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# Information System for Asset Management

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**Abstract.** The purpose of this study is to design an asset management information system in the form of desktop-based application design so that it can be used as a reference in implementing it into the application. With the application, it can facilitate BMN in making reporting related to assets control and management. Universities cannot be separated from the existence of assets owned, by seeing so many assets and development opportunities, there are often mistakes in planning, procurement, and inventory of data relating to assets. Sekolah Tinggi Pariwisata National Hotel Institute (NHI) Bandung is a College that organizes professional education programs in the field of tourism. In implementing its business processes, STP involves supporting assets owned by the State managed by the State Property section (BMN). In managing assets, which include the process of registration, request, acceptance, and maintenance of BMN goods still use the written recording process in the paper, as well as the process of making reports still using Microsoft Excel applications taken from the data written on the paper. From these problems, BMN requires a computerized information system design. System analysis methods uses Object Oriented Analysis and Design (OOAD), and Unified Modelling Language (UML).

## 1. Introduction

Assets, goods, or objects are things that can be owned and that have economic value, commercial value or exchange value owned or used by a business entity, institution or individual [1]. Physically, the assets purchased need to be managed better, so that adequate administrative tools are needed so that the assets purchased are maintained and can be controlled [1].

Universities cannot be separated from the existence of assets owned, by seeing so many assets and development opportunities, there are often mistakes in planning, procurement, and inventory of data relating to assets [7]. The application of information technology is a concrete step that can be taken in supporting the asset management process. So that in every process of asset management can be done effectively and efficiently [4].

College of Tourism (STP) National Hotel Institute (NHI) Bandung is a College that organizes professional education programs in the field of tourism. In carrying out its business processes, STP involves supporting assets owned by the State. There is one part that has a special task in managing assets in STP, namely the BMN (State Owned Property) section. If seen from the organizational structure of the BMN under the Office of the Second Assistant Chairperson and the Head of the General Administration Section. Where BMN has the duty as an Implementer and responsible for the maintenance and supervision of State assets [6].

In carrying out the asset management process, until now the BMN is still managing manually. Where in the process of registration, request, acceptance, and maintenance of goods still use written records in the paper, as well as the process of making reports still using Microsoft Excel applications taken from the data written in the paper. Therefore, when there is an annual examination of the State related to asset management, BMN officers always have difficulty in making

accountability reports. This is because the data written on paper is often damaged or even lost. So that BMN requires a considerable amount of time in making reports related to asset management.

From these problems, BMN requires a computerized information system design as a tool in the asset management process from the registration, requesting, receiving, and maintaining goods. The results of this study are to design an asset management information system in the form of desktop-based application design. So that it can be used as a reference in developing and implementing it into the application. With the application, it can facilitate BMN in making reporting related to assert control and management.

## 2. Method

In this study, a software development will be carried out. For this reason, a development approach and system are needed. The method used in this research is object-oriented method. The system development method used in this study is RUP (Rational Unified Process). Following is the RUP architecture, which will be explained in Figure 1.

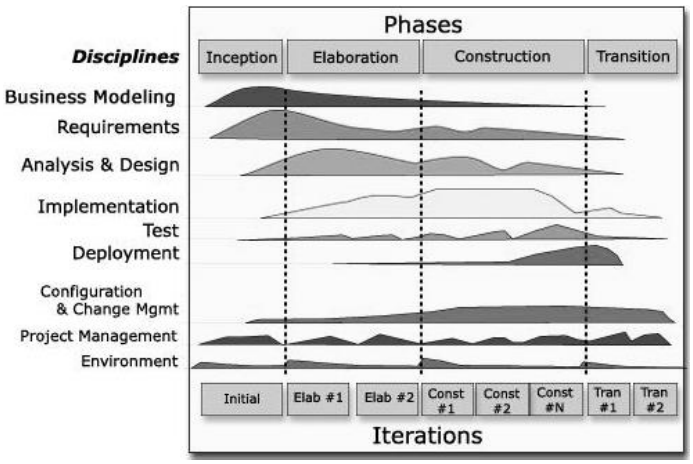


**Figure 1.** *The Architecture of RUP (Rational Unified Process) [2].*

Rational Unified Process (RUP) is a software engineering method developed by collecting various best practices contained in the software development industry. The main characteristic of this method is to use a use-case driven and iterative approach to the software development cycle. The picture below shows the overall architecture that the RUP has [2].

