

Design Of Website-Based Santri Attendance Information System (Case Study: Rumah Yatim And Tahfidz Qur'an Madani Bandung)

Mamok Andri Senubekti

Departement of Informatic Management
HASS Bandung Academy of Informatics and Computer
Management

Bandung, Indonesia
mrymodion@gmail.com

Muhammad Yusron Fathul Islam

Departement of Informatic Management
HASS Bandung Academy of Informatics and Computer
Management

Bandung, Indonesia
muhammadyusron10.khanus@gmail.com

Abstract- *In today's era of globalization, the advancement of information technology is accelerating. Computers connected to the internet or intranet created to facilitate human work are needed in all fields, especially in the field of education. Rumah Yatim and Tahfidz Qur'an Madani need a website-based attendance information system to help enter santri attendance data. For this reason, the author tried to create a journal about a web-based santri absence system that until now has not been computerized. Rumah Yatim and Tahfidz Qur'an Madani is one of the foundations in Bandung that until now the input of absenteeism is still manual ranging from the input of santri absentee data to the storage of absentee data that has been input and report making. So that it is possible when the process takes place data manipulation and data loss is very large. The design of this information system is the best solution to solve the problems in this foundation, and with a computerized system can be achieved an effective and efficient activity in supporting activities in this foundation.*

Keywords— *Information System Design, Absence of web-based santri.*

I. INTRODUCTION (HEADING I)

1.1 Background

The development of information and communication technology greatly influenced today's civilization, allowing the work within a foundation to be completed quickly, accurately and efficiently. One example is the santri absentee taking system, in some schools the santri absentee taking system is still manual or still uses an absentee card. If we follow the development of technology today that has been increasingly advanced or developing, of course, there are many examples of technological developments that will be encountered, one example of technological development is the Website. The website is static if the content of the website information remains, rarely changes and the content of the information is in the direction only from the website owner. The website is dynamic if the content of the website information is always changing, and the content of the information is interactive both ways from the owner and users of the Website. Rumah Yatim and Tahfidz Qur'an Madani have a website that is generally accessible to everyone, is www.rumahyatimadani.com that contains a foundation profile. But do not have a santri absentee collection website, since February 17, 2019 the author joined this foundation, and this is the main reason the author conducted

Work Practices in Orphan Homes and Tahfidz Qur'an Madani. In its development, Rumah Yatim and Tahfidz Qur'an Madani have used the use of information technology in various aspects of the foundation's operational activities. But it does not include the taking of absenteeism santri who are still manual or still use the absentee card. In this article, the author is interested in compiling a Case Study Report with the title "Design of Website-Based Santri Attendance Information System in Rumah Yatim and Tahfidz Qur'an Madani Bandung".

1.2 Identify problems

1. The research problems that the author proposes can be identified as follows:
2. There is no absence of website-based santri. Absentee santri still uses a manual way so it takes a long time.

1.3 Research objectives

The purpose of the research is to:

1. Preparing an efficient santri absence application and can facilitate the teacher's work in the input of absentee santri.
2. Make it easier for teachers to recapitulate absentee santri
3. Make it easier for the foundation to inform parents about santri absences.

1.4 Scope of Research

In the writing of this Journal, the author limited its scope only to designing and creating a web-based santri absence application system, which also includes its activities in online attendance activities ranging from inputting teacher data conducted by admins, teachers choosing classes to be licensed, adding new santri data in class to the process of making periodic attendance recapitulation reports given to classroom guardians. Print the attendance recapitulation report can only be done by the teacher.

1.5 Research Methods

As for the research methods that the author did in the making of this Journal, the author conducted research in the Orphanage and Tahfidz Qur'an Madani are:

1. Interview Technique.

The author conducted a direct Q&A with Ustadz Maman Suryaman S.E as the chairman of the Orphanage and Tahfidz Qur'an Madani.

2. Observation technique.

During the research, the author made direct observations to the Orphanage and Tahfidz Qur'an Madani on the absence activities carried out before teaching and learning activities.

3. Literature Studies.

With this method of literature study, the author gets data sources from books and journals that relate to the title that the author raised and used for reference related to the design of the program application.

