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Academic Information System in Nurul Falah Islamic Foundation in Garut District Web-Based

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ABSTRACT

Academic, namely activities carried out within the world of education related to the teaching and learning process. The academic information system at the Nurul Falah Islamic Education Foundation is considered ineffective where recording student data, teacher data, subject data, student class data, scheduling and assessment are still recorded in books so they are easily damaged or lost and making reports takes a long time. This study aims to determine the current system, make system design, analyze and test the system and to implement academic information systems. The method for designing the system used by the author in this study is the waterfall method where the data collection techniques used include observation, interviews and literature study. The development method uses a structured method with several tools and processing techniques such as flowmaps, context diagrams, and data flow diagrams. The programming language used in designing and implementing academic information systems is PHP and the database used is MySQL.

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1. INTRODUCTION

Education is currently experiencing very rapid development marked by advances and sophistication of technology. The development of science and technology has created new traditions and cultures in civilization. These developments have a very broad influence both in the field of development, in the economic field, and not least in the field of education. Education is a long-term investment. Information is an important key for an agency, companies are no exception.

At this time academic administration and archiving activities regarding activities such as: the process of admitting new students, making school schedules, grades and data management of students and teachers at the Nurul Falah Islamic Education Foundation are still carried out manually and not centrally, meaning in other words still using the archiving method in the form of books. or paper so that if the data is needed in a fast time the data cannot be obtained. Therefore we need a concept of data processing academic information system.

The online academic information system is an academic information system built to provide user convenience in online student academic administration activities. Student 2 academic administration activities as required above can be used online, this system can also function as a support for data analysis in determining student decisions.

It is hoped that using a management system using information technology can solve problems and save time and costs in its presentation. Based on this problem, the writer conducts an analysis and development of information systems. The title that the author adopted is "Academic Information Systems In The Nurul Falah Islamic Foundation In Garut Regency Web-Based"

2. RESEARCH METHOD

The research method that the author uses are:

Data Collection Techniques Data collection methods to collect data from research samples, carried out with certain methods according to their objectives. The techniques used in collecting the data are as follows:

a) Observation Method Data collection by conducting surveys, reviews, and direct observations at the Nurul Falah Islamic Foundation.
b) Methods of Information Gathering Interviews were directly asked to all teachers or employees at the Nurul Falah Islamic Foundation.
c) Literature Study To complete the lack of data obtained from interviews and observations. Then the data collection by taking from print media sources, electronic and other sources.

2.1 Software Development Method

The method for designing the system used by the author in this study is the waterfall method. Waterfalls are often also called linear sequential models or classical life cycles. The waterfall model provides a sequential or sequential software lifeflow approach starting from analysis, design, coding, testing, and support stages (Rosa and Salahuddin, 29: 2013). Here is a picture of the waterfall model:

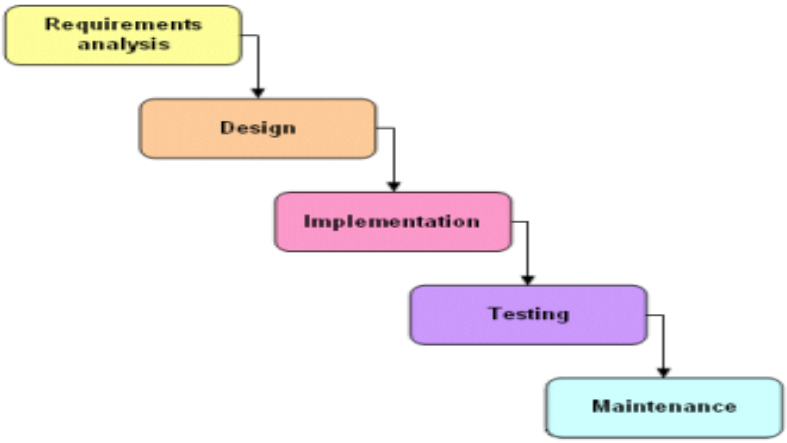

Figure 1. Here is a picture of the waterfall model:

2.2 Software Requirements Analysis

The process of gathering requirements is carried out intensively to specify software requirements so that users can understand what kind of software is needed by the user. Software requirements specifications at this stage need to be documented.

2.3 Design

Software design is a multi-step process that focuses on the design of a software program including data structures, software architecture, interface representations, and coding procedures. This stage translates software requirements from the requirements analysis stage to the design representation so that it can be implemented into a program at a later stage. The software design produced at this stage also needs to be documented.

