IJOBIT
International Journal of Business and Information Technology

Vol. 2, No. 2, Desember 2021

ACADEMIC INFORMATION SYSTEM WEB BASED AT MADRASAH ALIYAH AL – SYAHNI RUMBAI JAYA TEMBILAHAN

Saipul[1], Sri Nadriati[2] Yulya Muharmi[3]

[1,2,3]STMIK Dharmapala Riau
[1] saipul1510@gmail.com, [2] srinadriati@gmail.com,
[3]yulya.muharmi@lecturer.stmikdharmapalariau.ac.id

Article Information

Received: Oktober 2, 2021
Revised: November 12 2021
Online: Desember 20, 2021

Keywords

Sistem Informasi, Madrasah Aliyah Al – Syahni, Web

Abstract

The development of information technology is very rapid and is needed in all things, especially in the world of education. Madrasah Aliyah Al – Syahni is a high school (SLTA) for the continuation of the junior high school level. The construction of school websites and the construction of web-based academic information systems are some of the uses of information technology. With information technology, it is possible for academic data to be processed quickly and easily so that the presentation of the required academic information report can be obtained accurately, quickly and efficiently. The research methods used in this study were qualitative, observation, interviews and questionnaires. While the development of the system using the programming language PHP (Personal Home Page), HTML (Hyper Text Markup Language), MySQL database. This research program is expected to later be able to help Madrah Aliyah Al - Syahni Rumbai Jaya Tembilahan in processing value data, students, teachers, and with the Madrasa Aliyah Al - Syahni website it is hoped that it will be an attraction for parents to send their children to Madrasah Aliyah Al - Syahni.

BACKGROUND

The advance development of information and technology is a challenge for a company or educational institution, both public and private. Each education sector is expected to be able to utilize information technology to support operational activities in producing information. The information produced must be relevant, accurate and timely so that it can be used for personal, business, educational, government purposes and used for decision making (Asmawi et al, 2019).

Madrasah Aliyah Al-Syahni academic data management is still done manually. Where academic data is recorded in a book because the existing system still uses sheets of paper and archives so that it can cause existing data to be easily lost or damaged, school data such as student data, teachers, and grades are sometimes difficult to find when needed, school information is announced through madding media so that students who rarely see madding will miss information, and data updates are very slow because the system is not based online.Sistem informasi akademik merupakan suatu kelompok elemen yang saling terhubung satu dengan yang lainnya, guna memproses data akademik menjadi suatu informasi yang berguna bagi penggunanya (Pangaribuan, 2019).

To improve the performance of the academic data processing system at Madrasah Aliyah Al-Syahni, a Web-Based Academic Information System was created.

Formulation of the problem

Based on the description of the background above, several problem formulations were found, including the following:

1. How to design and build a web-based academic information system at Madrasah Aliyah Al – Syahni Rumbai Jaya Tembilahan. So that the school does not have trouble finding school data such as student data, teachers, and student grades?
2. How to inform school activities using internet media so that students who rarely see the wall magazine will not miss the information?
3. How to update school data quickly, precisely and accurately using an online-based system?

Objective of the research

The objectives to be achieved from this research are:

1. Provide a web-based academic information system to make school data administration so that it can provide accurate information to students, teachers, parents and keep school data up-to-date.
2. Facilitate the processing of school academic data.

RESEARCH METHOD

a. Data collection technique

Data collection techniques used are observation, interviews and questionnaires.

b. Observation

Observation is a way of collecting data by making direct observations of existing objects. By observing the authors get data on books that exist at Madrasah Aliyah Al-Syahni Rumbai Jaya Tembilahan. Among the book data obtained are the number of books that are still suitable for use and books that are no longer suitable for use.

c. Interview

Data collection by way of direct question and answer to the principal of Madrasah Aliyah Al-Syahni Rumbai Jaya Tembilahan and librarian. By conducting this interview, the authors get an estimate of the missing book data and have not been returned.

d. Questionnaire

Data collection techniques are carried out by giving a set of questions or written statements to respondents to answer. Questionnaires can also be in the form of closed or open questions/statements, can be given to respondents directly to the Principal, Teachers and staff of Madrasah Aliyah Al-Syahni.

e. Data analysis technique

Data analysis used in this research is descriptive qualitative method. Qualitative descriptive is analyzing, figuring out, and summarizing various conditions, situations from various data collected in the form of the results of interviews or observations about the problems studied that occur in the field.