II. METHODS

2.1 Framework

To help in the preparation of this research, it is necessary to have a clear frame work arrangement. This framework is the steps that will be taken in solving the problem that will be discussed. As for the research framework used as seen in the picture:

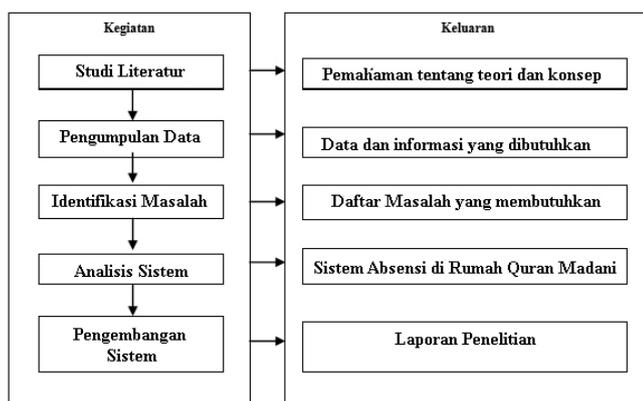


Fig 1. Research Framework

2.1.1 Literature Studies

At this stage, a search of theoretical foundations obtained from various books and also the internet to complement the treasury of concepts and theories, so as to have a good and appropriate foundation and science. Data Collection

At this stage, the process of collecting data with interview and observation methods to make observations and analysis of the ongoing teaching-learning process at Sweet School Batam so as to get the data and information needed by researchers.

2.1.2 System Analysis

At this stage, identification of problems in the system is being carried out. Thus, it is expected that researchers can find obstacles and problems that occur in the teaching-learning process in the Orphanage and Tahfidz Qur'an Madani so that researchers can find solutions to these problems.

2.1.3 System Development

At this stage, system development is carried out using the waterfall model.

2.1.4 Report Creation

At this stage, a report is made based on the results of research using primary and secondary data collection techniques so that it becomes a research report that can provide a complete picture of the system being built.

2.2 Data Collection Methods

For the preparation of this Journal, data and information related to the title are needed, namely "Website-Based Santri Attendance Information System in Orphan House and Tahfidz Qur'an Madani". Therefore, before the preparation of this Journal is done research or research first to net data and related information. The methods of data collection carried out in the writing of this thesis, among others:

2.2.1 Library Studies

According to Iyas (2011), library studies are conducted by searching for books, magazines or brochures related to research, scientific works or journals, articles, both in the library and on the internet. The data derived from books and the internet that are used as references in the preparation of this thesis are the theories contained in chapter 2 of this Journal.

2.2.2 Field Studies

According to Iyas (2011), the methodology carried out in field studies is to practice into the field directly to obtain information related to research. Practices carried out in field studies, among others:

a. Observation

The author analyzes existing problems by observing the source and processing of data and collecting data from parts related to the teacher and santri absenteeism system in the Orphan House and Tahfidz Qur'an Madani, observations are made to see firsthand the ongoing work process.

b. Interview

The interview method is a method of collecting data by doing direct Q&A with Ustadz Maman Suryaman S.E as the chairman of Rumah Yatim and Tahfidz in Bandung.

2.3 System Approach Methods

System approach method is an approach by how to use tools and regulations that complement one or more stages of information system development. The system approach method used in the creation of absentee information systems is by way of a structured approach that is oriented to data, namely structured analysis and design. A structured approach is the development of systems that follow the stages of system development with data collection tools and techniques. The tools used as aids are as follows:

1. FlowChart

Flowchart or flowchart is a diagram with graphical symbols that state the flow of algorithms or processes that display the steps symbolized in the form of boxes, along with the sequence by connecting each step using arrows.

2. UML or Unified Modelling Language

Unified Modeling Language is a method of visual modeling for the means of designing object-oriented systems, or the definition of UML as a language that has

become the standard for visualization, design and also documenting software systems. The types of UML diagrams are:

- a. Use case diagram
Use case diagram is a diagram that describes the interaction between the system and the actor, the use case diagram can also describe the type of interaction between the user of the system and the system.
- b. Activity Diagram
Activity diagram is a type of diagram on UML that can model any processes that occur in the system.
- c. Class Diagram
Class diagram is a type of diagram on UML that is used to display classes and packages that exist in a system to be used. The diagram can give an idea of the system and its relationships.

