

Examination of Information System Design for Student's Scoring Processing

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Abstract: *The development of information technology is needed in the education system to deal with various problems that arise in managing and solving problems that exist in educational institutions, especially in SMP PGRI 1 Semaka. The design of information processing systems for students uses web technology that can be used by teachers and employees to process student grades quickly and accurately and produce effective and correct information.*

In designing this information system using an SDLC (Software Development Life Cycle) method. Whereas the programming language used uses PHP and Mysql as its database, xampp as a web server, and Mozilla Firefox as its web browser.

Keywords : *information processing value system, web, SDLC.*

I. INTRODUCTION

The development of information technology has reached almost all sectors [1]. This requires improving performance both in terms of effectiveness and efficiency [2]. One sector that becomes an important thing to note in performance improvement is in the education sector [3]. The development of information technology is needed in a quality education system in all fields, including in terms of educational material, teaching, testing, facilities and infrastructure [4].

Technology that develops at this time plays an important role in dealing with various problems that arise in managing and resolving problems that exist in educational institutions [5].

Data processing that is done manually requires a long time, so if it needs large data it is less efficient and requires a lot of time and energy [6].

Based on the description above, then the design of information systems processing students value in SMP PGRI 1 Semaka uses a web-based information technology so that it can be used to facilitate teachers and employees in processing the value of students quickly, accurately and effectively to produce the right information.

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1.1 Research Objectives and Significance of The Research

The objectives to be achieved from this research are :

1. Applying and developing knowledge.
2. Making a design of information processing value systems
3. Finding and identifying the problems faced.

The significance of the research are :

1. As input material in processing the value data, to improve the quality of work quickly and accurately.
2. Extending knowledge and adding experience about how to design an information system.

II. THEORITICAL FRAMEWORK

2.1 Definition of System Information

Information system is a collection of hardware and software designed to transform data into useful information [7]. The information system is a system within an organization that brings the needs of daily transaction processing which supports the organization's operational functions that are managerial with strategic activities of an organization to be able to provide certain external parties with the necessary reports [8].

2.2 Definition of Value System

Information systems imply an organized data collection along with the procedures for its use which include more than just presentation [9].

2.3 Definition of Website

Website or often abbreviated as site, are several web pages that have interrelated topics, sometimes accompanied by images, videos, or other types of files [10].

A website is usually placed at least on a web server that can be accessed through networks such as the internet, or local area networks (LANs) through internet address that is recognized as a URL [11].

2.4 Definition of PHP Dan MySQL

2.4.1 PHP

PHP is a web programming language or scripting language designed to create web-based applications. PHP is the most widely used script programming language today. PHP is widely used to program dynamic websites, although it is not possible to use it for other uses.

2.4.2 MySQL

MySQL is a Relational Database Management System (RDBMS) that is distributed



free under the GPL (General Public License). Where everyone is free to use MySQL, but may not be a commercial product. MySQL is a derivative of one of the main concepts in the database for a long time, namely SQL (Structured Query Language). SQL is a database operating concept, especially for data selection or input, which allows easy operation of data to be done automatically.

2.5 SDLC Method

SDLC is a step in developing information systems. SDLC provides a complete framework for form engineering activities and the development of formal information systems [11].



Figure 1: SDLC Method

Usually, the SDLC (System Development Life Cycle) method will focus on the methods and technicians used. SDLC stages in building a Web information system:

1. Planning

Planning is feasibility, interview, observation, and Questionnaire. In this stage, the first thing to do is to provide a form to the user that is used to find out the user's request [12].

2. Analysing

Analysing is a stage of analyzing the needs of the user of the system to be made [13].

3. Designing

Designing is a stage of system design based on the analysis of needs that have been determined to be a system that will be applied [14].

4. Coding

Coding is the stage of making the system based on the analysis of needs and design that has been determined [15].

5. Testing

Testing is the stage after the application is completed. This stage serves to evaluate the application to ensure that the application is running [16].

6. Implementing

After the application is deemed appropriate and running, the application can already be applied and used by the user [17].

7. Maintenancing

Maintenancing is the stage of system maintenance and development [18].

III. RESEARCH METHODOLOGY

In designing this information system the researcher used the SDLC (Software Development Life Cycle) method. The stages were as follows:

a. Planning Stage

In this stage, the researcher recognized, defined the problem, determined the purpose of the system be made and identified the obstacles and conducted a feasibility study of the system design that will be created at SMP PGRI 1 Semaka [19].

b. Analysing Stage

In this stage, the researcher analyze the needs of the system to be designed and take into account the costs incurred by SMP PGRI and considered the risks that will occur with the existence of this information system [20].

c. Designing Stage

In this stage, the researcher designed page by page and determined the layout, colors, images, and databases that are expected to become an information system for SMP PGRI 1 Semaka that will be accessed by a user [21].

d. Implementing Stage

Writing and installing programs that have been analyzed and designed by using PHP and MySQL as well as testing the system that has been implemented with using a variety of existing browser technology and checking documents by following the design of the information system created [22].

e. Maintenancing Stage

In this stage, the researcher improved the errors that occur, modified, update, and developed the system and improved the performance of the system that has been designed [23].

