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E-Learning Curriculum Thematic Rejodadi Elementary School Use Method UML-Based Hybrid

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Abstract

The Ministry of Education and Culture of the Republic of Indonesia regulates regulation to education through the determination of SNP ie National Education Standards. The curriculum used in education in Indonesia is Curriculum 2013. Thematic integrated is a Suite implementation in the learning process using Curriculum 2013. Integrated thematic learning is learning by integrating several lesson contents into a theme. Rejodadi Elementary School is one institution with moderate education development moment this is working To always increase the quality of Good activity and service. The moment This Rejodadi Elementary School currently faces the Covid-19 pandemic, where is the learning process teach done fully online or online at home? There is online application or e-learning of course become a challenge alone for SD Rejodadi which was affected plague. The PHP programming language and MYSQL database are used in building system this. Method data collection using method studies literature, observation, and interviews. Based on matters, the author wants to create and design something E-learning application about material and questions For Rejodadi Elementary School students. Study This will take the title "E-Learning Curriculum Rejodadi Elementary School Thematic Use Hybrid-Based UML Methods.

Keywords : *System Information, E-learning, UML.*

1. INTRODUCTION

Curriculum 2013 becomes the base curriculum education used since 2014 [1]. This is based on a determination the SNPs has regulated by the Ministry of Education and Culture of the Republic of Indonesia. Learning theme integrated become base learning in the 2013 curriculum. thematic integrated a meaning that is a learning process integrating teaching a number of eye lessons in One theme. In the implementation, students become pedestal majors in learning thematic. There is learning This meant no existing gap in every eye lesson. [2] . In application, The 2013 curriculum makes the teacher a facilitator so it is hoped that the teacher can provide interesting learning media. [3]

With exists very digital development significant e-learning into electronic media in the learning process between teachers and students. these two stakeholders No must be face-to-face direct during the learning process started because the existence of e-learning as intermediary learning can make change new [4]. With thereby atmosphere learning can be made interesting Possible through visualization [5]. Rejodadi Elementary School is one institution of education in the area special Yogyakarta namely Rejodadi Elementary School is an institution trying education For increase quality and quality in aspect service education. Rejodadi Elementary School Alone moment This uses a curriculum thematic, Where learning thematic is blended connecting learning a number of eye lesson use theme For give experience meaning for the student. In essence, a blended model learning is something system possible learning student, Good in a manner

individual nor group, For in a manner active seek, dig and find draft And principle scientific in a manner comprehensive, meaningful and authentic. Blended learning happens when an incident authentic or exploration theme becomes a guide For activity Study teach. By participating in a study of something topic, students learn such processes they do, and students learn topics Which different on time Which same [6].

The moment this is SD Rejodadi currently faces the Covid-19 pandemic where the learning process teaches fully online or online at home. There is online application or e-learning of course become a challenge alone for SD Rejodad which was affected plague. Rejodadi Elementary School needs to choose the available e-learning For students and teachers and ensure that That No only affordable and price competitive but also can be used For facilitating activities of teachers, students, and administrators. For use, and, which do not lose importantly, have available functions so that can support full implementation of e-learning. From the existing problem, the writer makes Study Teach an application in field technology [7].

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Based on matters, the author wants to create and design something E-learning application about material and questions For Rejodadi Elementary School students. Study This will take the title "E-Learning Curriculum Rejodadi Elementary School Thematic Use Hybrid Based UML Method ".

2. RESEARCH METHODS

2.1. Object Study

object study This is *E-Learning* Curriculum Rejodadi Elementary School thematic Use Method Hybrid-based *Unified Modeling Language (UML)*. System This is expected to help Rejodadi Elementary School to make it easy for students and teachers to Study with the use *of E-Learning* [8]. PHP Programming Language and MySQL database become Language programming used For planning e-learning systems. [9] .

2.2. Method Data Collection

Method Data collection, including :

2.2.1. Literature review

Method This is done with the method gather a number of sources related to For and Then making a material reference in the planning system. Source Can be obtained through book references, journals scientific, or a number of sources important from the appropriate internet with research this [10].