2.4 History of Orphan House and Tahfidz Qur'an Madani

Since about June 2012, the House of Qur'an Madani (RQM) which is addressed in Kiara Sari VII no.24, has been running. Hopefully, the House of Qur'an Madani produces students (scholarships) who memorize the Qur'an 30 Juz. And it's covered.

Management of results (targets). Tahfidz achievements should be closely guarded quarterly. The students undergo an exam to find out the achievement and evaluation of other results in general.

Teacher management (ustadz) and the replacement of the teaching team (Asatidz) with function updates. Teachers and replacement teams are those who are ready to accompany the tahfidz students and be role models (especially in the issue of tahfidz).

In the end, only the pleasure of Allah SWT we expect, and with the help of Allah SWT all efforts will feel light. The house of the Qur'an Madani was established with a very noble ideal, which is to form generations of Qur'an for the creation of a broader purpose, which is to create a civil society. This Madani Qur'an house was established under the new Indonesian Civil Society Foundation (YMMB) chaired by Dr. Ir. H. Muhammad Budi Djatmiko M.Si.

III. RESULTS AND DISCUSSION

3.1 Problems

During the author's stay in the Orphanage and Tahfidz Qur'an Madani that is for 2 years. The author found the problem in the dormitory is that the santri absence process still uses manual methods, namely still writing in the absentee book, and the author also saw a lot of shortcomings such as the loss of previous santri absence data, or the breakdown of absenteeism due to exposure to water.

3.2 The solution

The author makes a santri absence design but based on the web, in the design we can see the system in this design is very effective, because the author makes several admins to control the santri absence process. So there will be no data loss or data damage, because all data is already stored in the application.

3.3 Analysis of Ongoing Systems

Analysis of ongoing procedures systematically describes the activities that occur in the process of santri absence.

3.3 Analysis of Ongoing Systems

Analysis of ongoing procedures systematically describes the activities that occur in the process of santri absence.

3.3.1 Use Case Diagram Running

A use case diagram is modeling to describe an interaction between one or more actors in an ongoing system. Use cases are used to find out what functions are in an information system and who has the right to use those functions. Here's a depiction of a running use case for an absentee information system.

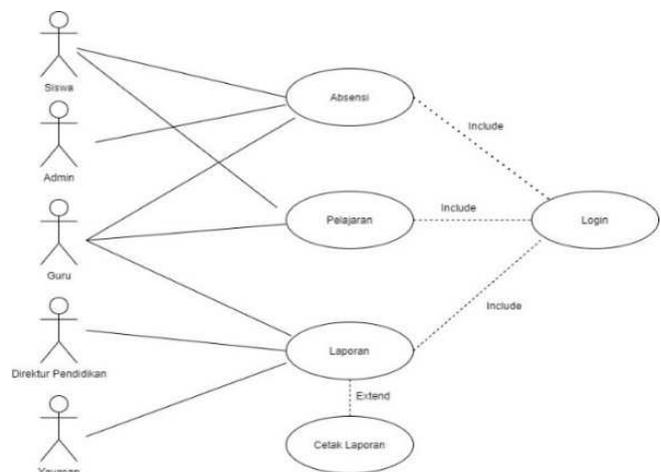


Fig 2. Use Case Diagram

3.4 Running Activity Diagram

Activity diagrams describe the various flow of activity in the system being designed. Activity diagrams can also describe parallel processes that may occur in some executions. Here is an activity diagram image of the ongoing absenteeism process:

1. Santri attended the Teaching and Learning Activities room
2. The teacher came into the room.
3. The teacher did absenteeism to the students who were present, sick, or santri without information.
4. Teachers collect absenteeism data
5. The teacher makes a report and provides the results of the report to the director of education.
6. The director of education checks the attendance data, whether there are absentee violations committed by the santri
7. If no breach is found, the education director will archive the attendance data.

