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E-Report Engineering System for Senior High School in Lampung

1st Melda Agarina
Department of Computer Science
Institute of Informatics and Business Darmajaya
Bandar Lampung, Indonesia
agharina@darmajaya.ac.id

2nd Sutedi*
Department of Computer Science
Institute of Informatics and Business Darmajaya
Bandar Lampung, Indonesia
sutedi@darmajaya.ac.id

3rd Arman Suryadi Karim
Department of Computer Science
Institute of Informatics and Business Darmajaya
Bandar Lampung, Indonesia
armansuryadi@darmajaya.ac.id

4th Rini Nurlistiani
Department of Economic Business
Institute of Informatics and Business Darmajaya
Bandar Lampung, Indonesia
rininurlistiani@darmajaya.ac.id

***Abstract*—**one of the most important parts of a school is the students and their grades. Not infrequently, the storage and reporting of student grades is recorded and stored conventionally. Therefore, it takes a long time for the process. While the results of value processing can only be seen at the end of the semester, both by students and parents of students only in the form of report cards called report cards. Therefore, the school still has difficulties in processing grades, both daily grades and final grades, although the processing has been arranged but is still not optimal. The system that was built aims to simplify the process of assessing and absenteeism students using a web-based system. The method used, namely RUP, is one of the many processes contained in the Rational Process Library, which provides the best simulation for the development or needs of the project. The system is designed with UML diagrams and is built using the PHP programming language and The Mysql database. The results of the research are mobile web-based applications built online by producing features such as data processing of teachers, students, curriculum, courses, materials, assessments, attendance and report recaps. Based on the grades processed by the teacher, they can then produce reports in the form of assessment reports based on materials and reports on overall student progress that can be accessed online by parents.

Keywords— Design, Information System, E-Reporting, School.

I. INTRODUCTION

One of the most important parts of a school is the students and their grades. Not infrequently the storage and reporting of student grades is recorded and stored conventionally. So it takes a long time to process. While the results of the processing of grades can only be seen at the end of the semester, both by students and parents of students only in the form of a report called a report card. Therefore, the school still has difficulties in processing grades, both daily grades and final grades, although the processing has been organized but is still not optimal. In addition, this method is also prone to various kinds of errors, both technical errors and human errors. This error can cause lost or corrupted files. And furthermore it will affect the student assessment process later.

Some of the literature reviews are as follows:

1. Cloud computing-based school financial service information system designyear 2018 conducted by Melda Agarina, Sutedi and Arman Suryadi [1].
2. Application of the Rational Unified Process Method in the Knowloedge Management System to Support the High School Learning Processconducted by Awaludin, M., & Raveena, R. R in 2021 [2].
3. Digital Learning Media for High School/K Students in Bandar Lampungyear 2022 conducted by Melda Agarina, Sutedi, Arman Suryadi, Indra [3].
4. E-Reporting System Design Using ReactJS and Firebaseconducted by Panjaitan, J., & Pakpahan, A. F in 2019 [4].

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Problems that arise from several existing schools include:

This information system handles storing and reporting daily grades as well as final grades, student attendance, and reporting to convey student understanding of the subject matter. This information system can only be accessed by admins, principals, teachers, students and parents of students in the school. Provide information to parents regarding attendance and grades both daily grades and final grades of the subjects the students participated in while at school.

This information system can provide information about the school Based on these

problems, the research team made E-Report engineering system for Senior High School in Lampung

With this new system, it can help all parties in the school in storing and reporting data on grades and student absenteeism, becoming a place for reporting the progress of understanding student subject matter. As well as displaying information related to schools in Lampung Province.

II. RELATED WORK

2.1 CodeIgniter

CodeIgniteris a Framework for the PHP programming language, which was created by Rick Ellis in 2006. CodeIgniter has many features that help PHP developers to create applications easily and quickly and has a flexible nature that can develop on web, desktop and mobile devices.

2.2 Web Based

Web Basedis a web-based application that requires a web server and browser to run. Concluding that the website can be accessed easily through a computer or smartphone device that is connected to the internet network with unlimited space and time

2.3. Reporting

Reportingis a management function in the form of delivering developments or results of activities or providing information regarding all matters relating to the duties and functions to higher officials. Either orally or in writing so that in receiving the report you can get an idea of how the tasks are carried out from the person who gave the report (Oktavia, F., & Hendriyani, Y. 2020) Nuwo, W.R Makan Pindang Kepala Simba Restu Murni, Dapoer Mbok Rondo, Sambal Seruit Buk Lin. W.R Pindang Uwo, dan W.R Pindang Ika.

