Improving Employee Performance Measurement: An Approach for Designing New Features in the New-Siransija Application

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Abstract — *This study presents the design and development of new features in the New-Siransija application using an object-oriented system approach. The main objective is to optimize employee performance measurement and improve personnel administration within the Gorontalo Provincial Government. This study uses a qualitative methodology, adapting the first three stages of the Software Development Life Cycle (SDLC). The weakness identified in the current system lies in the assignment feature input section. To overcome this, this study proposes the integration of the upload feature for assignment documentation, which is linked to the payroll recording system. These enhancements aim to prevent potential abuse and increase accountability by requiring employees to provide proof of completed assignments. The development process involves a qualitative analysis of user needs and system requirements, followed by the design and implementation of new features. The results of the study show that the features designed in the New-Siransija application which were developed through an object-oriented system approach improve employee performance measurement and encourage accountability within the Gorontalo Provincial Government.*

Keywords: Feature design, Object oriented, UML, New-Siransija

I. INTRODUCTION

Human Resources (HR) in this case employees are one of the important factors in the operation of a company (Yoki et al., 2011). Good management of employees will have an impact on aspects of the company's success. Every company in the current era is required to show superior and optimal performance in order to be able to compete in national and international markets (Sumardi & Efendi, 2021). Departing from this, it is important that the performance process evaluation activity is carried out in order to measure the employee's performance.

The Work Performance Measurement System, also known as Siransija, is an application created by the Gorontalo Province Communication and Information Service which aims to optimize and measure and provide statistics on employee performance in Gorontalo Province. The implementation of the Siransija application in the Provincial Government of Gorontalo signifies a progressive shift towards using technology to improve personnel administration.

Measuring employee performance has traditionally been a manual and time-consuming process, prone to errors and inconsistencies. Governments streamline the performance evaluation process by adopting digital solutions such as Siransija and reduce administrative burdens.

The Siransija application offers several advantages in measuring employee performance. Firstly, it provides a centralized platform where employees can report their daily activities, ensuring transparency and accountability. This feature enables real-time insight into the tasks and responsibilities performed by employees. It promotes a culture of transparency and encourages employees to be actively involved in their work.

The ability to enter performance goals monthly and annually allows for a structured and measurable approach to evaluating employee contributions. By setting clear goals, employees can align their efforts with organizational goals and track their progress over time. These regular evaluations based on performance goals facilitate meaningful feedback discussions between employees and supervisors, enabling constructive dialogue for performance improvement.

The Siransija application serves as a valuable tool for career development and advancement within the Gorontalo Provincial Government. Accurate employee performance measurement provides a solid basis for making the right decisions regarding promotions and assignments. By objectively assessing performance, the government can ensure that individuals are recognized and rewarded based on their services and contributions.

The Provincial Government of Gorontalo has a personnel information system called New-Siransija which manages personnel data within the provincial government. However, this system does not yet have sufficient features to measure employee performance effectively and efficiently. Therefore, it is necessary to design feature development in the New-Siransija application to measure employee performance achievements using an object-oriented system approach. This approach makes it possible to separate the various features and functionality in the system into well-organized objects so that they can be carried out in a more structured and effective manner.

II. RESEARCH METHODS

This study uses a qualitative method with a three-stage approach in SDLC, namely:
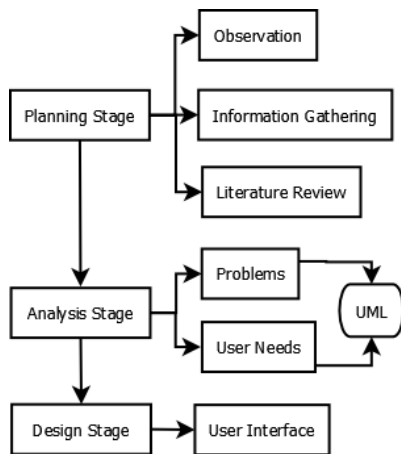
Figure 1. The stages used

1. Planning Stage:
   - Observation: The observation phase is used to collect data by directly observing and documenting existing workflows and processes related to measuring employee performance within the Provincial Government of Gorontalo.
   - Information Gathering: interviews, surveys and focus groups can be used to gather information and gather insights from stakeholders.
   - Literature Review: This stage usually involves gathering information from existing studies, academic papers, and publications that are relevant to the research topic.