In this case, information systems will play an important role in supporting asset management. It can be concluded that the performance of physical asset management can be measured through planning, acquisition, operation, maintenance and disposal [8].

## 3. Results and Discussion

### *3.1. Evaluation of the Running System*

Judging from the procedure currently running on the Asset Management Information System at the Sekolah Tinggi Pariwisata NHI the process is quite good, it is just that there are a few things that are lacking in the system. System evaluations that are running will be explained in Table 1.

**Table 1.** Evaluation of ongoing asset management information systems

| A | Problem | Solution |
|---|---|---|
| 1 | The absence of a computerized information system that can help State-Owned Agency (BMN) officers, which can lead to errors in asset data management. | Make the application of information systems in order to minimize errors in recording. |
| 2 | Difficulty in Controlling Assets due to unorganized equipment / goods layout. | Building an asset-based asset management information system, BMNs can check and track asset conditions more easily. |
| 3 | The absence of an asset management information system, which causes the period of periodic asset report creation. | Asset management information system supports the process of recording and preparing reports quickly and precisely. |
| 4 | The absence of clear data storage makes it very difficult to manage asset data. | Created an asset management information system along with a centralized database so as to facilitate the management of asset data. |

*3.2. System Design*

In the system design stage, it must be measured by the characteristics of the system itself. System quality is a desirable characteristic of Information System [10]. The indicator is used to measure the quality of the system ease of use, system flexibility, system reliability, and ease of learning, as well as the system features of intuitiveness, sophistication, flexibility, and response times [9]. Information quality is the desired characteristic of the IS output. The indicator is used to measure the quality of information accuracy, completeness, conciseness, consistency, relevance, the timeliness, amount of information, accessibility, and understandability [8].

For system design, using Object oriented Analysis design. Where the tools used are the Unified Modeling Language (UML). UML is one of the standard languages widely used in the industrial world to define requirements, make analysis and design, and describing architecture in programming object oriented. UML is a visual language for modeling and communication about a system using diagrams and texts supporters [5]. System Design is represented in two designs, namely Use Case Diagram and Interface Design.

*3.2.1. Usecase Diagram*

The following is a diagram of the Asset Management Information System diagram depicted in five main cases, namely: User Registration, Demand for goods, Handover of goods, Management of goods and report. The following is explained in Figure 2.

