

# Analysis and Design of Assessment and Monitoring System Web Based

Syukri Nazar

Faculty of Computer Science, Mercu Buana University, Indonesia

Email address: syukri.nazar@mercubuana.ac.id

**Abstract**— School is one place to shape student morals into a better person. Student moral evaluation system is a system used to assist schools in collecting data on violations committed by students, with this system the school can foster or help students who are not disciplined. The purpose of this study is to help both schools and parents to monitor student discipline while at school. In designing this application the researchers used the prototype method as a software development methodology. The results of the development of this system are expected to provide input to schools to implement the system, in order to provide convenience to schools and parents of students in monitoring violations committed by students.

**Keywords**— Assesment, analysis, design, prototype, monitoring.

## I. INTRODUCTION

The role of technology is needed in various fields. In entering the current era of globalization, educational institutions have the responsibility to prepare and produce human resources who are able to face all the challenges of change that are around them. With this assessment and monitoring system, it helps schools in determining moral grades for students who in turn produce good morals. the problem is that many students break the rules but only take the form of a non-computerized note.

Based on the problem, the researcher will propose the title "Analysis and Design of assessment and Monitoring System Web Based". This design is expected to help schools improve the quality of students 'parents' trust in the school.

## II. PLATFORM THEORY

### A. Definition of System

According to E. Zaenal Abidin (2014: 1) the system is a combination of a series of interdependent variables with each other, which as a whole has a particular purpose / gives a certain result. Or System is a set of Elements both Physical (Money, Human, Product, Asset) and Concept (Information) that work together to achieve the goal. Examples: Respiratory system, system of the universe, economic system, information system and others.

### B. Definition of Information System

According to Rohmat Taufiq (2013: 17) System is a collection of sub-sub systems that are connected and collaborate for a particular purpose. The information is data that is processed so as to have added value and more useful for users. Information System is a merger of the System and Information, thus can be defined that the information system is a collection of sub-sub systems that are integrated and

collaborate to solve a particular problem by processing the data with a tool called computer so that has added value and useful for users.

### C. System Development Life Cycle (SDLC)

System Development Life Cycle (SDLC) is a process of how an information system can support business needs by designing, creating and submitting the results to users (Alan Dennis, 2013: 2).

### D. Prototype Method

In the prototype method, the process of analysis, design, and implementation is done simultaneously, and the three phases are repeated over and over until the system is completed. With this method the basic analysis and design is done, and the workmanship of the system starts from a prototype system, which is a program showing a small feature of the program to be built. The first prototype is usually the main part of the system to be used. The result of this prototype is shown to the user or sponsor of the project, which will comment. This comment will be the material for analyzing, designing, and re-implementing the next prototype. This process continues to recur in the cycle, until the user and project sponsor agree that the prototype results already provide functionality that is ready to be applied within the company or organization. (Alan Dennis 2015: 12).

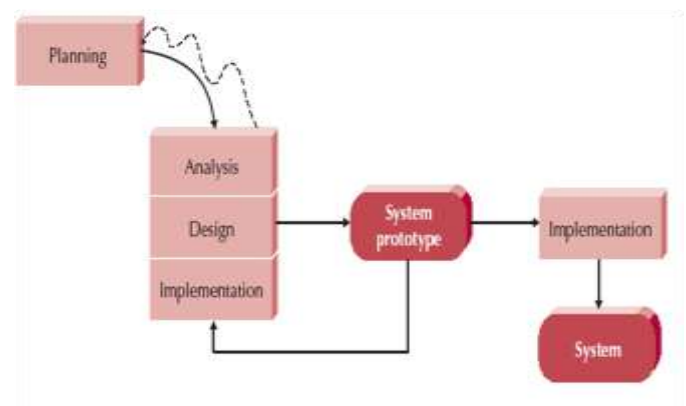


Figure 1 Prototype Method (Alan Dennis, 2015:10).

### E. Unified Modeling Language (UML)

Unified Modeling Language, or UML, is a standard set of diagramming techniques that provides graphical representation to illustrate models in a system development project from system development analysis through implementation.

Currently most object-oriented system analysis and design approaches use UML to describe a developing system. UML uses a diverse set of diagrams to illustrate the views of a growing system (Alan Denis, 2015: 34).

In the SDLC prototype method, UML is applied to the analysis phase and design that describes the business process and user requirement of the data collection that will be used as a guide in building the system.

**F. Definition of Assessment and Monitoring**

Evaluation is a systemic process to determine the level of success of a program. In the field of education, Ralph Tyler (1950) said that evaluation is a process of collecting data to determine the extent, in what terms, and the part where educational goals have been achieved. The evaluation process is not just to measure the extent to which objectives are achieved, but is used to make decisions.

Evaluation requires a study or research design, and sometimes requires a control group or comparison group. Evaluation involves measurement over time.

Monitoring is a routine process of collecting data and measuring progress towards program objectives or monitoring changes that focus on processes and outputs. Monitoring involves calculating what we do and observing the quality of the services we provide.