III. PROPOSED SCHEME

3.1. RUP Model

The method used to develop this system is the RUP method. This method has several stages starting from Inception, Elaboration, Construction, Transition Inception phase, this stage the research team understands the scope, and analyzes the needs of the system flow that runs in several schools in Bandar Lampung. Identification of problems obtained that do not have a reporting information system, from that problem, the advice given is to make a Reporting Information System Design, namely.

Elaboration (Planning) Phase

This stage focuses on the design of the system architecture (design). The system is designed based on the results in the inception phase (business processes.) The data obtained will be analyzed first and then continued with the system design process. It aims to choose between needs that will be created and those that are not. The output of this stage is a prototype system according to the analysis of user needs.

Construction Phase (construction)

This stage focuses on the implementation of the design that has been made (at the elaboration stage). Implementation is done by changing the design into an information system feature (writing program code). Start testing to make sure the program code is running. At this stage there are activities carried out by researchers.

Transition (transition)

This stage focuses on the deployment or installation stage. This stage produces a product that is ready to be used by the user. The intended users are all members of the school, especially teachers, students and parents of students. This stage is also a website that has been tested and also carried out maintenance on the system.

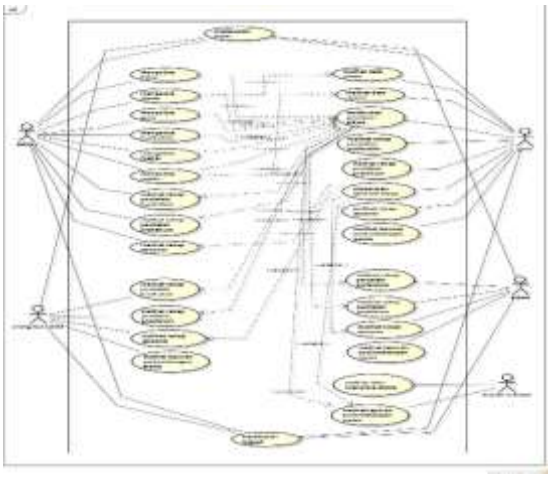

Figure 1. Activity Diagram

System Design

The design of the system that must be adapted to the needs requested using the Unified Modeling Language (UML). Simple design is a form of system depiction that is carried out to facilitate the process of making a system or application later, a simple design is carried out using a system developer tool in the form of Unified Modeling Language (Sharma, R., Srivastava, P. K., & Biswas, K. K. 2015) following is a use case diagram in Figure 3.1

Sequence Diagram

Sequence Diagram Login

The login diagram sequence is a depiction

of the system flow by sending a message on the live timeline in the admin section to the next section according to the function of the use case diagram, here is the login diagram sequence in Figure 3.2

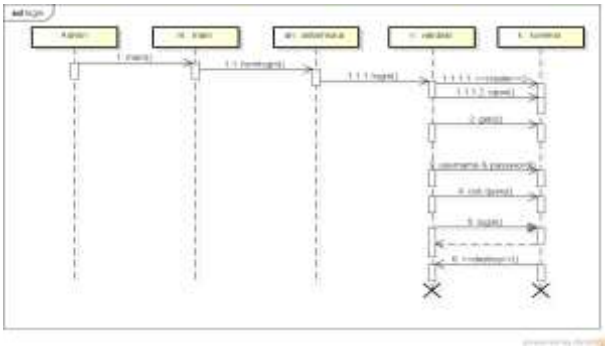

Figure 2. Sequence Login Diagram

Sequence Diagram Master Teacher

Diagram sequence is a depiction of the system flow by sending a message on the live timeline in the admin section to the next section by displaying teacher data to check the connection and succeed in the process, here is the teacher diagram sequence in Figure 3.3

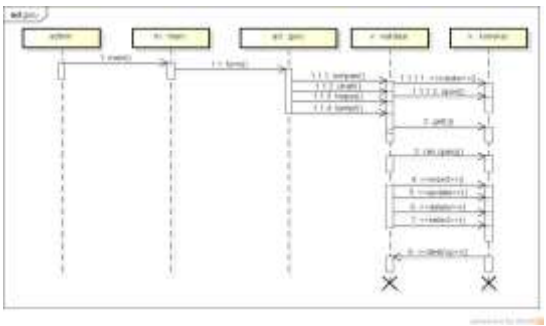

Figure 3. Sequence Teacher Diagram

Class Diagram

Class diagrams describes the structure of the system in terms of defining the classes that will be created to build the system, the following is a class diagram in Figure 4.