2.2.2. Observation

Something observation without asking in a manner direct. Observation has done not enough more three times; Observation First aims To build cooperation with party institution Yani SD Rejodadi that researcher will do research at the institute that offers Thematic E-Learning. Observation second researcher finds more treatments in the research process that Thematic E-Learning offered by researchers it turns out become a solution for teachers and

students because student difficulty For Study during the Covid-19 pandemic; Observation third party institution namely SD Rejodadi return give agreement For implemented research or research at the institute the with accept the offer from researcher namely Thematic E-Learning which will run or used by SD Rejodadi as application For Rejodadi Elementary School students learns.

2.2.3. Interview

Interview together with Mr. Martono head of SD Rejodadi school and Mrs. Sumiyati Margareta the operator of SD Rejodadi For do the collection of the required data in the study This

2.3. Design System

2.3.1. Use case diagrams

The design system of this e-learning consists of Use case diagrams, Activity Diagrams, and Class Diagrams [11]. Usecase Diagrams are designed to image _ For explaining the interaction of every entity that exists in the system that is built [12].

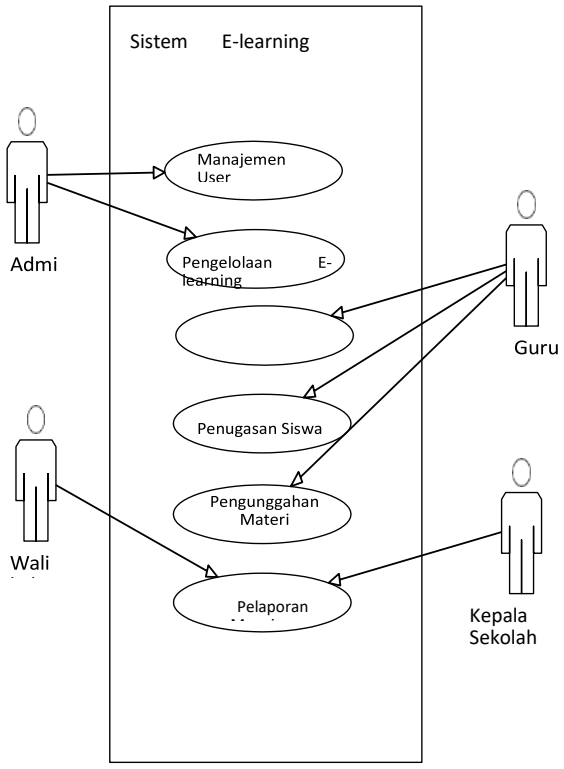
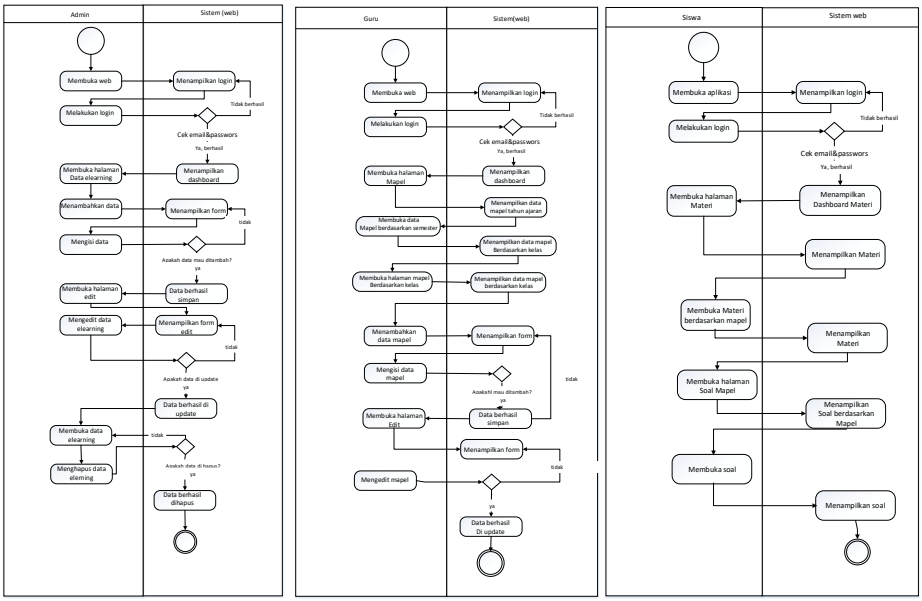


Figure 1 . Use case diagrams and Activity diagrams

2.3.2. Activity Diagrams



a. Admin chart b. Master Diagram c. Student Chart

2.3.2.1. Admin Activity diagrams

The modeling activity diagram in Figure A explains the management process SD Rojodad e-learning system carried out by the system administrator. Administrators first formerly enter the web page, then the system will display the login, and then the administrator will be logged in first formerly with enter their email address and password, if the valid email address and password are, then enter to page dashboard, but If the email address and password invalid, return to login page again For enter a valid email address and password. The system will display a dashboard page after its system administrator can add data, fill in data, open the edit data page, edit e-learning data, and open e-learning data, then the system will display page these [13].