**III. ANALYSIS AND DESIGN**

**A. Use Case Diagram**

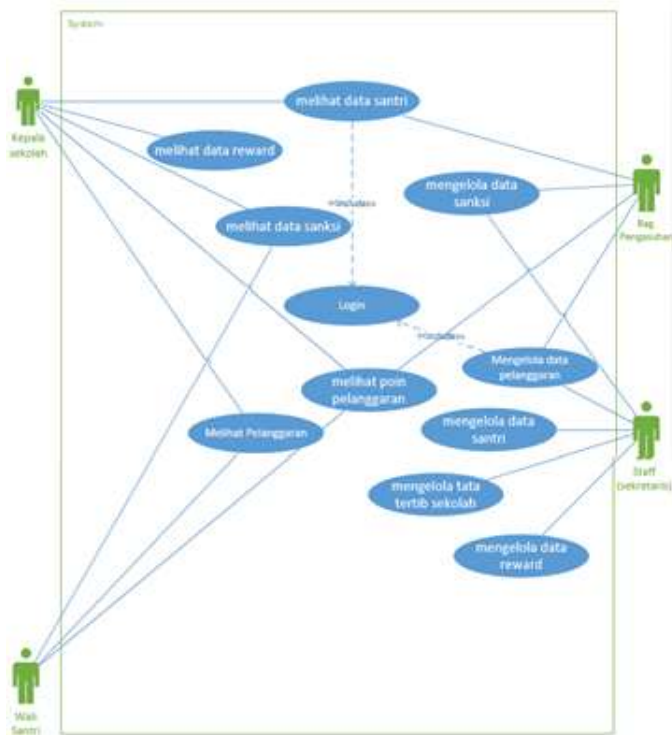


Figure 1 Use Case Diagram

The use case describes the definition of function that is in the use case assessment and monitoring system.

