DEVELOPMENT OF INFORMATION MANAGEMENT SYSTEM FOR *AKADEMI KOMUNITAS PRESIDENT*

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Abstract-The Akademi Komunitas President is an educational institution under the auspices of the president university, the President Community Academy provides education with diplomas 2 and 3 and there are also LPK programs or job training institutions for people outside the president Community Academy who wish to receive job training courses. However, the President's Community Academy does not have an information management system that supports administrative, academic and information sharing activities, this causes the workload to be high and work efficiency to be low. To solve this problem, I propose this final project to create an information management system for the President's Community Academy.

Keywords – Information Management System, Information System, President's Community Academy.

I. INTRODUCTION

Management Information Systems in education are very important to help schools not only manage, store, organize, but can also help to process and analyze them and generate various reports from them. However, there are still some schools/campuses that have not used this system because its development could cost a lot of money. The use of a Management Information System can monitor the performance of educational programs offered by institutions and manage the distribution and allocation of educational resources. He organizes, plans, and strategizes to implement work processes to run the education system smoothly. Of course in the field of education, MIS education has a special role to help an educational institution develop.

Most educational institutions have implemented a management information system, because it can help a lot, for example in the fields of administration, academics, and finance. The system helps educational institutions to manage all lecturer and student data, so that all information can be accessed in the system such as when students want to register for a new semester, look for classes for the next semester, change classes, class schedules, GPA scores and much more, and also the same as lecturer. The system will certainly help educational institutions to operate much better and more easily on the side of lecturers and students.

In addition, the application of management information systems can also help efficient distribution of information, reduce data loss, because data can be stored everywhere, and also reduce paperwork.

II. LITERATURE REVIEW

2.1 Information Management System

Kumar (2006) and Gabriel (2012), each gathered in the opinion that defining a management information system would first of all require separating the subject into three aspects: Management, Information and Systems respectively [2]. The relevance of system designers and administrators grew significantly in the early 1960s. At the administrative level of an organization, a management information system consists of a human-machine combination that is used to fulfill information requests at various levels. In very large companies, the MIS is also a collection of many interconnected subsystems that share the same data and processing resources. When discussing the idea of MIS in an organization, it is seen as only one of many sustainable activities. This MIS function is very important as it provides all information about lower management to top management and ensures a constant flow of information throughout the business. The MIS system also provides basic information about the organization to the organization owner. The main benefit of an organization's MIS system is to maintain an adequate flow of information, which can be achieved by breaking the organization into distinct subsystems with specific integrated and unique roles. To make the entire organization a successful MIS system, the integration of subsystem functions must be much more

efficient. Using this strategy, as soon as all the demands of the subsystem are met, all the needs of the organization are met.

2.2 Education Management Information System

There is more than just a quality education that students demand in all these competitive ICT-equipped educational institutions (Communications and Information Technology). Students demand exceptional service in all the information they seek. Students need an atmosphere that can help them in every way to present their daily challenges [4]. ICTs have established functions in medicine, business, industry, entertainment, and communications, but these technologies are now playing an important role in education. In developing countries, particularly in Pakistan, education is one of the key sectors that needs to be increased in focus to ensure the country's rapid growth. The mission of every educational institution is to provide high quality education to all its students. Management at all levels in these schools is always trying to achieve this desired goal. The university employs highly skilled academics and equips their scientific laboratories with cutting-edge technology, as well as adding new books and technology to their libraries. The idea of a digital library is also promoted in this educational institution, and multimedia projects are implemented in the classrooms. These institutions provide distance learning ideas, various tutorials such as online and disc-based tutorials, and audio and visual data concepts to enhance lectures. In conclusion, ICT has played an important role in the dissemination of knowledge among various groups in this educational institution.

III. SYSTEM ANALYS AND IMPLEMENTATION

The development of this thesis uses the Rapid Application Development (RAD) method. Rapid Application Development (RAD) itself is a software development methodology that tends to prioritize adaptive processes over planning [1]. This methodology is used to develop fast and quality applications at a lower cost, RAD is usually chosen because of the limited time in development and the application is needed as soon as possible.

3.1 System Analysis

System analysis is divided into 2, namely system description and *use case diagram.*

3.2 System Overview

The system will implement management in the academic realm, so that administration, teachers, students and trainees process/access data more integrated and automated. The system functionality is as follows:

- Users can log in and be directed to their respective menus
- Provides CRUD features for master data related to all institutional data (accounts, classes, courses, semesters, class lists, majors, rooms, classes, training

courses) which can only be accessed by administrators
- Provide features for teachers to fill in the scores of students and participants
- Provides a feature to display class schedules
- Provides a feature to display the training course schedule
- Provides features to add information
- Showing information
- Show user profile
- Displays IP per semester and GPA
- Showing feedback for the trainees