2. Analysis Stage:
   This stage includes analyzing the data collected during the planning stage, such as identifying problems related to the Siransija application and understanding the needs, expectations and preferences of Siransija application users. UML will be used at this stage.

3. Design Stage:
   This stage includes designing the flow and structure of new features in the Siransija application and then representing them visually through user interface design.

III. RESULTS AND ANALYSIS

Based on the findings from observations and interviews, potential areas have been identified for feature development on the New-Siransija website. This study focuses on improving the assignment features used by ASN when carrying out service assignments outside the region or service. The goal is to integrate this feature with the payroll recording system, where each assignment will have an impact on the amount of salary received by ASN. However, a weakness has been identified in the feature input section. Currently, the system does not require ASN to provide reports or documentation of any kind as proof of task completion. As a result, this loophole allows some ASNs to potentially manipulate the system by falsifying activities to exploit the payroll recording system on the Baru-Siransija Website.

In order to effectively address the identified weaknesses, the proposed development involves adding an upload feature specifically designed for sending proof of assignment documents. This new feature will be seamlessly integrated with the task presence feature. At each attendance entry, the system will automatically ask ASN to make and submit reports or documentation related to tasks that have been completed. This submitted document will then undergo validation by the admin or user supervisor to ensure its authenticity and accuracy.

By implementing the proof of assignment document upload feature, the New-Siransija website can significantly mitigate the potential for system abuse and manipulation. It establishes a more robust and reliable process for tracking and verifying completion of authorized assignments. Integration of document validation by authorized personnel adds an additional layer of supervision and ensures that reports or documentation submitted are genuine and reflect the actual activities carried out during the assignment.

This proposed development addresses the identified weaknesses and strengthens the integrity and accountability of the assignment feature in the New-Siransija website. This promotes transparency, reduces the potential for fraudulent activity, and increases the accuracy of salary calculations based on authenticated assignment attendance and proper documentation. In addition, the system analysis process, utilizing an object-oriented analysis approach and UML diagrams, also ensures that the system is designed to effectively meet users' needs.

The system analysis process aims to determine what actions the system should take, identify the intended users, determine where and when the system will be used. To achieve this, the current systems analysis activity adopts an object-oriented analysis approach, mainly focusing on understanding the existing system functionality. The results of the analysis will be documented and visualized using the Unified Modeling Language (UML), using Use Case Diagrams, Activity Diagrams, and Class Diagrams. These diagrams were chosen to represent the designed features and facilitate user understanding accurately.

By following the system analysis process, the team aims to understand user requirements and align system functionality comprehensively. This involves studying the existing operating system, identifying its strengths and weaknesses, and determining users' specific needs and expectations. The object-oriented analysis approach enables a structured examination of system components, interactions, and behavior, enabling a thorough understanding of the underlying functionality.

To present the findings of the analysis, UML diagrams are used. Use Case Diagram describes the system's functionality from the user's perspective, depicting various interactions between actors (users) and the system itself. The Activity Chart visually represents the workflow of the system, showing the sequence of activities and decision points. Class Diagrams, on the other hand, display the structure of the system by illustrating the relationships and attributes of the various classes or objects in the system.
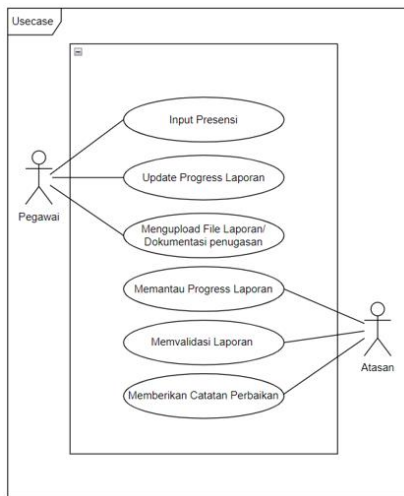
Use case charts

Figure 2. The relationship between employees and superiors for the designed features

Use case diagrams describe the actors and the relationship with their respective functions. In the assignment feature to be designed, there are 2 actors: employees and superiors.