2.3.2.2. Teacher Activity Diagrams

The activity diagram modeling in figure a explains the uploading process questions and material on the System E-learning at Rojodadi Elementary School conducted by the teacher. The teacher enters more web pages formerly Then the system will display the login then the teacher logs in first formerly with enter her email and password when the email and password are valid then will be continued to the dashboard page, will but if the email and password are invalid then will be returned Again to login page for Enter a valid email and password. The system will display a dashboard page then the teacher can add material, add questions, open the page edit material and questions, edit material and questions, then the system will display the page that has been addressed by the teacher

2.3.2.3. Student Activity Diagrams

The modeling activity diagram in Figure 4 explains the process for access theme based on class, access material as well as access questions on the System SD Rojodadi E-

learning conducted by students. Students enter a mobile page especially formerly Then the system will display the login then the admin logs in first formerly with enter their email and password when the email and password are valid they will be continued to page material, will but if the email and password are invalid then will be returned Again to login page for Enter a valid email and password. The system will display the last dashboard page student Can access material and questions on their mobile.

2.3.3. Class Diagrams

These class diagrams are a reference For implementing an in-built system using Language programming [14].

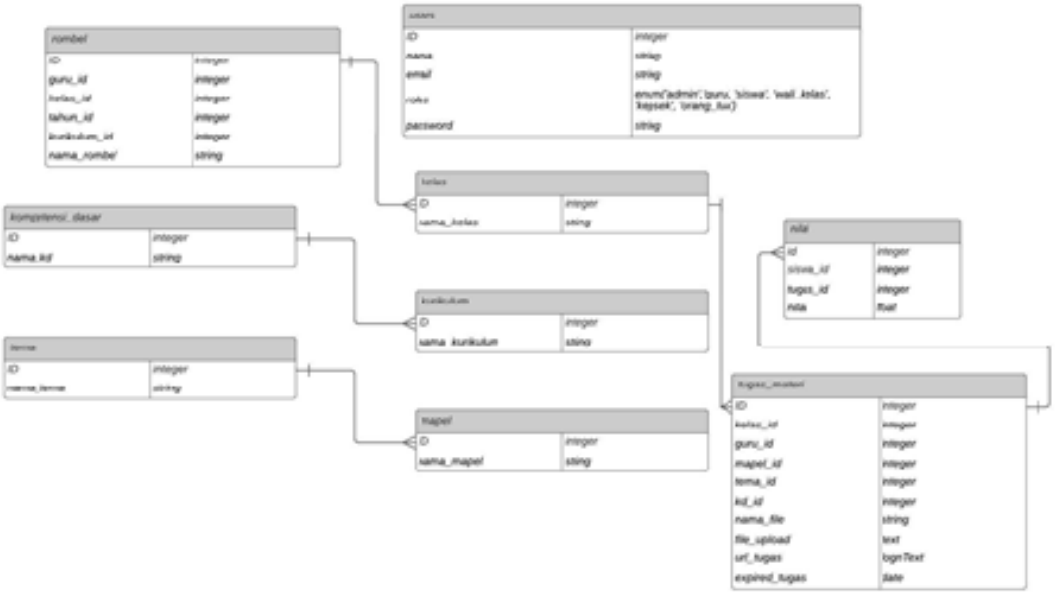


Figure 5. *Class* Diagrams

3. RESULTS AND DISCUSSION

3.1. Results

This page contains group data study, guardian class, curriculum, year academic, class, and also available actions to edit and delete. this page function For saving data related to encouraging learning in Rejodadi Elementary School [15].