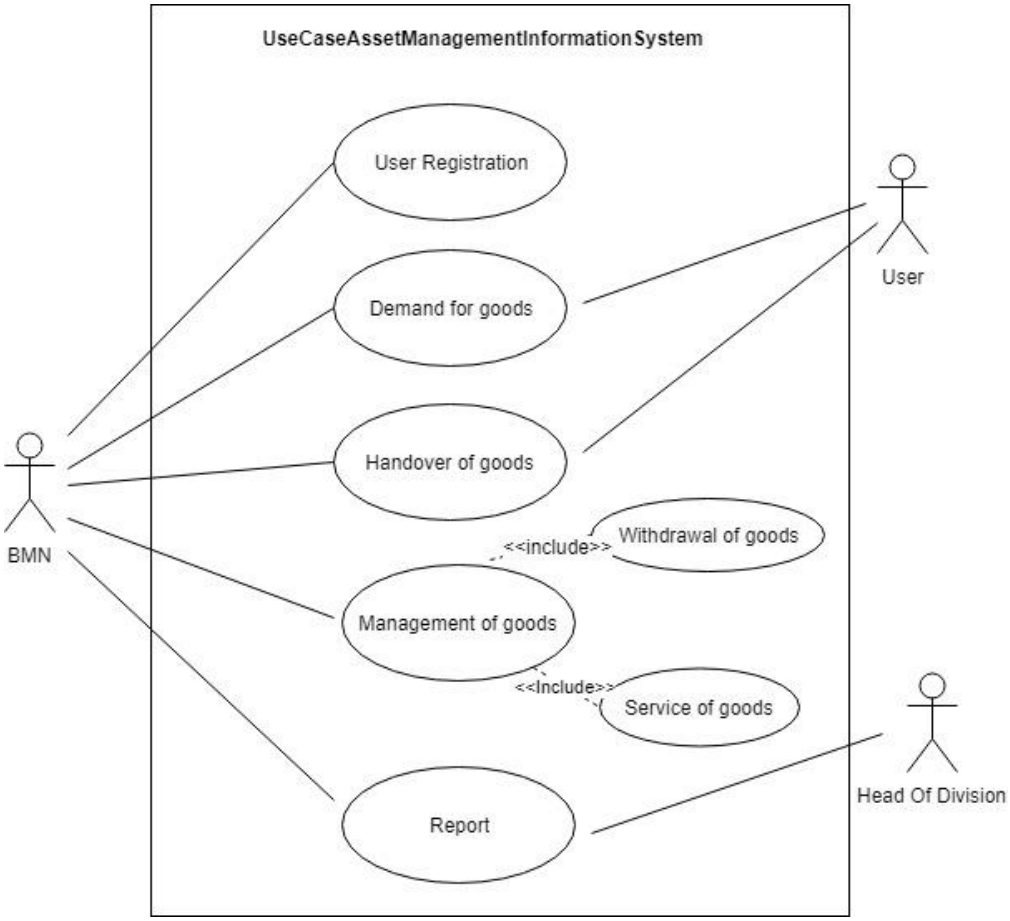


**Figure 2.** *Use-Case Management Asset Information System Diagram*

Use case or use case diagram is a model for information system behavior made. The use case describes an interaction between one or more actors with the information system that will be created [3].

From the use-case diagram above, it can be seen that there are 3 actors who will interact with the system, namely: BMN, User and Division Head. BMN functions as a system administrator who is able to manage all asset management activities. While users are staff employees who are in each section who will manage assets and receive asset. The head of the division only acts as the recipient of reports from each activity carried out by the BMN [1].

*3.2.2.* Interface Design

The following interface design will be illustrated in the form of menu structure and application design. The following menu structure is illustrated in figure 3 and 4 (see figure 3 and 4). As well as designing applications in Figures 5, 6 and 7.