RESULT & DISCUSSION

The results of this analysis are an explanation of the design of the system to be made along with the implementation of the information system. In the flow of information systems at Madrasah Aliyah Al-Syahni, several changes were made in the student administration information system.

The purpose of this system change is to further optimize the use of this new system in the future. The changes made are managing data for teachers, students, grades and subjects. And in optimizing the use of computers, namely in the manufacture of academic information systems that contain information on student grades and student biographies with the application of a new application.

a. Use Case Diagram Akademic Madrasah Aliyah Al – Syahni

Figure 1. Use Case Akademic Diagram Madrasah Aliyah Al – Syahni

This web-based Madrasah Aliyah Al – Syahni Rumbai Jaya Tembilahan academic information system has three users. The users consist of admin, teachers and students.

b. Activity *Diagram* Admin Mengelola Data Guru

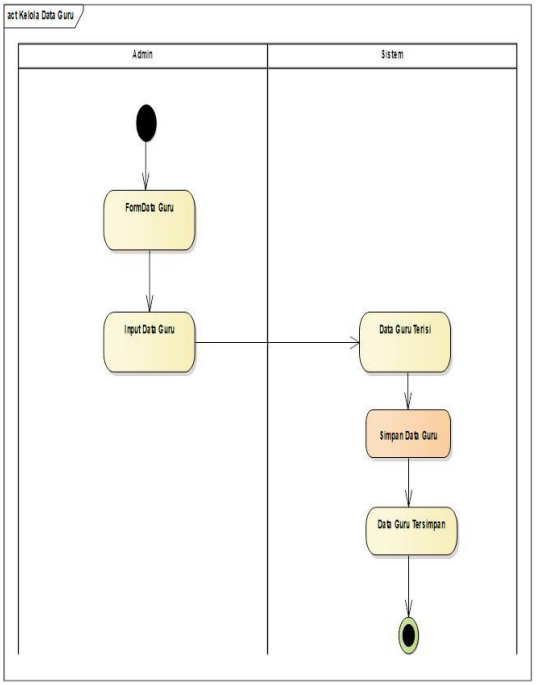

Figure 2. Activity Diagram Admin For Teacher Data

The admin manages teacher data, enters the teacher data input page then fills in the teacher data after it is filled in then the data is saved.