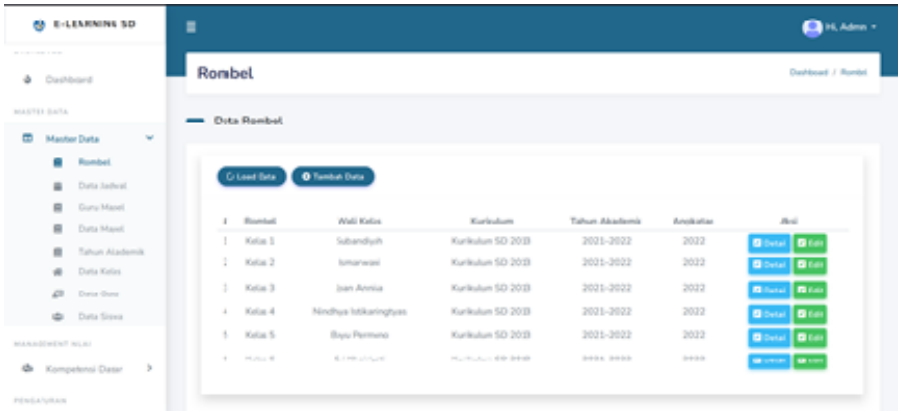


Figure 6. Garbled Data Page

This page contains display data type, code, name course as well as the edit and delete menu. this page function Enter related data eye lesson

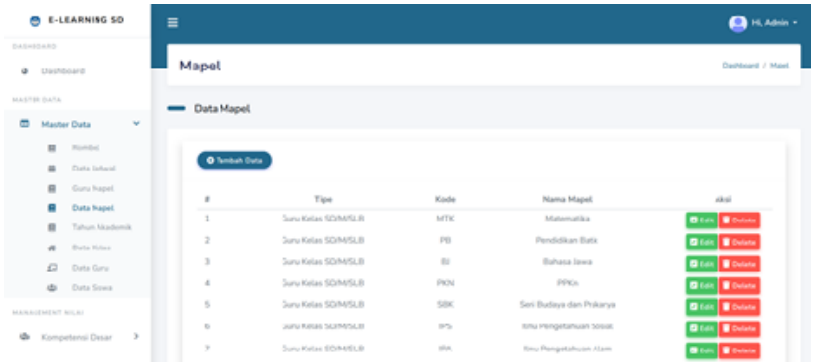


Figure 7. Folder Data Page

This page contains year data display academic, class, information regarding yearly data active academic laugh menu for deleting and editing data.

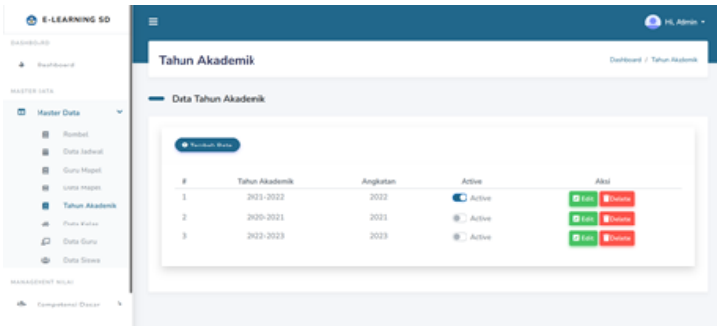


Figure 8. Year Page Academic

This page contains information about material lessons to be learned and accessed by each student. Material This is previously inputted through the teacher through the e-learning website so that students stay accessible in accordance with directions that the teacher has given before.

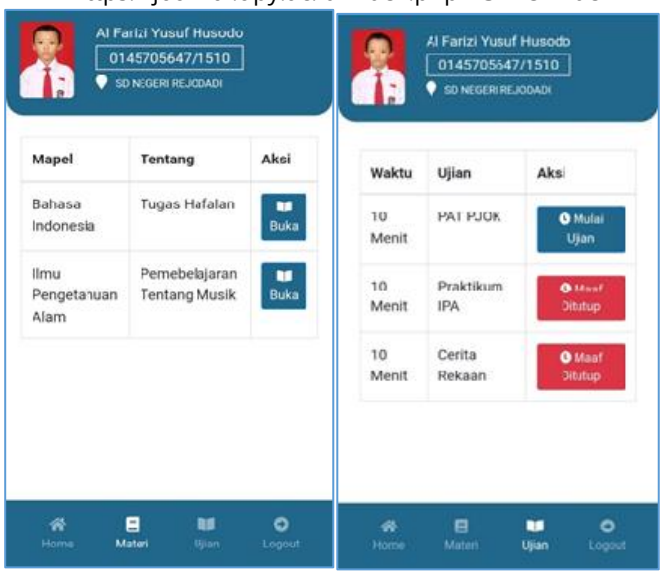


Figure 9. Material and Exam Pages

This page contains appearance information about duration tests, name exams, as well action For start exam. To start an exam students must click start especially formerly so that instruction or question-related things that have been shared by the teacher can be done as soon as maybe.