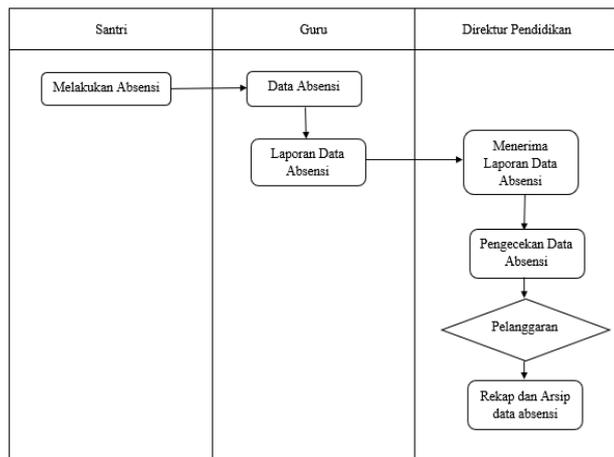


Fig. 3 Activity Diagram of Absentee Procedures on Running Systems

3.5 Class Diagram

Class diagrams are specifications that if in instance will produce an object and are the core of object-oriented development and design. Class diagrams describe the state (attributes/properties) of a system, while offering services to manipulate those circumstances (methods/functions).

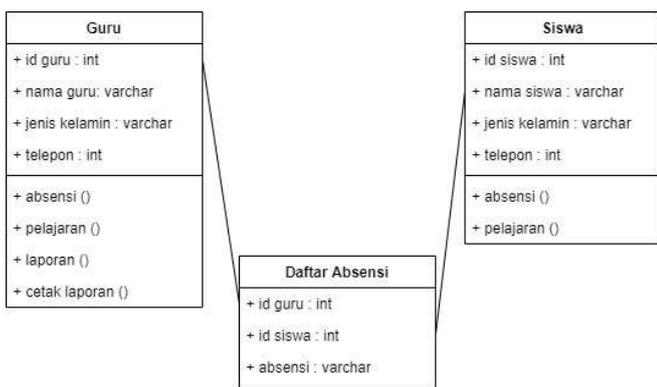


Fig. 4 Class Diagram

3.6 Table Structure

3.6.1 Teacher

This table is used for teachers who are in an institution or school. This table consists of: id_guru, nip, nuptk, name, jenis_kelamin, status, address, job title, telephone, tgl_lahir.

Table name: teacher

Primary Key: id_guru

Table 1 Teacher

Nama Field	Panjang	Type	Keterangan
Id_guru	5	Int	Primary Key
Nip	5	Varchar	
Nuptk	5	Varchar	
Nama	30	Varchar	
Jenis_kelamin	1	Varchar	
Status	20	Varchar	
Alamat	100	Varchar	
Jabatan	20	Varchar	
Telepon	15	Varchar	
Tgl_lahir		Date	

3.6.2 Student

This table is used to find out the students who are in an institution or school. This table consists of: id_siswa, name, jenis_kelamin, class, address, tgl_lahir, telephone

Table name: student

Primary Key: id_siswa

Table 2 Student

Nama Field	Panjang	Type	Keterangan
Id_siswa	5	Int	Primary Key
Nama	50	Varchar	
Jenis_kelamin	1	Varchar	
Kelas	11	Int	
Alamat	100	Varchar	
Tgl_lahir		Date	
Telepon	15	Varchar	

3.6.3 User

This table is used to find out who can login in an application. This table consists of: id_user, username, password, name, email, access

Table name: user

Primary Key: id_user

Table 3 User

Nama Field	Panjang	Type	Keterangan
id_user	5	Int	Primary Key
Username	5	Varchar	
Password	15	Varchar	
Nama	30	Varchar	
Email	50	Varchar	
Akses	15	Varchar	

3.6.4 Absen_siswa

This table is used for absent students in an institution or school. This table consists of: id_absen_siswa, tgl_absen, description, id_siswa.