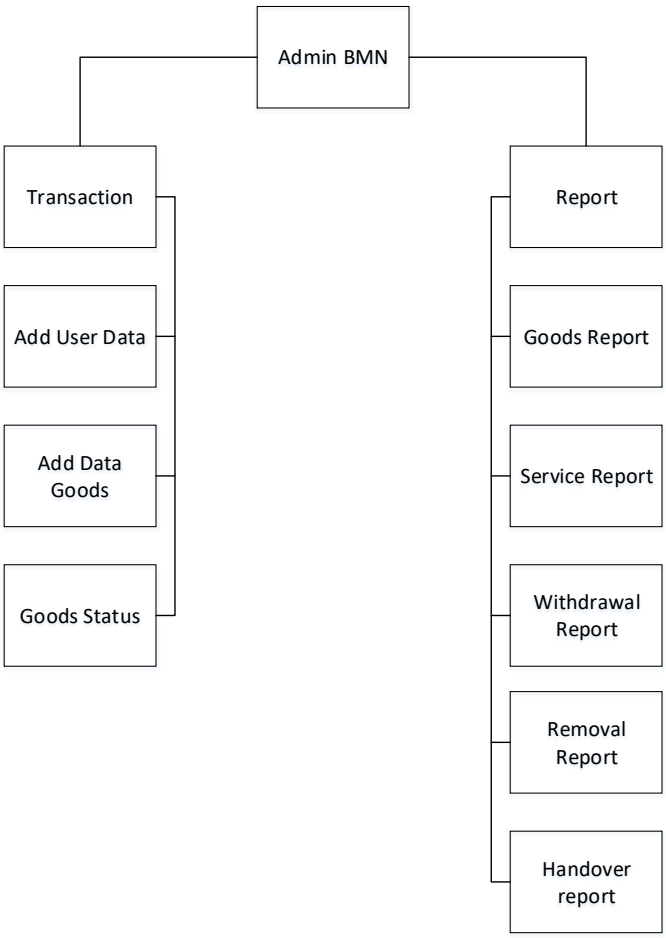


**Figure 3.** *Structure Menu for BMN.*

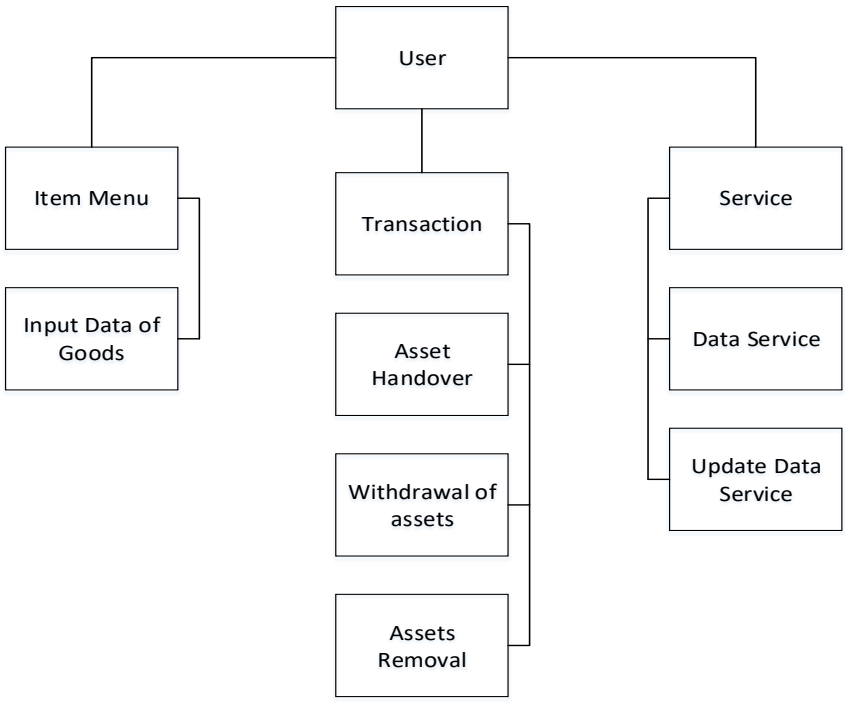


**Figure 4.***Structure Menu for User Admin*

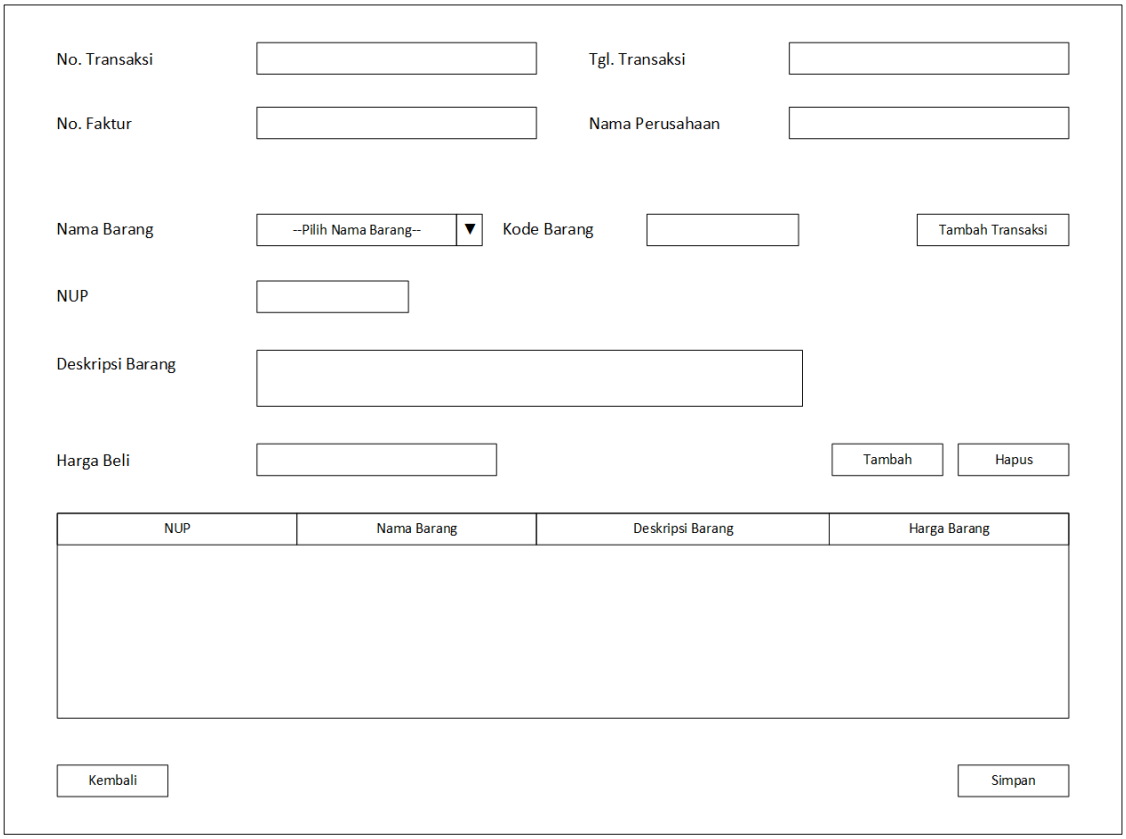


**Figure 5.** *Design of Input Data for Goods*

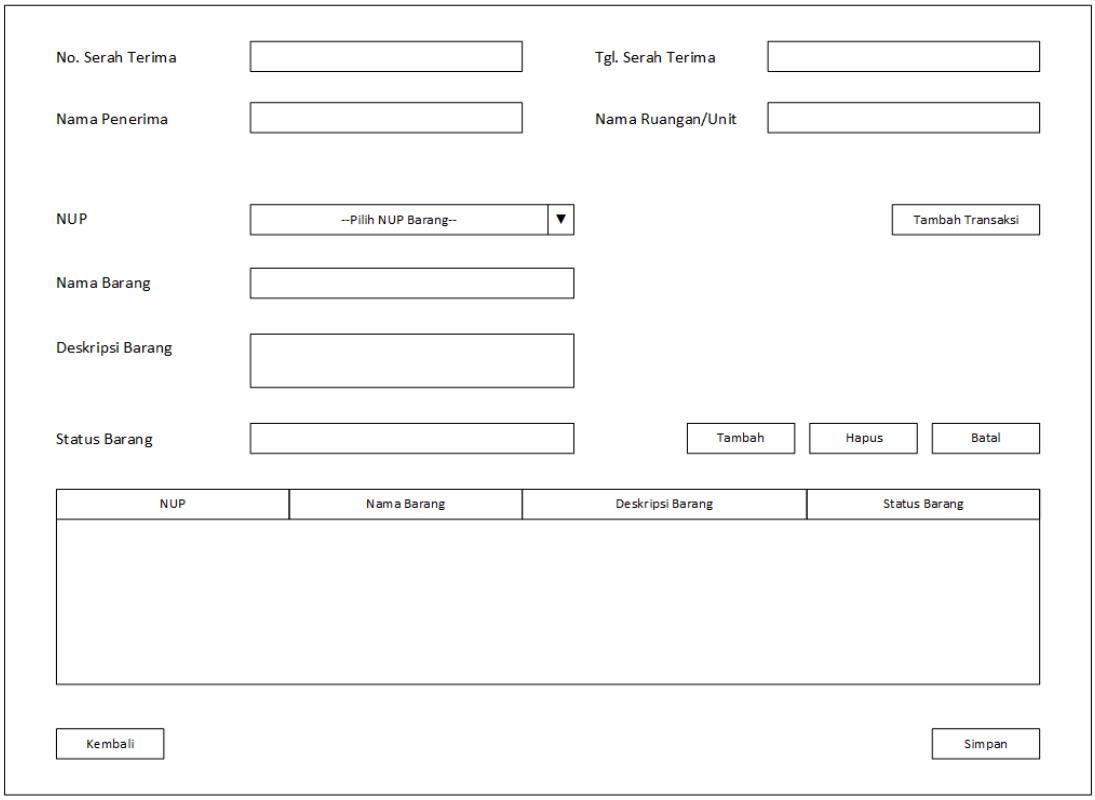