Activity Charts

Activity diagrams describe the various workflows in the designed system, how each flow begins, the decisions that may occur, and how they end. The activity diagram in this study can be seen in the following figure:
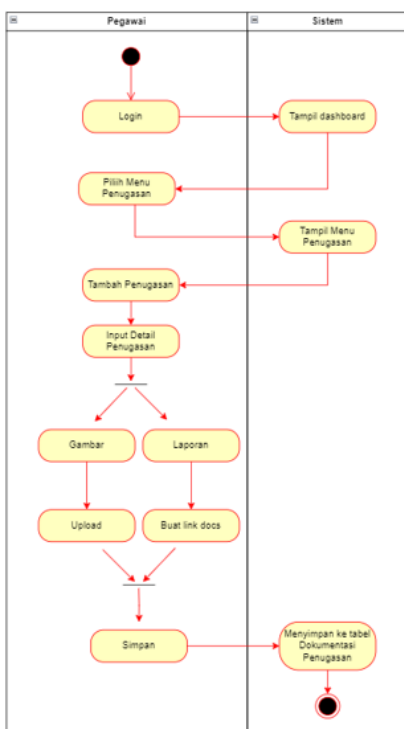

Figure 3. Absentee activity diagram

The New-Siransija system empowers employees with a simplified process for logging in and accessing the assignment menu. With a simple login, employees gain access to a variety of task options, including the ability to select a task type, such as Photo or Report. This user-friendly interface ensures a seamless experience and facilitates efficient input of assignment details. By combining these features, the New-Siransija system promotes productivity and accountability, enabling employees to navigate and contribute to the assignment tracking process easily.
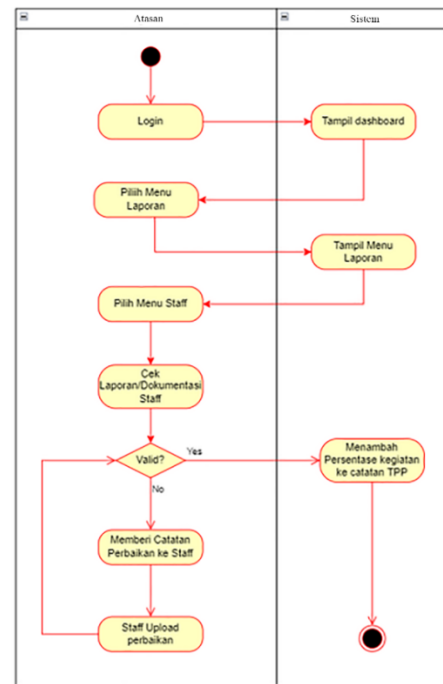

Figure 4. Report validation activity diagram
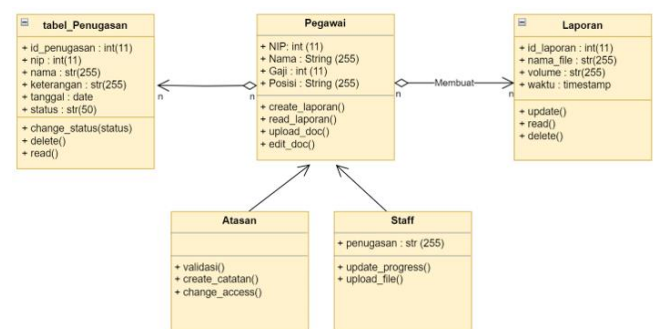
Class Charts
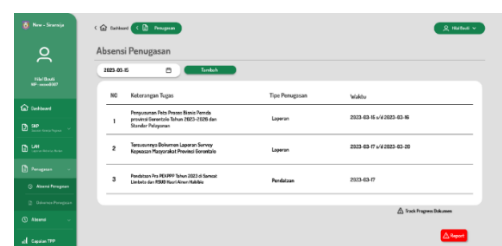