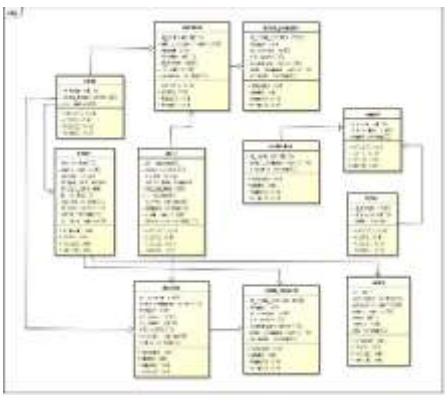

Figure 4. Class Diagram

Based on the class diagram design, there are 11 classes that are connected to each other such as student classes, teachers, classes, folders, users, attendance, attendance details, curriculum, assessment and assessment details. Each has a primary key on the initial id of each class, while for classes that are connected to each other such as the attendance class with attendance details, there is an attendance id in the detail_absensi class as a forengn key and the assessment detail_class has an assessment id as a foregn key which is connected to the assessment class.

IV. RESULT AND DISCUSSION

4.1 Login Implementation

The login implementation is a display that is used as access rights to the menu page, here is the login display in Figure 5.

Figure 5. Login Implementation

Student implementation is a display used to manage data such as adding, changing, deleting and displaying, here are student data in Figure 6.

Figure 6. Student Interface Implementation

Based on the student display, there is data input information such as nis, name, address, class, place of birth, date of birth to telephone. There is a save button to add data to the database

4.3 Class Implementation

Class implementation is a view that is used to manage data such as adding, changing, deleting and displaying, here are the classes in Figure 7.

Figure 7. Implementation of class menu display

4.4. Teacher Implementation

Teacher implementation is a display used for data such as adding, changing, deleting and displaying, here is the teacher in Figure 8.

Figure 8. Teacher Implementation

Based on the teacher's display, there is data input information such as nick, name, address, class, place of birth, date of birth, gender and telephone. There is a save button to add data to the database

Curriculum Implementation

Curriculum implementation is a display that is used to manage data such as adding, changing, deleting and displaying, here is the curriculum data in Figure 4.5

Figure 9. Curriculum Implementation

Based on the display of the curriculum, there is data input information such as the school year and curriculum. There is a save button to add data to the database

4.6 Implementation See Curriculum Assessment

Implementation of curriculum assessment view is a view used to display data, here is the curriculum assessment in Figure 10.

Figure 10. Implementation See Curriculum Assessment

Based on the view of the curriculum assessment, there is data input information such as nis, name, select curriculum, select class and select the school year. There is a view data button to display the assessment recap data

4.7 Implementation See Practicum Assessment

The implementation of the practicum assessment view is a view used to display data, here is the curriculum assessment in Figure 11.

Figure 11. Implementation See Practicum Assessment

Based on the view of the curriculum assessment, there is data input information such as nis, name, select practicum, select class and select the school year. There is a view data button to display assessment recap data

4.8 Implementation of View Attendance Data

The implementation of the attendance view is a display used to display data, here is the curriculum assessment in Figure 12.

Figure 12. Implementation of View Attendance Data

Based on the attendance recap display, there is data input information such as nis, class select name, select school year and semester. There is a view data button to display attendance recap data.

4.9 Implementation of Student Development Report

The implementation of the student progress report is a display used to print the student progress data report, here is the student progress report in Figure 13.

Figure 13. Implementation of the Student Progress Report

Based on the display of the student progress report, there is data input information such as selecting classes, selecting the school year and semester. There is a view data button to display the data

V. CONCLUSION

Based on the results of the research conducted, the following are the conclusions:
Mobile web-based applications are built online by producing features such as data processing for teachers, students, curriculum, subjects, materials, assessments, attendance and report recaps.
Based on the grades processed by the teacher, they can then produce reports in the form of assessment reports based on the material and overall student progress reports that can be accessed online by parents.
Based on student progress reports, overall student scores and details of the number of absences such as attendance, permission, illness and no information were obtained.
To overcome the difficulty of the information to be conveyed by the superiors and also the management is done online which can be accessed through the website and the internet network.
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THANK-YOU NOTE

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