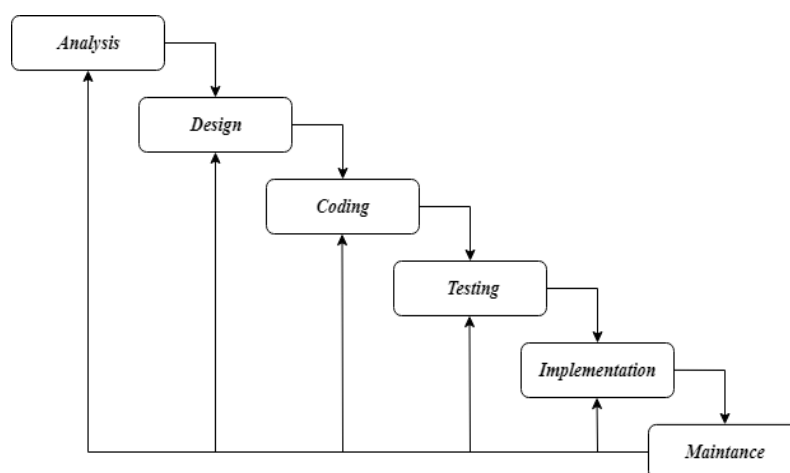

Figure 1. Metode Waterfall

Figure 1 shows the stages of the system planning process. The explanation of each of the stages is as follows:

1. Requirments definition stage where recognising the problems that exist in users is then carried out the process of the initial stages in creating a new system.
2. System and Software design At this stage, data design is carried out, interface (interface). The design created focuses on creating a software support programme design.
3. Implementation and unit testing At this stage is the implementation of the design stage which is then tested partly or per unit.
4. Integration and System Testing at this stage the process of testing the system or testing the design of the information system is carried out and then the system is tested as a whole whether it is in accordance with the expected results.
5. Operation and Maintanance at this stage the software that has been made is handed over to the user to run and maintenance is carried out by the agency.

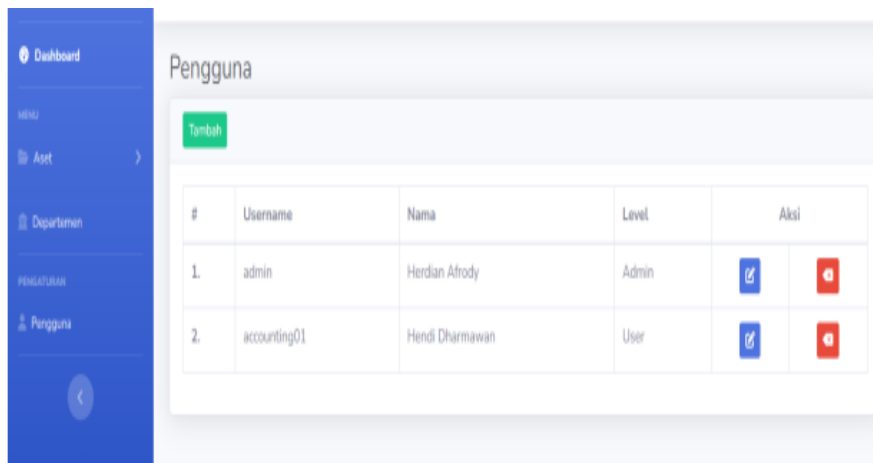**RESULT AND DISCUSSION**
Design System

The system design in this application uses UML (Unified Modelling Language) which allows developers to model visually, namely the emphasis on images and not dominated by narrative. UML (Unified Modeling Language) is a modelling language for object-oriented systems or software. UML serves to help developers to describe the flow of a system to be built, Usecase diagram is made to describe what will be done by the system (use case) and who will interact with the system (actor) and describe the relationship between the actor and the use case diagram. Figure 2 below shows the design of the use case diagram.
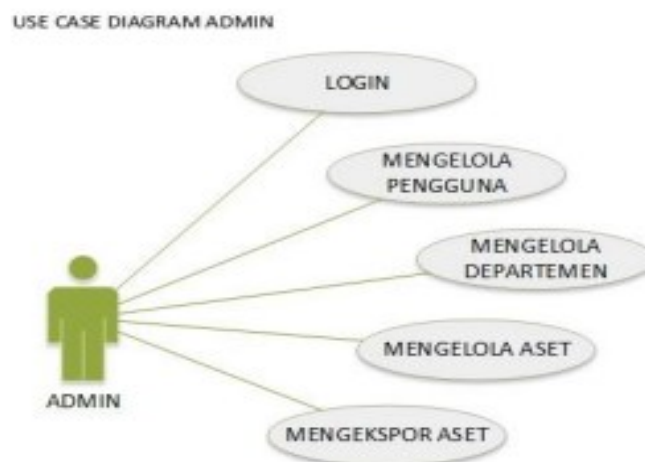
Figure 2. Usecase Diagram

Dashboard

Interface design for the initial page of the SPPD information system application admin login. This page is the first page that appears if the admin successfully logs into this application so that he knows the appearance of the initial login page to the application.
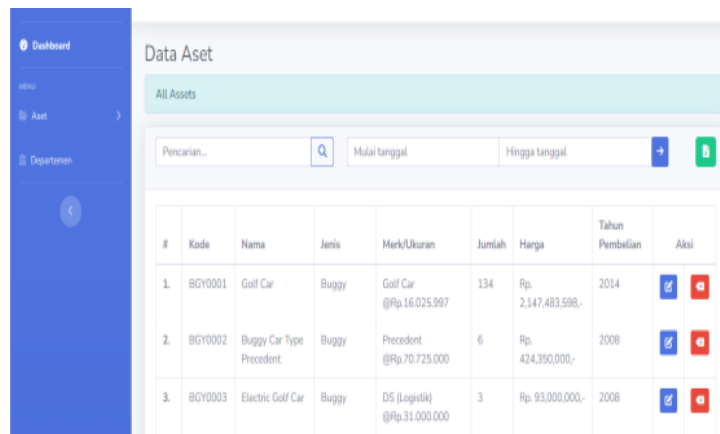

Figure 3. Dashboard

Asset Data Page

This page is used by users to manage asset data, the asset data page is as shown below:

Figure 4. Asset Data

CONCLUSION

Based on the analysis, design, implementation and discussion of making official travel letter applications using a computerised system, it is concluded from the test results of the system that it is able to minimise errors such as double data or in the input process in entering data because the input process already uses a database. Produce reports on employee data, official travel orders, cost processing, cost administration, official letter

printers and official task results. The availability of a computerised information system for making official travel orders can facilitate employees in the process of making official travel orders.

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