IV. REQUIREMENTS ANALYSIS AND DESIGN

4.1 Hardware Requirements

The following are hardware specifications used in building this information system:

- Processor : Intel Core 2 Duo
- Ram : 2046 MB
- Hard Disk : 2,00 GB

4.2 Software Requirements

The following are software specifications used in building this information system:

- Operating System : Windows XP/7
- Text Editor : Macromedia Dreamweaver 8
- Web Server : Xampp - Win32-1.7.0
- Database Server : MysQl
- Web Browser : Mozilla Firefox
- Drawing tool : Microsoft Visio 2007.

4.3 Context Diagram

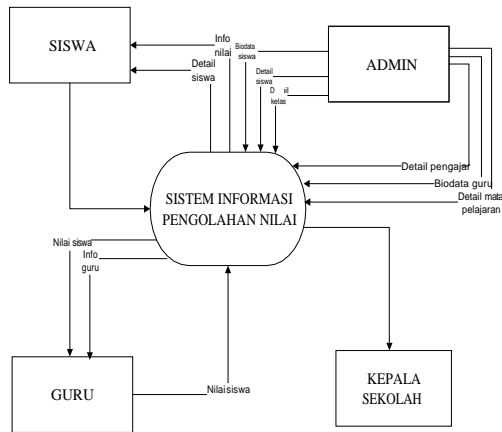


Figure 2: Context Diagram

Header		
Admin	Home News Guest Book	Time
Profile	News Content	Calendar
Teacher		Visitors
Students		
Alumni		
Footer		

Figure 4: Main Page Screen

4.4 ERD (Entity Relationship Diagram)

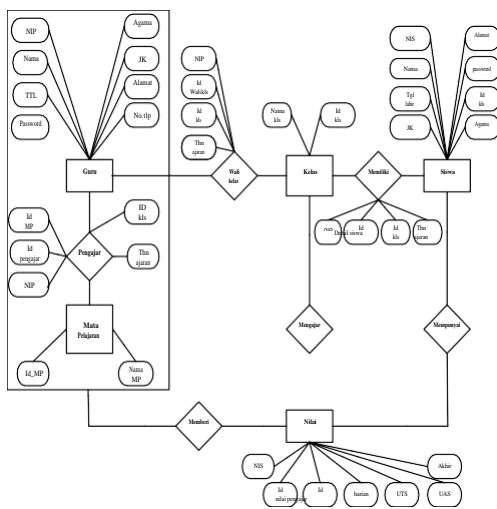


Figure 3: ERD

4.5.2 Students Input Screen Design

Explaining about students input screen design in value processing information system.

Add Student Information

Name

NISN

Gender

Class

Figure 5: Students Input

4.5 Interface Design

To complete the design it is necessary to describe how the input and output are displayed to facilitate the creation of views that will be created later.

4.5.1 Main Page Screen Design

Is a main page design in value processing information system at SMP PGRI 1 Semaka.

4.5.3 Admin Input Screen Design

Explaining about admin input screen design in value processing information system.

Admin Input

User

Password

Figure 6: Admin Input Screen

4.5.4 Guest Book Page Design

Is a guest book page design for the visitors who want to give criticism and suggestion.



Guest Book Content

Name

Email

Suggestion

Security Code

Figure 7: Guest Book Screen

4.6 Display Screen of Program Implementation

4.6.1 Main Page

The main page is designed in such a way as to provide convenience for website visitors so that the information presented by the school (admin) can be well received by website visitors. The design of the display is as follows:



Figure 8 : Main Page

4.6.2 Students Input Page

This page is used to input the students data in value processing information system. The students input design is as follows:

TAMBAH DATA SISWA

NAMA:

NISN:

JK:

KELAS:

Figure 9: Students Input

4.6.3 Admin Page

Admin input page is the page that will be used to enter data about the admin or page to add a new admin. The admin input display design as follows:

INPUT ADMIN

USER_NAME

PASSWORD:

Figure 10: Admin Input

4.6.4 Guest Book Page

This page is used to display data on visitors to the PGRI 1 Semaka SMP website who have filled in the guest book and it is displayed on the website page. The design of the guest book list display as follows:



Figure 11: Guest Book Content

V. CONCLUSION

Analysis of the value processing information students design of PGRI 1 Semaka Middle School, it can be concluded that information technology is needed to process student grades quickly, effectively and accurately, to produce the correct information needed by the user. The information system can also make it easier for teachers and employees to process students' grades.

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