

ASSESSMENT OF STUDENT RESULT INFORMATION SYSTEM DESIGN IN VOCATIONAL HIGH SCHOOL

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Abstract

This study aims to produce design software Student Assessment Result Information System based on PHP and MySQL that can manage employee personal data, personal data of students and student Report the results of learning data each semester and each year can access from every time and every place.

This type of research is the Research and Development. Methods of software development using the Waterfall Model. Software testing is done through white-box testing and black-box, as well as alpha and beta through testing by a number of experts and users. The quality factor McCall instruments used as an indicator to determine the level of proprietary software in terms of correctness, integrity, and usability, while in terms of reliability in the measurement scale using Likert Scale. Tests carried out through instrument validity and reliability testing. Instrument reliability test using Cronbach Alpha coefficient formula.

Techniques of data collection using interviews and questionnaires. The Techniques of data analysis using quantitative descriptive analysis.

The results of the draft final-Based Information System Student Assessment of PHP and MySQL is a blueprint for the management of employee personal data, personal data of students, and student report the result of learning data each semester and each year data.

Keywords : Information System, Student Assessment, PHP, MySQL

1. Introduction

With the era of growing globalization, the need for information even more important to also include those who pursue the world of education library. So if there is a lack of management can lead to the launch chaos in controlling the flow of information, re-making and planning technical and strategic. For that we need a system that relied upon to support the need for such information. One system word good when will facilitate all the processes, one by way of a data processing system computerization. The use of computers as Data processing equipment can be said that Best for now, because it can increase the pace of work so time and energy efficiency can be achieved in process the data.

In the operations of a school, generally involves a lot of student data collection. Both a collection of personal data of students, student extracurricular activity data, the data of personality and character of students, student assessment data, and so forth. The data set is usually stored in an archive (paper) and the file on your computer. Data storage on a computer can use Microsoft Word and Microsoft Excel, but most of the data storage is still done manually. In addition to student data, the operational activities of a school employee data set also involves working on it. Management of

employee data even this is still done manually, mostly stored in the school archives. The main management of the students at the school, is still done manually by the classroom teacher. The delivery of value to parents who are still in the form of report cards submitted by the end of each semester. When the homeroom teacher or charging a report card, teachers will find the data value of each student one by one, adding the average value, and rank of each student, then teacher can fill in the student report cards. Such a way that would be very inconvenient and time-consuming and labor. Likewise, the student profile data management and employees at the school, is still done manually. So when searching a data, will require a long time. Along with the development of science and technology today allows all areas of human life can be done with the help of computers. Similarly, the data management of the students in a school. By utilizing database software and internet access, data profiling and the students can be accessed quickly by the principal, teachers, and students themselves so that the efficiency of energy and time can be improved.

2. Study Literature

In the preparation and design information systems, we must use basic concepts as well as

reference and basis, where such concepts a theory that relates directly with the design of information systems and existing problems in a organization. Here is a theoretical basis theories that describe the author use in systems analysis and design to be designed.

2.1 Model Waterfall (Waterfall Model)

At the waterfall, there are several schemes which stages of each explanation of the stages are as follows:

- a. Requirements analysis and definition Service, programming language, and objective system determined in consultation with user system. These requirements are then defined in detail and function as a system specification.
- b. Software system design and Dividing the system design process requirements in the system hardware or software. Activity These define the

system architecture overall. Software design involves the identification and description abstraction system software fundamental and relationship.

- c. Implementation and Unit Testing At this stage, the design of the device realized as a series of software program involves the testing unit verify that each unit has meets the specifications.
- d. Integration and System Testing Program unit or individual program and tested as a system integrated in complete to ensure that system requirements have been met
- e. Operation and maintenance: operates the program in their environment and perform maintenance, such as adjustment or change because adaptation to the actual situation.