3.2. Test Results System

Testing system-related study This uses 2 methods namely black box and alpha test. The test results are as follows:

3.2.1. Black Box Testing

Testing *Black Box* is carried out by the program supervisor. Testing was done with the method running the E-Learning Curriculum Rejodadi Elementary School thematic Use Hybrid Based UML Method. Testing done For see is generated system can Work with ok. From the testing system can conclude that the built system is free from error syntax and functional give the expected result.

3.2.2. Alpha Testing

Alpha testing was carried out by 30 (three twenty) respondents consisting of teachers and students. Respondents complete the program and then complete a list of questions (survey) as the response for the program created.

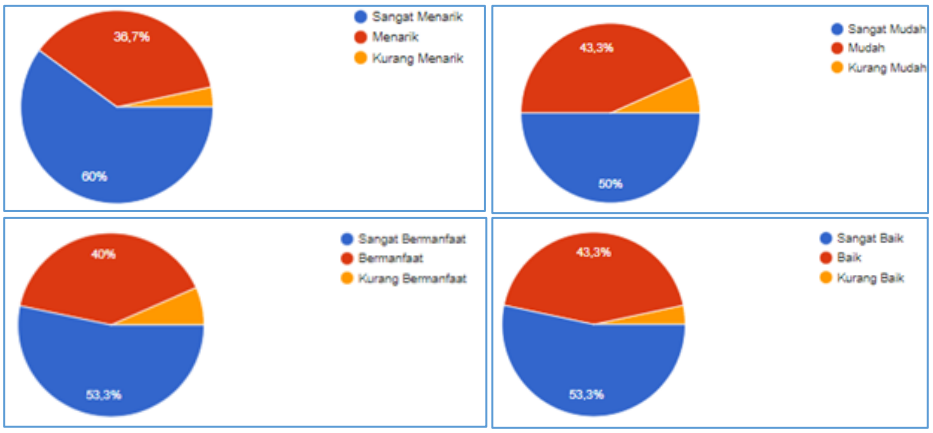


Figure 9. Alpha Testing Graph

Based on the results of the alpha test trial obtained conclusion is as follows:

1) Trial results about appearance system

   Based on results survey about the program view appears information as follows: 18 (60%) respondents answer very interesting, 11 (36.7%) answered interesting and 1 (3.3%) answered not enough interesting

2) Trial results about convenience system

   Based on a questionnaire about convenience in using the obtained program information as follows, 15 (50%) respondents answer very easy, 13 (43.3%) respondents answer easy, and 2 (6.7%) respondents answer not enough easy.

3) Trial results about the benefit system

   Based on a questionnaire about program benefits users, obtained data as follows, 15 (50%) respondents answer very useful, 13 (43.3%) respondents answer useful and 2 (6.7%) respondents answer not enough useful.

4) Trial results about program performance

   Based on the results questionnaire about the completeness of the information that has been served so obtained data as follows, 16 (53.3%) respondents answer very well, 13 (43.3%) respondents answer good and 1 (3.3%) respondents answer not enough Good

4. CONCLUSION

Based on the results implementation of the E-Learning Curriculum Rejodadi Elementary School thematic Use Hybrid- Based UML Methods, then can take the conclusion as follows:

1) Study This produces E-Learning Curriculum Rejodadi Elementary School thematic Use Hybrid Based UML Method that can be used by teachers and students To make it easy learning where can the teacher input material and make exam new online so student nor female student can access with easy.
2) The results of testing the E-Learning Curriculum Rejodadi Elementary School thematic Use The Hybrid Based UML method shows the system can walk with ok. it can be proven through the alpha test testing process carried out on 30 respondents consisting of teachers and students. The result 60 % answered very program view interesting, 50% answered very easy, 53.3% answered very useful, and 53.3% answered performance program very interesting.

5. SUGGESTION

From the conclusion got suggestions as follows:

1) System This expected can be developed to do so accessed through the device.
2) System This needs improvement function so that capable provide e - reports To make it easy teacher performance.

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