Figure 5. The stages used

User Interface Design

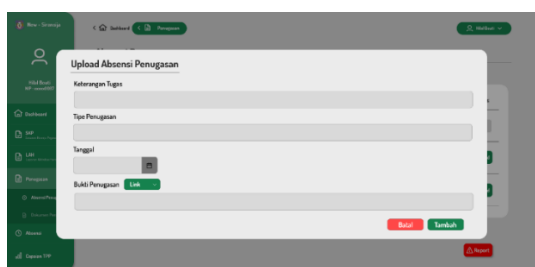

Figure 6. UI Design Menu Attendance
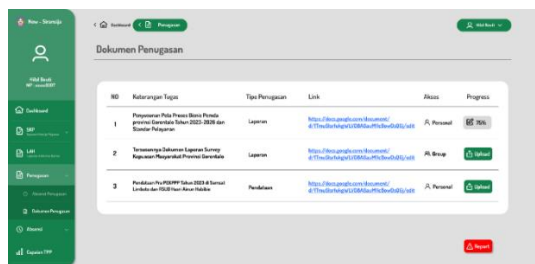
Figure 7. UI Design Attendance Form

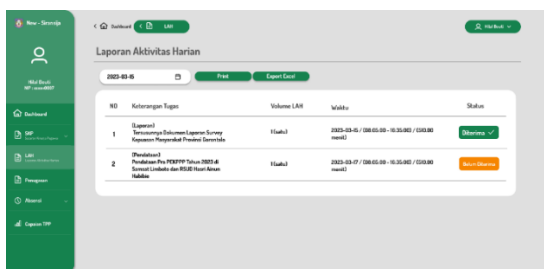Figure 8. Assignment Document Menu UI Design

Figure 9. Activity Report Menu UI design

The entire interface design presented above is a form of additional new features for Siransija as an additional indicator of measuring employee performance. The use of applications in measuring employee performance can help avoid subjective and more objective assessments of employee performance. In addition, employee performance measurement applications can be used as a tool to identify individual training and development needs. The development of features in the Siransija application is based on the many companies that have developed employee performance measurement applications and have positively impacted these companies. First (Zikri et al., 2022) developing the SI-BOOK website application for monitoring and evaluating employee performance which adds the Evaluation feature which has been tested and implemented at BPRRD Jambi city successfully and received feedback or input during the development of the application. (Rifa'i, 2021) developing a teacher performance management application, namely a web-based performance reporting system showing the results of the WEB-based employee performance reporting system application in order to make it easier for employees in the performance reporting process. Next (Sikumbang et al., 2020) Designing an employee presence application utilizing Android-based fingerprint and GPS technology aims to measure employee

disciplinary performance. Through this application, it is hoped that each employee will find it easier to take attendance both while in the office and outside the office so that monitoring and evaluating employee performance will accumulate every day. Furthermore, similar research was also carried out by (Purba et al., 2022) developed a website-based employee performance appraisal system at SDIT Inasani Semaranga, the results showed that the application built was able to facilitate employees and leaders in monitoring performance, then all the features were successfully implemented and received positive feedback from employees.But contradictory to the research conducted by (Kinasih, 2021) developing an employee performance management information system called the Modena Strategy System at the MODENA company still has many shortcomings in its development where some menus experience errors making some employees not understand their use.

Based on the previous discussions, it shows that performance measurement through an application or a system can provide benefits in increasing efficiency, transparency, objectivity and employee development. Even though there are still some deficiencies in its development, this needs to be overcome and becomes an opportunity for new discoveries in subsequent research studies.

Likewise with the New-Siranja application which was developed with the aim of improving employee performance measurement through the addition of new features. Of course, it is hoped that it will be able to provide great benefits to the Gorontalo Province Communication and Information Service.

IV. CONCLUSION

In conclusion, the development of the New-Siransija application with an object-oriented system approach, focusing on assignment features and integrating it with the payroll recording system, is an important step in optimizing employee performance measurement and improving personnel administration in the Gorontalo Provincial Government. By addressing identified weaknesses in the current system and introducing new functionality, such as an upload feature for assignment documentation, the proposed development promotes transparency, reduces the potential for fraudulent activity, and strengthens system integrity and accountability.

The system analysis process, carried out using an object-oriented analysis approach and visualized using UML diagrams, ensures a comprehensive understanding of user requirements and facilitates effective communication of system functionality. This systematic approach enables the identification of problems, user needs, and the design of appropriate features to meet those needs.

Implementation of the proposed development and utilization of an object-oriented system approach will significantly increase the efficiency and effectiveness of

measuring employee performance within the Gorontalo Provincial Government. This will provide accurate and reliable data on employee contributions, facilitate decision-making processes regarding promotions, assignments, and career development, and ultimately improve overall personnel administration.

THANK-YOU NOTE

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