Academic Assessment Information System

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Abstract. The purpose of this study is to create the information system of academic assessment used in education to facilitate the assessment of students. This research used descriptive analysis method to analyse the requirements contained in the system to be built. Data collection techniques used observation and interview methods to obtain more accurate data to apply to the system. The results of this study indicate that the academic appraisal system facilitates school information about assessing and publishing grades in students and is also expected to be more efficient.

1. Introduction
Student's academic assessment information on a school is essential to students, parents, and teachers to see the students ' academic grades. However, the lack of media, as well as the management of student assessment data is still manually made teachers' difficulties in publishing grades. [1-3] information systems are a useful assessment work of teachers in the insert and publish grades. [4-6] one of the researchers that discussed the information system is Sabherwal Rajiv, he described that academic institutions are divided into three groups based on their CSF: academic understanding, famous giants, and small educators. The ideal IT proficiency profile is developed for each cluster regarding four dimensions: information retrieval, electronic communication, computing facilities for students, and computer-assisted education. The alignment is then calculated for each institution because of its proximity to the IT capability profile for the cluster that is part of it. [7]

Laird T F N and Kuh GD investigate the relationship between the use of information technology by students and other forms of student involvement. There appears to be a healthy positive relationship between the use of information technology for educational purposes and involvement in effective educational practices such as active learning and collaboration and student-faculty interaction. The results also point to the prospect that some regions of engagement on information technology can be seen as a form of involvement in and of themselves. Also, when students use information technology, it can increase their chances of other types of engagement. [8]

Muslim M A explained that this academic information system is a system that provides information about teachers, students, and parents of students, thus helping speed and quality in the delivery of information. Also, by web-based data information can be accessed by time and place that is not specified. In this system, users have access rights for each level of the user, in obtaining information. To create an attractive web-based application program (website), then before it must be designed in advance so that the results achieved following the objectives that have been set before. In the results of this study has developed a Web-Based Information System, Information to improve the Service and Access Information. [9]
Subhansyah explained School is an organization in which there are academic activities about running academic activities SMA Muhammadiyah 3 Tangerang is still simple. Therefore needed a system to overcome these problems, one of them with a web-based system. The management of the web-based academic system in schools still needs to be maximized that is by using mobile web services so academic information can be received easily and quickly. [10] From the above information is not detailed information forms the information system created so that the explanation gives less detail. This research used the descriptive method to analyze how the academic assessment manually to be a reference in making information systems. Techniques of data collection using interview and observation methods, so the data obtained was direct data from research sources. The results of this study indicate that the existence of the academic assessment information system allows schools in assessing and publication of value to students and also expected to be more efficient in the assessment.

2. Method
The research used descriptive analysis method to analyze system requirement. Data collection techniques used interview and observations. In this research approach method used by us was an object-oriented approach which used AOO (Analysis Object Oriented) and visualized using UML tool. UML was a language used to define, visualize, construct and document the artifacts (parts of information used/generated in an application-making process.) Artifacts can be modeled, descriptions, or software. UML was also the best technique that proves successful in modeling a large and complex system. The types of UML diagrams used was Use Case Diagrams. A Use Case aims to describe/model the interrelated processes and entities of the combined series of scenarios.

3. Results and Discussion
Overview of the proposed system is a web-based academic assessment system, which can use as a means of storing information that can be accessed indefinitely by time and place, where the computer connected to the internet network. Academic assessment system, there is a process to generate information, including class information, value information, and information subjects. The academic assessment system is used by the six categories of users, namely: Students, Parents, Admin, teacher, homeroom teacher, and Headmaster (Figure 1).
The following is a Use Case diagram illustrates the activity or sequence of interaction that interrelates with the system and the actor. The description of the actor's description detail in (Table 1).

**Table 1. Actor Description**

| No. | Name Actor       | Description                                                                 |
|-----|------------------|------------------------------------------------------------------------------|
| 1   | Student          | As a system user has access right to view academic information from classes, subjects, and the students report. |
| 2   | Parents          | As a system user who has access rights to view the child’s academic information from the class, subject and the students report. |
| 3   | Head Master      | As a system user who has access rights to view academic information report and has the right to give consent to be able to display or not student report. |
| 4   | Teacher          | As a system user who has access rights to view academic information about the class, subjects, and grades of the student teaching. |
| 5   | Homeroom Teacher | As a system user has access rights to view academic information of the class, subject, grades of students of their teaching and have the rights to give consent to display student report. |
| 6   | Admin            | As system users have access rights to manage information such as addition, change, and deletion of existing data on systems such as user data, class, map data and granting user permissions. |

The following is an explanation of the cases involved based on the use case of the Academic Assessment System (Table 2).
Table 2. Definition Case

| No. | Name Use Case | Description |
|-----|---------------|-------------|
| 1   | List          | A self-registration process in order to have access rights |
| 2   | Manage information | Is a process of managing information of classes, subjects, accounts, granting user permission system, semester, faculty, assessment of homeroom, and a list of Headmaster’s report |
| 3   | Account       | Is the process of showing the user account |
| 4   | Class information | Is the process of showing information class |
| 5   | Subjects Information | Is the process of showing information subjects |
| 6   | Report        | Is the process of showing results and the granting of permission display report conducted by homeroom and headmaster |
| 7   | Daily Exams   | Is a process of inputting daily test grade of students conducted by the teacher |
| 8   | Task          | Is a process of inputting the grade of students’ tasks by teachers |
| 9   | Exam          | Is a process of inputting the grade of student exam by teachers |
| 10  | Personality   | Is a process of inputting student personality grade conducted by teachers |

Display of the interface implementation, the following appearance:

![Figure 2. Home](https://www.illuminateed.com/products/illuminate-student-information/)

In Figure 2 the main page, users (teachers, students, Headmaster, homeroom, parents, class admin) will be directed to select register or sign in. The list will direct the user to register on the system. While the sign-in page will direct a user, who is already registered in the system to get into the system (Academic Assessment System).
Figure 3. Dashboard

Taken from: https://www.illuminateed.com/home-connection-portal-2/

On the Dashboard Page, Figure 3 displays a Dashboard based on user access rights.
In Figure 4, there is a student information page. It provides any information regarding students’ needs.

Figure 4. Student information class
Taken from: https://www.illuminateed.com/products/illuminate-student-information/

In Figure 5, there is a complete achievement system page. It describes a system for tracking student progress and providing feedback.

Figure 5. Complete Achievement System
Taken from: https://www.illuminateed.com/products/illuminate-data-assessment/
Figure 5 shows the complete achievement students where they can build and administer formative assessments, capture and analyze multiple sources of data to inform instruction, and direct students to learning resources needed to support specific, targeted standards.

Figure 6 page displays The per-student cost for any Illuminate product is available to all clients and is never bloated by hidden fees other vendors use to increase cost. For example, Illuminate charges no additional fees for items such as technical support, customer service, hosting, and upgrades.

4. Conclusions
Conclusions are on the academic information system will be very helpful in the input grade and the grade of publications, data security can be maintained, and also reduce the possibility of data input errors which resulted in produce information that is not accurate. Although there are still many shortcomings in the system for this information, this application can be expected to understand and facilitate the user in their use.

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