3.2 Use Case Diagrams

Use Case diagrams describe how actors/users use or interact with the web. This includes user activity and the response that will be given by the web, in other words the *use case* represents how each feature works from the user's side. Based on the analysis, there are 4 users who can operate the web, namely administrators, teachers, students, trainees
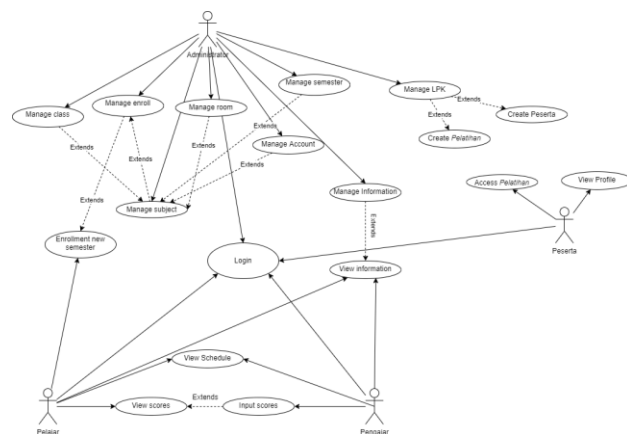

Figure 1. The system design is divided into two, namely User Interface design and database design

3.3 *User Interface (UI)* Design

User Interface Design is a prototype display of the web that will be accessed by users, the *User Interface* will help users understand the features contained in the web.
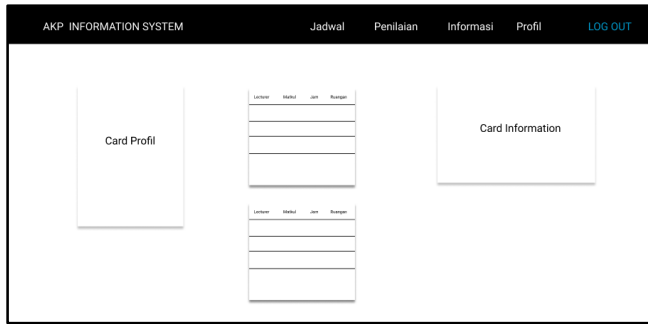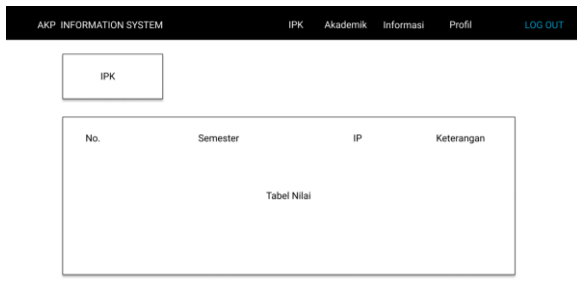
Figure 2. UI Design - Home Page Display

Figure 3. UI Design -GPA Page

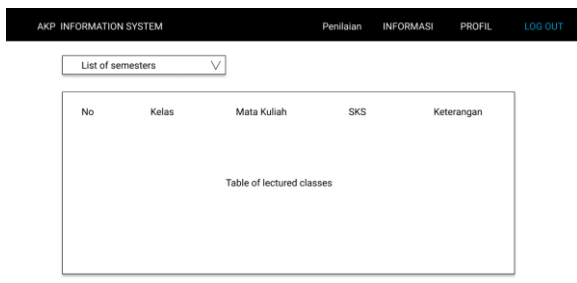Figure 4. UI Design - *Atur Mata Kuliah* Page
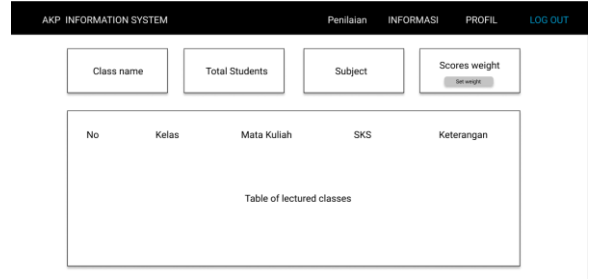