2.4 Program Code Generation

The design must be translated into a software program. The result of this stage is a computer program in accordance with the design that has been made at the design stage.

2.5 Test

Testing focuses on the software logically and functionally and ensures that all parts have been tested. This is done to minimize errors and ensure that the output produced is as desired.

2.6 Support (Support) or Maintenance (Maintenance)

It is possible for a software to change when it has been sent to the user. Changes can occur because of errors that appear and are not detected during testing or the software must adapt to a new environment. The support or maintenance phase can repeat the development process from specification analysis to changes to existing software, but not to creating new software.

3. RESULTS AND DISCUSSIONS

3.1 Analysis of the current system

The analysis of the current system at the Nurul Falah Islamic Foundation in Garut is carried out based on facts and interviews by the author to obtain data accuracy and find out the weaknesses of the current system. Through a teacher assigned to provide correct information to the author, it can be concluded that the ongoing academic activities are as follows:

a. Students are required to fill out a form for student registration
b. Student data that has been received by administration is stored and made into a report
c. Then a report on student data is submitted to the principal
d. Likewise, teacher data are required to fill out a form for teacher data collection
e. Then the teacher data that has been received by the administration, is stored and made into a report to be submitted to the principal
f. And for student value data, it is made by the teacher and then submitted to the administrative section
g. The administration section receives student grade data, then manages student final grades and performs grade calculations
h. The student's grades are then made into a student's final grade report
i. The report is then submitted to the homeroom teacher to be distributed to students.

3.2 Database Design

This database design includes a very important part in making application systems. This database is designed as a place to store data that is connected to the application. The database used is MySQL.

3.3 Table Structure

To describe the data requirements in database design, a data structure is made which is arranged in the following data table based on the previous design.

Table 1. Data Table

Field Data Type Size Description	Data Type	Size	Information
Id_admin	Varhcar	16	Login name
Password	Varchar	16	Manager/Hrd
Name	archar	16	Name
Level	Boolean	2	Access level
log	Varchar	255	Access logs

Table 2. Student Data Table

Field	Data Type	Size	Information
Id_student	Varhcar	16	Login name
S name	Varchar	16	Login Password
Nisn Varchar 16	Varchar	16	Manager/Hrd
Manager/Hrd			
Jk	Boolean	2	Male Female
Name_orng_old	Varchar	16	Parents' name
Photo	img	-	Photo
Class	int	6	Class ID
semester	Varchar	16	Semester

Table 3. Table of Value Data

Field	Data Type	Size	Information
Id_value	Varhcar	16	Login name
Note_value	Varchar	16	Manager/Hrd
Score	int	6	Score
Id_student	int	6	Student ID
Id_guru	int	6	Teacher ID
Semester	Varchar	16	Semester
Id_class	int	6	Id_class
Status	Varchar	25	Status

3.4 Implementation and Testing

The implementation stage is the application of the application that is carried out to ensure that the application made is in accordance with its design and all functions can be used properly without any errors.

a. System Testing

The testing of the Web-based Nurul Falah Islamic Education Foundation Academic System Application will be carried out using the black box testing method. The testing process will be carried out on all functional requirements that have been designed at the application design stage

Table 4. Testing the login page

Requirements	test scenario	Expected results	Test result
Login	Login input (if correct)	Show application start page	In accordance
	nput login (if false)	Show login failed confirmation	In accordance

Table 5. Testing Teacher Data Pages

Requirements	test scenario	Expected results	Test result
Teacher Data	Add teacher data (if correct)	The data is stored in the database and the teacher data appears	In accordance
	Add teacher data (if wrong)	The data is not stored in the database and the teacher data does not appear	In accordance
	Change teacher data (if correct)	The data is stored in the database and the results of changing the teacher's data appear	In accordance
	Change teacher data (if wrong)	The data is not stored in the database and the teacher data does not appear	In accordance

4. CONCLUSION

The conclusions from the design and manufacture of a web-based Academic Information System at the Nurul Falah Islamic Education Foundation, with the existence of a web-based academic information system at the Nurul Falah Islamic Education Foundation, it is hoped that it will make it easier for parents to obtain academic information quickly and efficiently.The web-based display makes it easy for users to access through various web browsers. This web-based academic information system can help processing and archiving academic data, namely: student data, teacher data, subject data, class data, lesson schedules and student grades (raport). With this system, academic data will be collected into a single unit in a database.

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