Table name: absen_siswa

Primary Key: id_absen_siswa

Table 4 Student absence

Nama Field	Panjang	Type	Keterangan
Id_absen_Siswa	5	Int	Primary Key
Tgl_absen		Date	
Keterangan	1	Varchar	
Id_siswa	5	Int	Foreign Key

3.6.5 Class

These tables are used for classes used in an institution or school. This table consists of: id_kelas, class name

Table name: class

Primary Key: id_kelas

Table 5 Classes

Nama Field	Panjang	Type	Keterangan
id_kelas	5	Int	Primary Key
Nama_kelas	30	Varchar	

3.6.6 Lesson

This table is used to find out the lesson schedule that is in an institution or school. This table consists of: id_pelajaran, mata_pelajaran
Table name: id_pelajaran
Primary Key: mata_pelajaran

Table 6 lessons

Nama Field	Panjang	Type	Keterangan
id_pelajaran	5	Int	Primary Key
Mata_pela-jaran	30	Varchar	

3.7 Specifications of Hardware and Software

Hardware and software specifications required for the creation of web-based santri absences, as in the table below

Table 7 Hardware and Software Specifications

Kebutuhan	Keterangan
Device Name	DESKTOP-GV4I425
Sistem Operasi	Windows 10 Pro 64-bit
Processor	AMD A9-9425 RADEON R5, 5 COMPUTE CORES 2C+3G
RAM	4 GB
Hard Disk	1 TB
Keyboard	Qwerty
Mouse	Wireless
Software	Google Chrome, XAMPP, Sublime Text 3

3.8 Implementation Results

The implementation results of several configurations carried out on the creation of this website can be viewed using a web browser. The web browser used is Chrome, by typing the following link <http://localhost/absensi2>. The following are some views of the results of the implementation of the design of the website-based santri attendance information system at Rumah Yatim and Tahfidz Qur'an Madani Bandung