c. Activity *Diagram* Admin inputs score data

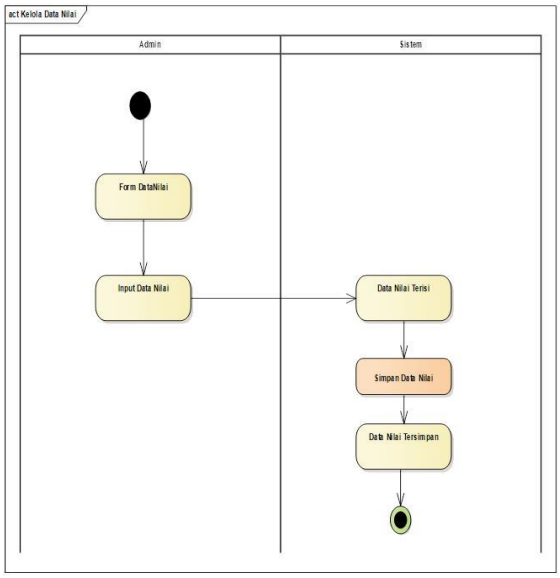

Figure 3. Activity Diagram Admin Input Score Data

d. Activity Diagram Admin for score data

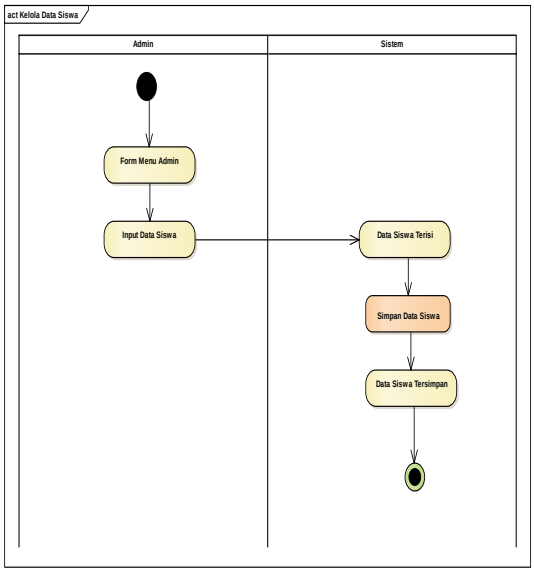

Figure 4. Activity Diagram Admin For Student Data

e. Sequence *Diagram* score management

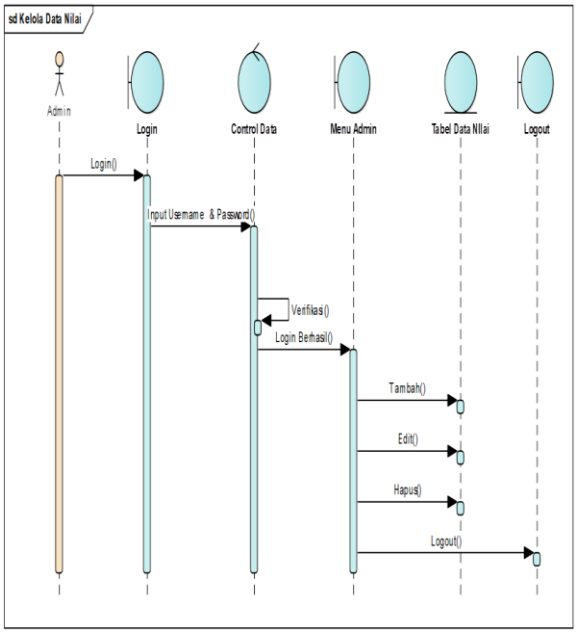

Figure 5. Sequence Diagram For Score Data

Sequence diagrams manage value data using the process flow of value data entry, add, edit, delete data carried out by the admin.

f. Academic *Class Diagram*

In the Figure Class Diagram below, it can be explained that in making this academic information system it has several databases as a data storage area.

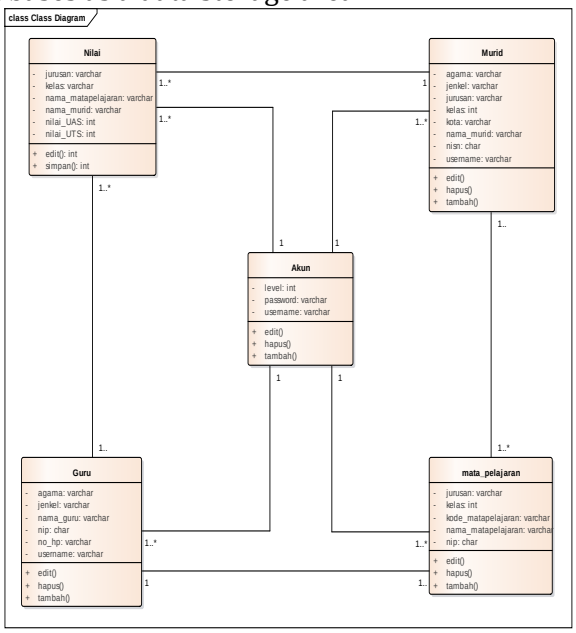

Figure 6. Academic Class Diagram

g. Application Trial

Homepage

The home page is the page that first appears when accessing the academic web. It can be seen in Figure 7. below:

Figure 7. Homepage Display

School Facility Display

This school facilities page displays what facilities are available at Ma Al-Syahni. It can be seen in Figure 8. below:

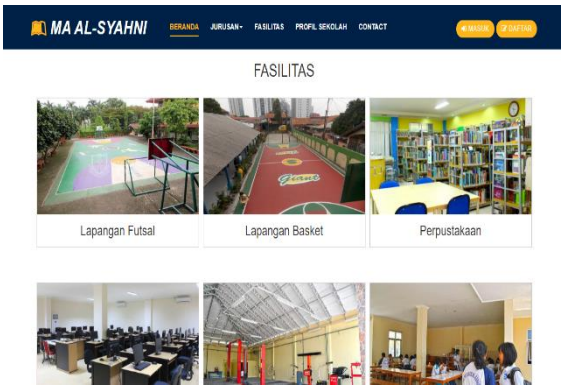

Figure 8. School Facility Page Display

School Profile Page

School Profile is a page that contains the history of the school and displays the school's vision and mission, which can be seen in Figure 9. below:

Figure 9. School Profile Page Display

Admin Panel Page

The admin panel page is a page that appears when you are logged in, in the admin panel you can choose several menus to manage academic data. As in Figure 10 below:

Figure 10. Admin Panel Page Display

Output Students' Data

It is a page displaying student data that has been inputted. It can be seen in Figure 11 below:

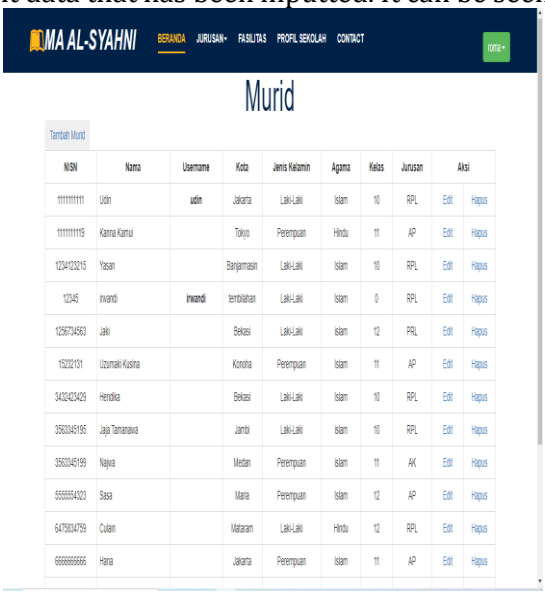

Figure 11. Output Student's Data

Output Teacher Data

This is a page displaying teacher data that has been inputted. It can be seen in Figure 12 below:

Figure 12.Teacher Data Output

Output Subject

This is a page that displays data on subjects that have been inputted. It can be seen in Figure 13 below:

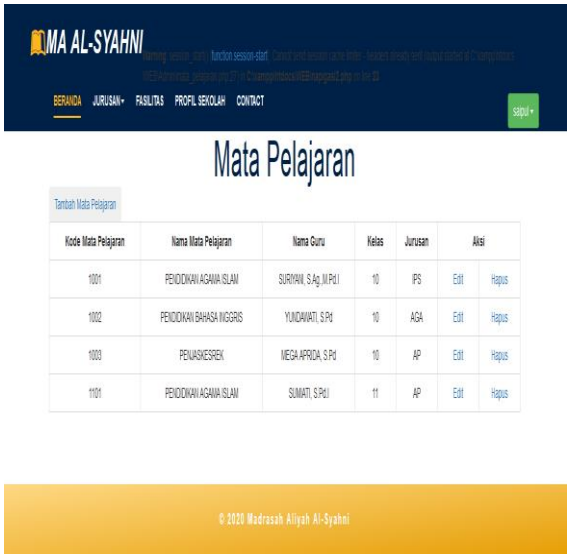

Figure 13.Output Subject

Output Score Page

This is a page that displays data on student scores that have been inputted. Can be seen in Figure 14. below:

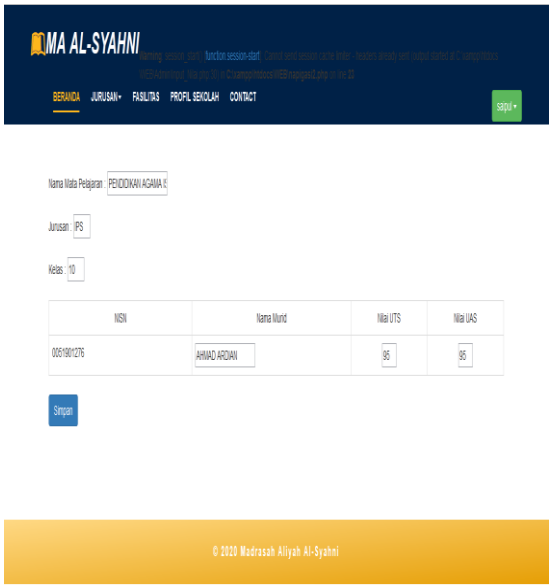

Figure 14.Output Score Page

Security Data Process

This system uses MD5 database encryption. Login and logout are almost always present in all systems/applications developed with a particular programming language, in this case it is PHP Native Version 5. The basic concept of Login is to match the username and password entered by the user with the username + password list stored in the databases.