**Figure 6.** *Design of Handover of Goods*

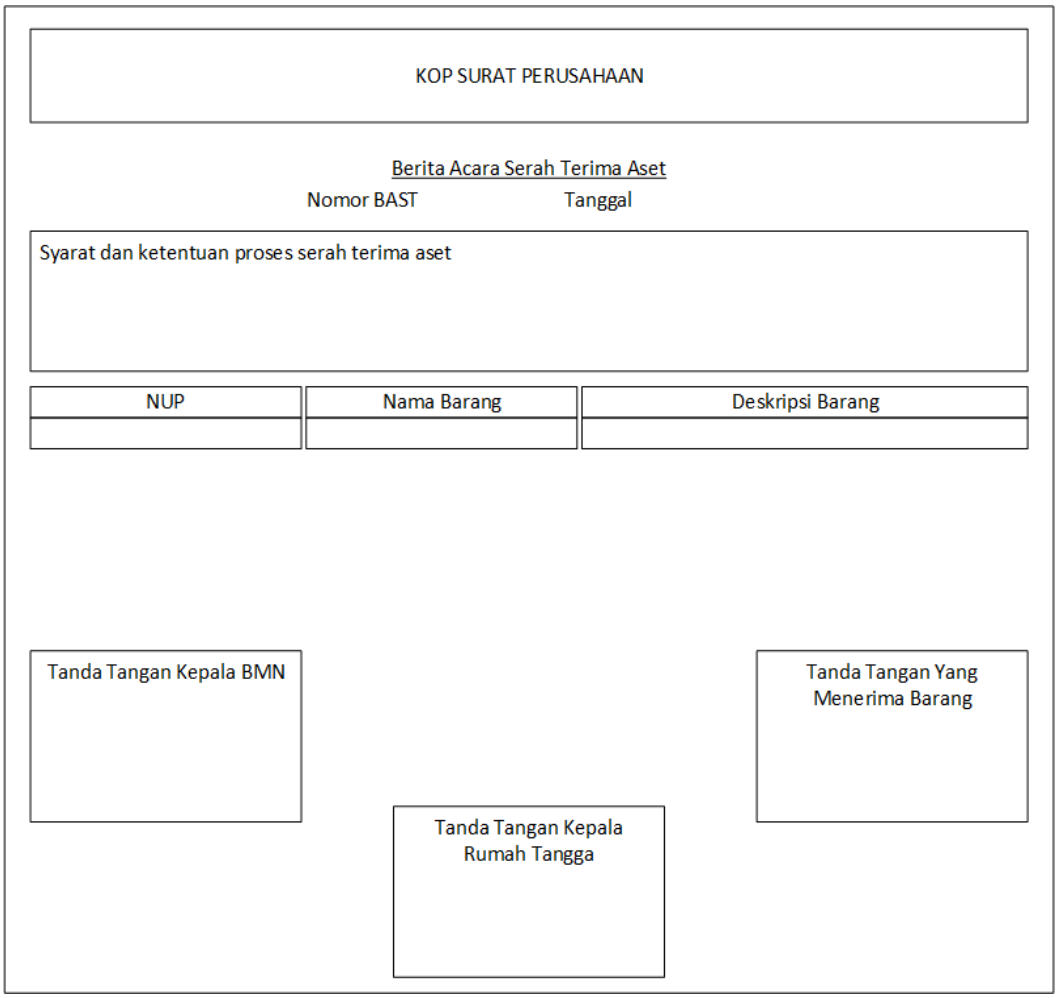


**Figure 7.** *Design of Goods Handover Output*

## 4. Conclusion

Based on this study, it can be concluded that the design of an asset management information system in Bandung can be implemented in the form of an application. So that the existence of this design can facilitate the implementer in building java-based applications. This application can facilitate business processes carried out by BMN especially in the process of registering, requesting, receiving, and maintaining goods.

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