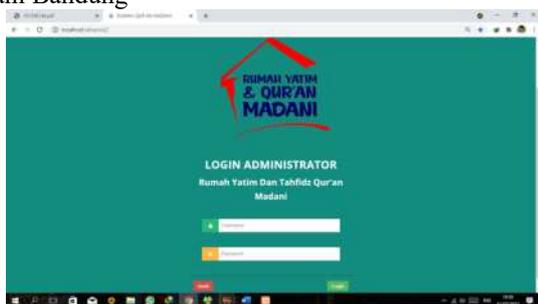


Fig. 5 Login Menu

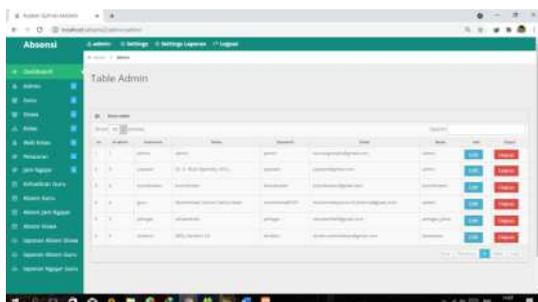


Fig. 6 Table Admin

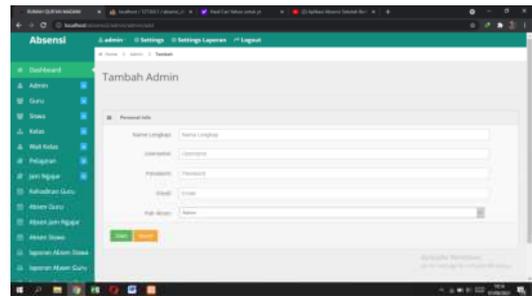


Fig. 7 Add Admin

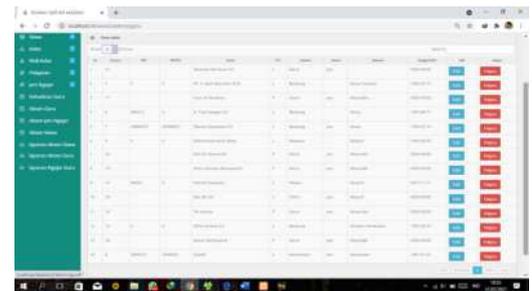


Fig. 8 Teacher Table

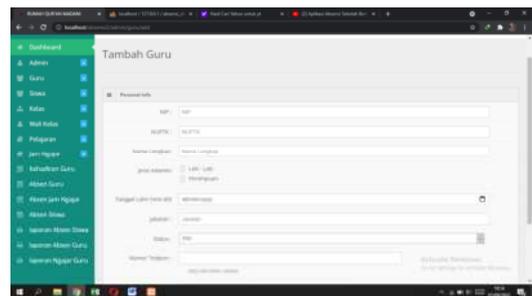


Fig. 9 Add Teacher

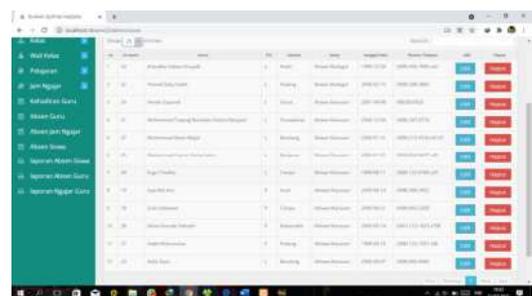


Fig. 10 Santri Table

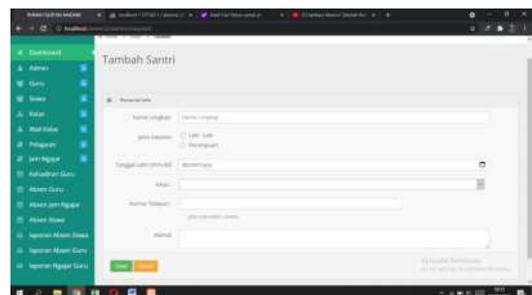


Fig. 11 Add Santri

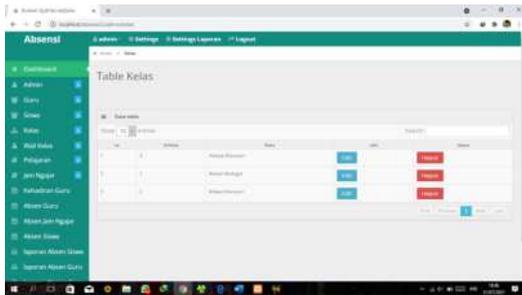


Fig. 12 Class Table

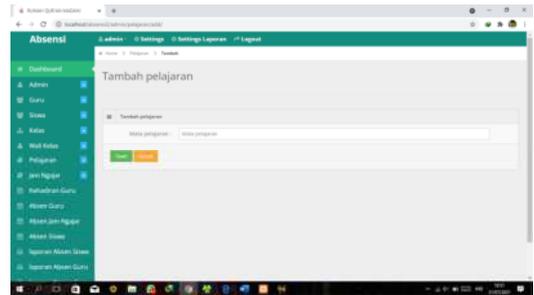


Fig. 13 Add Lessons

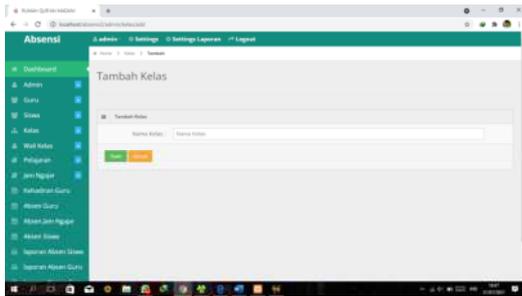


Fig. 13 Add Class

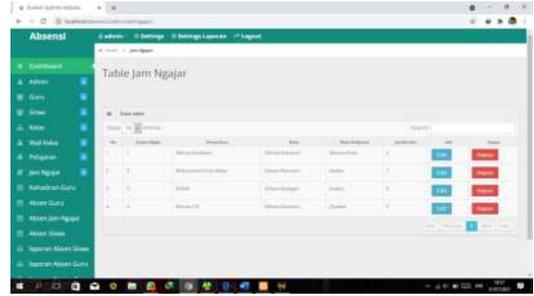


Fig. 14 Table Teaching Hours

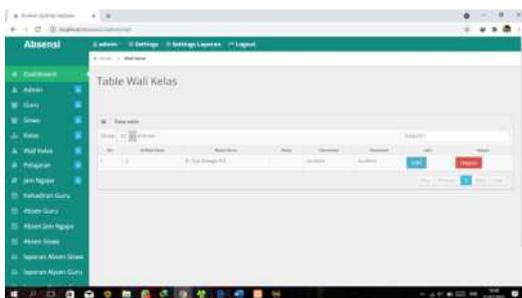


Fig. 14 Class Guardian Table

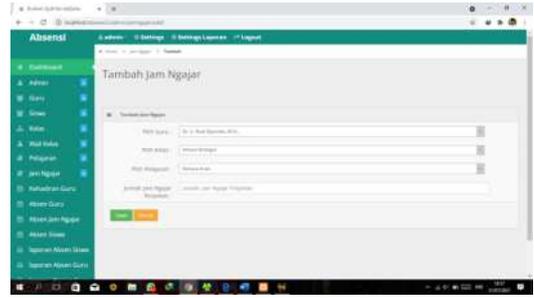


Fig. 15 Add Teaching Hours

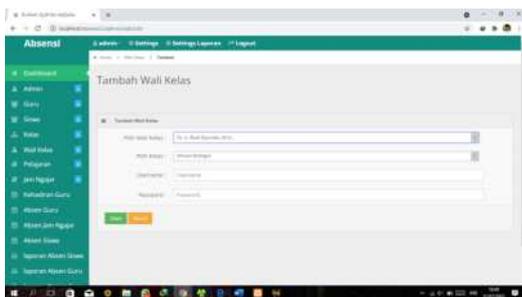


Fig. 15 Add Class guardian

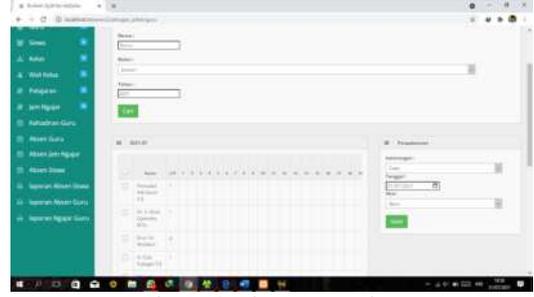


Fig. 16 Absent teacher

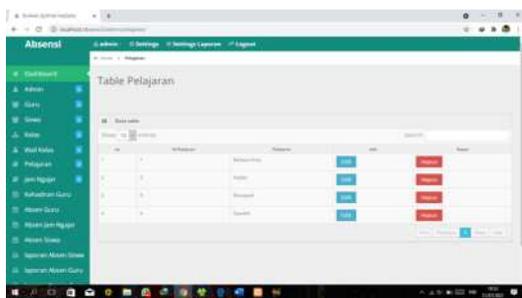


Fig. 12 Lesson Table

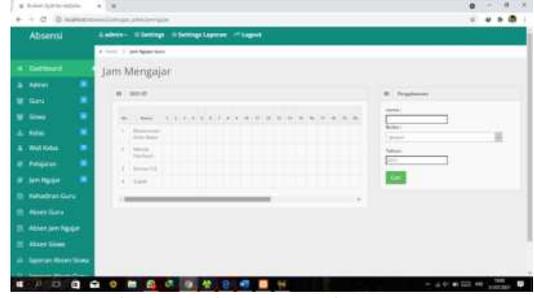


Fig. 17 Absent Ngajar Hours

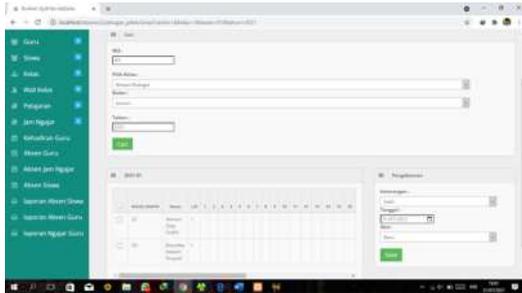


Fig. 18 Absent Santri

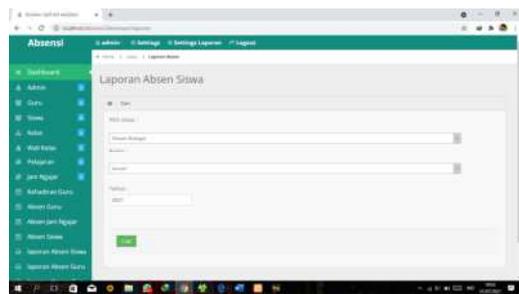


Fig. 19 Student Absentee Report

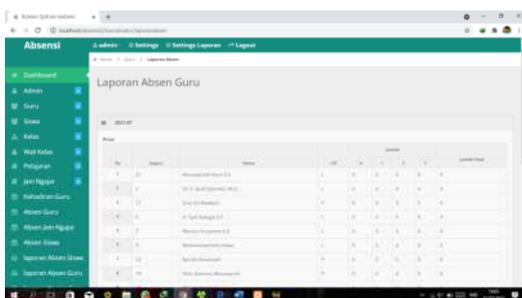


Fig. 20 Teacher Absence Report

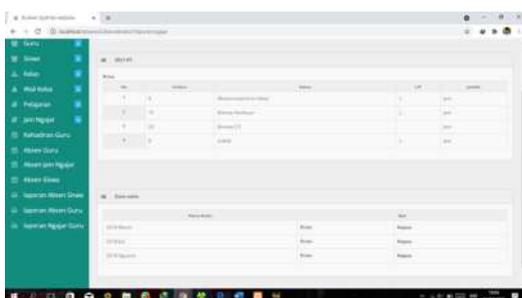