**B. Activity Diagram**

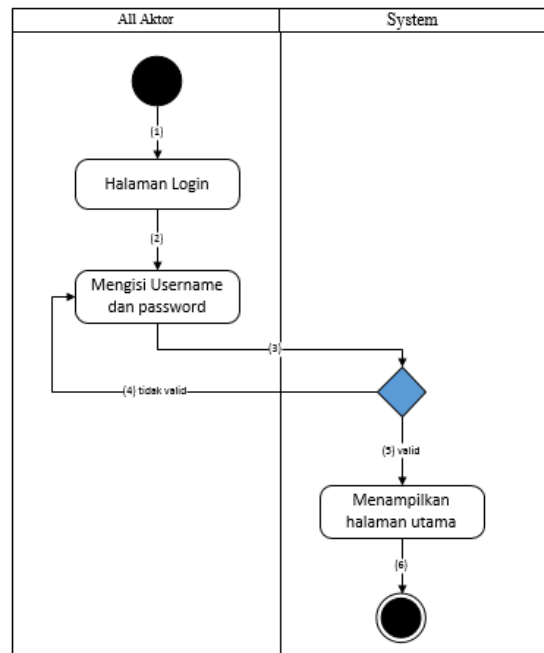


Figure 2 Activity Diagram Login

**C. Sequence Diagram**

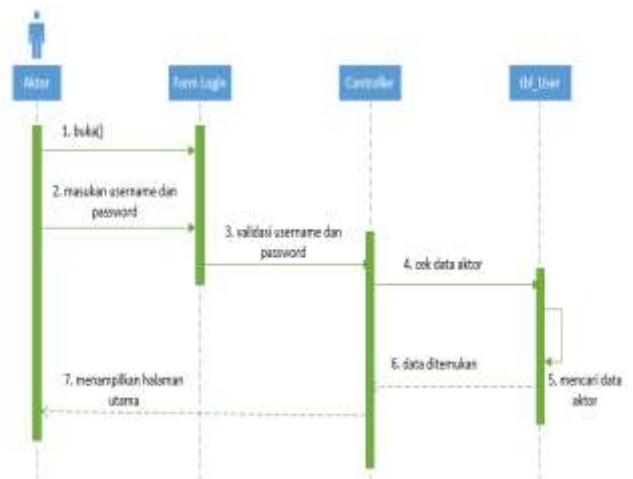


Figure 3 Sequence Diagram Login

**D. Class Diagram**

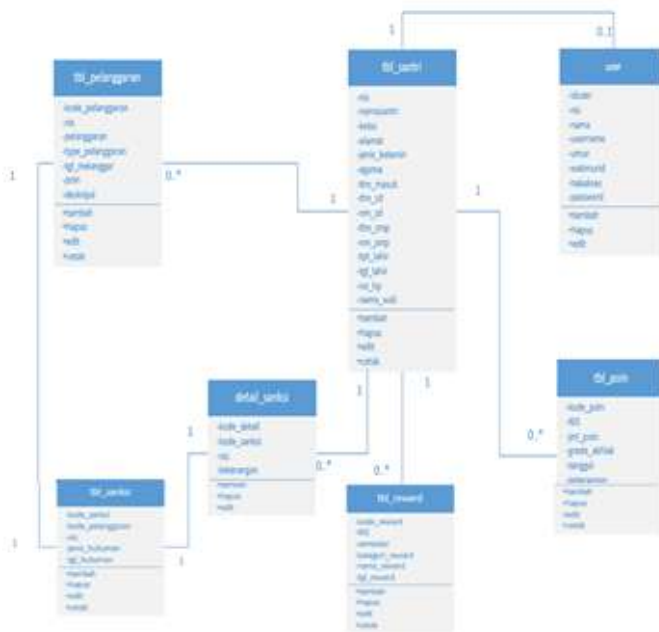


Figure 4 Class Diagram

E. User Interface

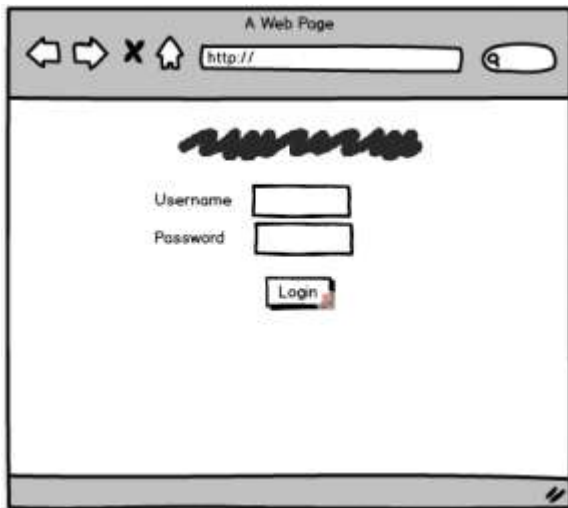


Figure 5 Home Page Design

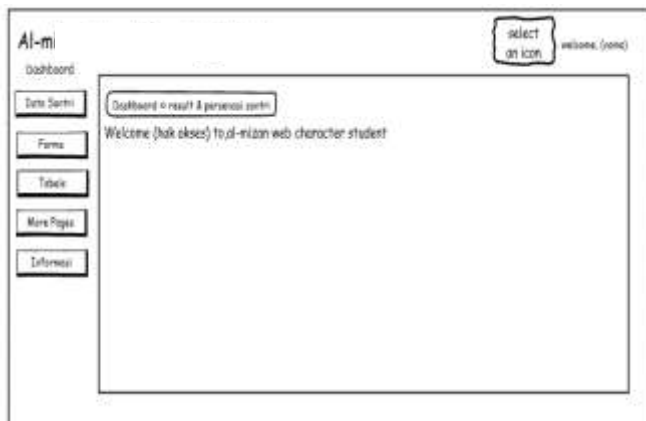


Figure 6 Admin Page Design

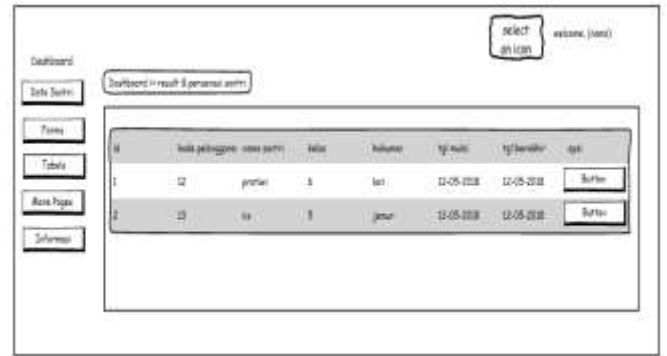


Figure 7 Assesment Page Design

IV. CONCLUSIONS

The conclusions of this study are as follows:

1. This web-based evaluation and monitoring system can manage data on violations that serve as a reference for assessing whether students have good morals while at school.
2. The website can print reports such as violation reports, sanction reports, and student point reports that make it easy for parents to monitor their children while at school.

REFERENCES

- [1] Abidin, Zainal. 2014. *Analisa Sistem Informasi*. Sukabumi : Al Fath Zumar.
- [2] Taufiq, Rohmat. 2013. *Sistem Informasi Manajemen; Konsep Dasar, Analisis dan Metode Pengembangan*. Yogyakarta: Graha Ilmu.
- [3] Dennis, Alan. 2015. *System Analysis and Design with UML 5th Edition*. United States of America: John Wiley and Sons.
- [4] Hutahaean, Japerson. 2015. *Konsep Sistem Informasi*. Yogyakarta: DeePublish.
- [5] [Nixon, Robin. 2014. *Learn PHP, MySQL, JavaScript, CSS & HTML5*. United States of America: O'REILLY.
- [6] [Mariadi, Andi (26 Maret 2016) . Pengertian *Sublime Text Editor*. Diperoleh 17 Juli 2019, dari <http://www.pemulabelajar.com/2016/03/pengertian-sublime-text-editor.html>
- [7] Ranggadara, Indra, and S. Y. Triana. "Analysis Opportunities for fishing location with using GIS applications around the southern region sea of thousand island." *Mercubuana University. Jakarta.[Google Scholar] (2018)*.
- [8] Sari, Yunita Sartika, and Nia Rahma Kurnianda. "Prototype Of Knowledge Management System (KMS) E-Procurement Web-Based: Case Study At PT. Sigma Pro 77." *International Research Journal of Computer Science* 5: 331-341.