Figure 5. UI Design - Class Page
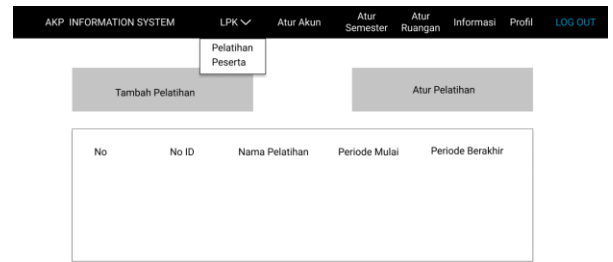

Figure 6. UI Design - GPA Submission Page

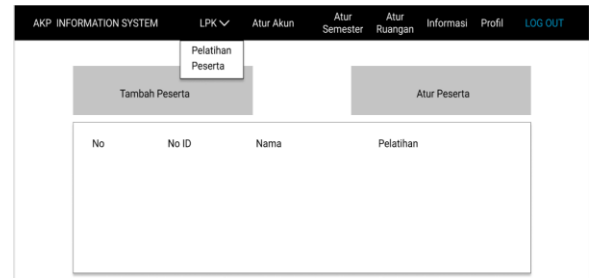Figure 7. UI Design - *Peserta* Page
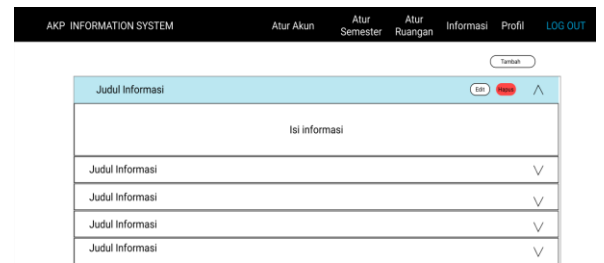

Figure 8. UI Design - *Pelatihan Page*

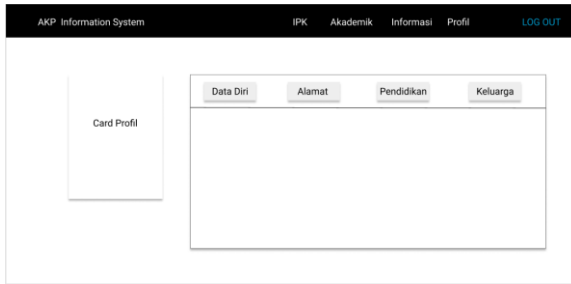Figure 9. UI Design - Information Page

Figure 10. UI Design - Profile Page

3.4 *Database* **Design**

Entity Relationship Diagram (ERD) visually represents the relationship between tables, including their attributes. It shows many-many, one-many, or one-to-one relationships depending on the needs of a table. For the President's Community Academy Information Management System program, there are 12 tables, namely user table, profile, information, courses, grades, grades, majors, semester, room, class, enrollment.
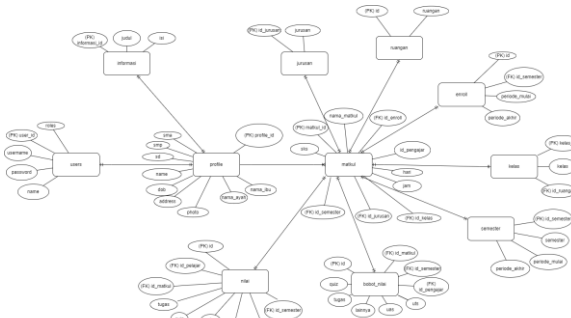

Figure 4.3.2 UI Design

IV.   RESULT AND DISCUSS

The evaluation section includes scenario testing that works for web testing, testing is carried out to find out whether the performance of the web meets the criteria sought, and prevents errors in the system. The following is a summary of the results of the evaluation of the system testing:

1. The login system is able to distinguish each user and displays a specific menu.
2. The system can perform CRUD (*Create, Read, Update, Delete) functions* on each academic menu.
3. Teachers can already enter value data and feedback for teachers and trainees.
4. The system can already calculate the value entered by the teacher so that students can see the final score.
5. The system is able to display the schedule for today and for tomorrow.
6. Students can register for classes for the next semester

V.   CONCLUSION AND FUTURE WORKS

5.1 Conclusion

This final project is intended to support the academic institution of the Presidential Community Academy, especially in terms of managing, storing, controlling all data related to the institution. To achieve this goal, a Management Information System-based web application was developed to support institutions in having an information system.

From this final project, there are several conclusions that can be drawn, namely as follows:

1. This Management Information System can be accessed by all employees or students at the institution, login based on role has been applied to this system so that it can detect which user is logged in and what menu will be displayed.
2. The administrator has all the modules to manage accounts, classes, registrations, rooms, semesters, LPK, subjects, so now all the data related to it can be managed in the system and the data will be stored in the database.
3. Homepages for students and lecturers as well as LPK participants allow them to view class schedules.
4. For the registration process, the system allows students to know which classes are available and the schedule and subjects.
5. The system is also equipped with a grade submission module for lecturers, to input student grades and the system will calculate and generate GPA.

5.2 Upcoming Development

1. Adding a security system, because this web application has not implemented any security system, this system is very vulnerable at this time, therefore adding a security system can be a very vital improvement.
2. Add a dashboard page for administrators to help administrators view and search for important data and schedules, helping them work more efficiently
3. Added a payment module system so that any incoming or outgoing payments can be tracked by administrators and students can also view their unpaid payment fees.
4. Adding an integrated chat/messaging system between LPK students/participants and administrators, will help make interaction between the two parties easier, so that question and answer interactions become easier.

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