Fig. 21 Teacher's Report

IV. CONCLUSION

This journal that has been created is the design of a web-based santri attendance information system in Rumah Yatim and Tahfidz Qur'an Madani which is expected to be useful to facilitate students and teachers in filling out absenteeism and to avoid fraud and data loss.

After the final discussion the author can make the following conclusions:

1. The santri attendance information system is designed to be able to monitor the presence of santri in the Orphanage and Tahfidz Qur'an Madani.
2. The attendance information system will design efficiently because it does not have to incur stationary costs such as paper, stationery, data archiving and having data security.

SUGGESTION

The design of this information system is still a lot of shortcomings for both the author and the Orphanage and Tahfidz Qur'an Madani. Therefore, the author provides roles for future improvement, namely: It is expected that the participation of the Orphanage and Tahfidz Qur'an Madani will be able to maintain and update the web-based santri absence system.

REFERENCES

- [1] Abdul Kadir. Pengenalan Sistem Informasi. Yogyakarta, ANDI Yogyakarta, 2003.
- [2] Ambarita, M. d. (2016) . Metode Penelitian Sistem Informasi: Mengatasi Kesulitan Mahasiswa dalam menyusun proposal Penelitian. Yogyakarta: Budi Utama
- [3] Amin, M. M. (2010). In M. M. Amin, Pengembangan Aplikasi Web Menggunakan PHP Data Object (PDO) (p.2. Yogyakarta: Graha Ilmu.
- [4] Davis, G.B. (1999), Kerangka Dasar Sistem Informasi Manajemen Bagian 1 : Pengantar, Diterjemahkan oleh Andreas, S, Ardiwardana, Jakarta.
- [5] Elvia (2008), Merancang Sebuah Sistem Informasi Absensi Berbasis Web.
- [6] Ghazali, M., dkk. 2008. Konsep Sistem Informasi, Yogyakarta : Andi Offset
- [7] Hartono, Jogiyono. MBA, Ph.D. 1999. Analisis dan Desain Sistem informasi. ANDI, Yoyakarta. 2005.
- [8] HM, Jogiyanto. (1999), Analisis dan Desain Sistem Informasi : Pendekatan Terstruktur Teori dan Praktek Aplikasi Absensi, Andi, Yogyakarta.
- [9] Jogiyanto, HM. 2005. Analisis dan Design Sistem Informasi, Yogyakarta: Andi Offset
- [10] Kadir, Abdul, Terra C.H., Trwahyuni. (2005), Pengantar Teknologi Informasi, Andi, Yogyakarta.
- [11] Ladjamudin, 2005. Analisis dan Desain Sistem Informasi, Yoyakarta : Graha Ilmu. Menguasai XHTML, CSS, PHP & MySQL Melalui Dreamweaver, (2009). Yogyakarta: Andi dan Madcoms.
- [12] Perangin-angin, Kasiman. 2006. Aplikasi web dengan Php dan MySql. Yogyakarta : ANDI
- [13] Sidik, Betha. (2012), Pemrograman Web dengan PHP (edisi revisi), Informatika Bandung.
- [14] Supardi, Yuniar., Pascal dan Flowchart, Dinastindo, Jakarta, 2000.
- [15] Sutabri, 2005. Karakteristik – Karakteristik Sistem dan Klasifikasi Informasi.