For security reasons, passwords are usually stored in the database using the MD5 function. MD5 is a hash function (one-way) which is quite well known in cryptography, commonly used for user authentication. While Logout has a fairly simple basic concept, namely by destroying the session of the logged in user.

CLOSING

Conclusion

From the results of research conducted at Madrasah Aliyah - Syahni Rumbai Jaya Tembilaan. Can be concluded that:

1. This web-based academic information system is very helpful for schools in managing school data administration such as teacher data, student data, grade data, subject data, teacher data, and lesson schedule data.
2. It provides accurate information to students in the form of grade data, teacher data, teaching data, and lesson schedules.
3. It can make academic data always updated so it does not interfere with the learning process.

REFERENCES

A. C. Prof. Dr. Sri Mulyani. (2016). *Metode Analisis dan Perancangan Sistem*. Abdi Sistematika, Bandung.

A.S., Rosa dan Shalahuddin, M. 2015. *Rekayasa Perangkat Lunak Terstruktur dan Berorientasi Objek*. Informatika Bandung, Bandung.

Ahmad Nurcholish. (2018). *Membangun Database Arsip Persuratan Menggunakan Pemrograman PHP dan MySQL,* CV. Jejak, Jawa Barat.

Alpiandi, M. R. (2016). *Sistem Informasi Akademik Berbasis Web Di Smp Negeri 2 Kecamatan Gaung Anak Serka*. Jurnal SISTEMASI, Volume 5, Nomor 3, September 2016 : 8 – 13.

Anam, K. (2018). *Analisa Dan Perancangan Sistem Informasi Akademik Berbasis Web Pada Mi Al-Mursyidiyyah Al-'Asyirotussyafi'Iyyah*. Jurnal Teknik Informatika Vol 11 No. 2, Oktober 2018.

Anwar, D dan Irawan, F. (2018). *Rancang Bangun Sistem Informasi Pengajuan Pengadaan Suku Cadang Mobil Pada Pt. Andalan Chrisdeco Berbasis Web.* Jurnal Pilar Nusa Mandiri Volume 13 No.1, Maret 2017.

Asmawi, dkk. (2019). Pendidikan Berbasis Teknologi Informasi Dan Komunikasi. Prosiding Seminar Nasional Pendidikan Program Pascasarjana Universitas PGRI Palembang.

Burrahman, A. (2017). *Membangun Sistem Informasi Akademik Berbasis Web Pada Pondok Pesantren Salafiyah Al-Baqiyatussa'diyyah Tembilahan.* Jurnal SISTEMASI, Volume 6, Nomor 1, Januari 2017 : 33 – 40.

Heriyanto, Y. 2018. *Perancangan Sistem Informasi Rental Mobil Berbasis Web Pada Pt. Apm Rent Car.* Jurnal Intra-Tech, Volume 2, No.2 Oktober 2018.

Hidayatullah, dkk. (2017). *Pemrograman WEB*, Informatika, Bandung.

Kesuma, C. (2019). *Sistem Informasi Akademik Berbasis Web pada LKP Rejeki Cilacap.* Jurnal Evolusi Volume 7 No 1 – 2019.

Lukman Ahmad dan Munawir. (2018). *Sistem Informasi Manajemen*. Lembaga Kita, Banda Aceh.

Madcom. 2016. *Pemrograman PHP dan MySQL Untuk Pemula*. C.V Andi Yogyakarta.

Novianty, C. (2017). *Review Konsep Responsive Design Dengan Framework Materialize Pada Website.* Jurnal InfoTekJar Vol 2, No 1, September 2017.

Pangaribuan, Subakti. (2019). *Sistem Informasi Berbasis Web Pada SMK (Sekolah Menengah Kejuruan) Teknologi Industri Pembangunan Industri Cimahi.* Jurnal Teknologi dan Informasi (JATI) Vol 9, No 2, September 2019. P-ISSN 2088-2270, E-ISSN 2655-6839.