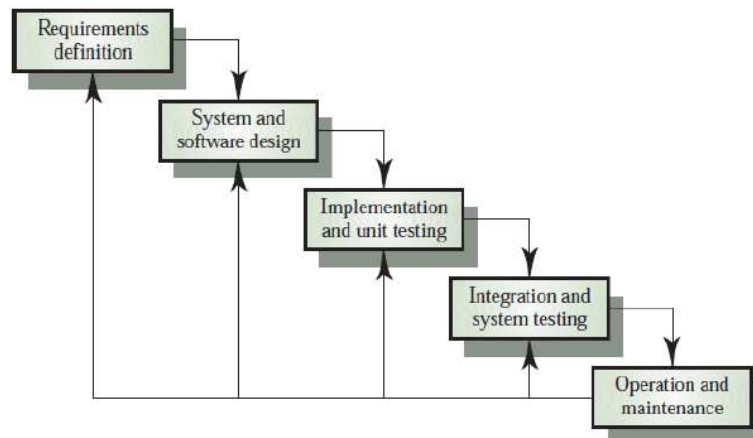


Figure 1. Model Waterfall (Ian Sommerville, Software Engineering, 2005 : 43)

3. Implementation

3.1 Requirement Definition

System requirements are contained in the application software the student information system is :

a. Information need

Table 1. Information Need

No.	Information	Goal	Use
1	Access to data processing according to the "Admin Utama" Privileges	Main Administrator	When there is new data that needs to be processed and the required
2	Access to data processing according to Administrator Privileges	Administrator per section	When there is new data that needs to be processed and the

	per Section		required
3	Access to data processing according to the Access Rights as a lecturer (Guru)	Lecturer (Guru)	When there is new data that needs to be processed and the required
4	Search the required data values	User	When Searching Data

b. Application Need

Application requirements that must be met in the process of making the student information system using PHP software interface are :

1. User

Displaying search results data is a student profile information and the corresponding half of the subjects that have been taken.

2. Main administrator

Enter new data, old data editing as needed, and delete data if it is not necessary.

3. Per Section Administrator

Enter new data, old data editing and deleting data corresponding access rights of each section.

4. Lecturer

Enter new data, old data editing and deleting data corresponding access rights of each section. Data is entered in the form of the data values and personality.

5. Server

Control and data processing according to search data in the form of student profile information data and the student.

c. Software Need

Software needs in an information system is the need of the accesses necessary to perform the input data, storing data, recording data, and process data. And access needed to perform data retrieval by the user.

Table 2. Description Need

No.	Description Need	Keterangan
1	Menu utama	The Main Menu of Application
2	Login	Login for Administrator Utama, Administrator per Bagian, Guru, and User
3	Logout	Logout for "Administrator Utama", "Administrator per Bagian", "Guru", and "User"
4	Setting database	Perform the addressing database
5	Ganti password	Change password for "Administrator Utama", "Administrator per Bagian", "Tenaga Pengajar", dan "User"
6	Hak akses	Grant permissions for "Administrator per Bagian" and "Guru"

7	Keluar	For close the application
8	Data siswa	Data processing of student profile data
9	Data orangtua siswa	Data processing of the data profile of parents
10	Data pegawai	A data processing school employee profile data
11	Data wali siswa	Data processing of student profile data guardians
12	Data kelas	Data processing of the data class
13	Data tahun ajaran	Data processing of the data of the school year
14	Data mata pelajaran	Data processing of the data subjects
15	Data ekstrakurikuler	Data processing of data in the form of extracurricular
16	Data pengguna	Processing of user data
17	Data wali kelas	Data processing homeroom
18	Data pengajar	Data Processing for teacher
19	Data guru ekstrakurikuler	Data Processing for extracurricular teacher
20	Data jabatan	Data Processing for position
21	Data KKM	Data processing for Minimal criteria for provision
22	Data catatan	Data Processing for student academic record
23	Data kepribadian	Data Processing for personal
24	Data kepribadian siswa	Data Processing for Student Academic Record
25	Data nilai	Data Processing for Student Grade
26	Data nilai ekstrakurikuler	Data Processing for Student extracurricular grade
27	Data siswa naik kelas	Data processing grade students who have

3.2 System Desain

System design is done by a structured approach (procedural). Structured approach is a structured formal approach to solving problems in business activity into smaller parts that can be arranged and relate to then be put back together into a single unit that can be used to solve the problem.

3.2.1 Proses Desain

a. Data Flow Diagram Level 0

Context diagram describes the sources, processes and outcomes of public information.

There is an outside party or the environment that provides input and output there is the party receiving the application. In detail, the context diagram Students Value Information System is shown in Figure 2, the data flow diagram level 0 or memeperlihatkan context diagram that the value of Student Information System application consists of four processes. The user process as the Main Administrator, the Administrator user as per section, the user process as Lecturer, and the user as User. There are differences in each individual user, as the Main Administrator, has full access

rights in doing pegolahan data. As per Section Administrator and Lecturer, can perform data processing in accordance with the permissions

of each section, while the user is only able to process data search report card.

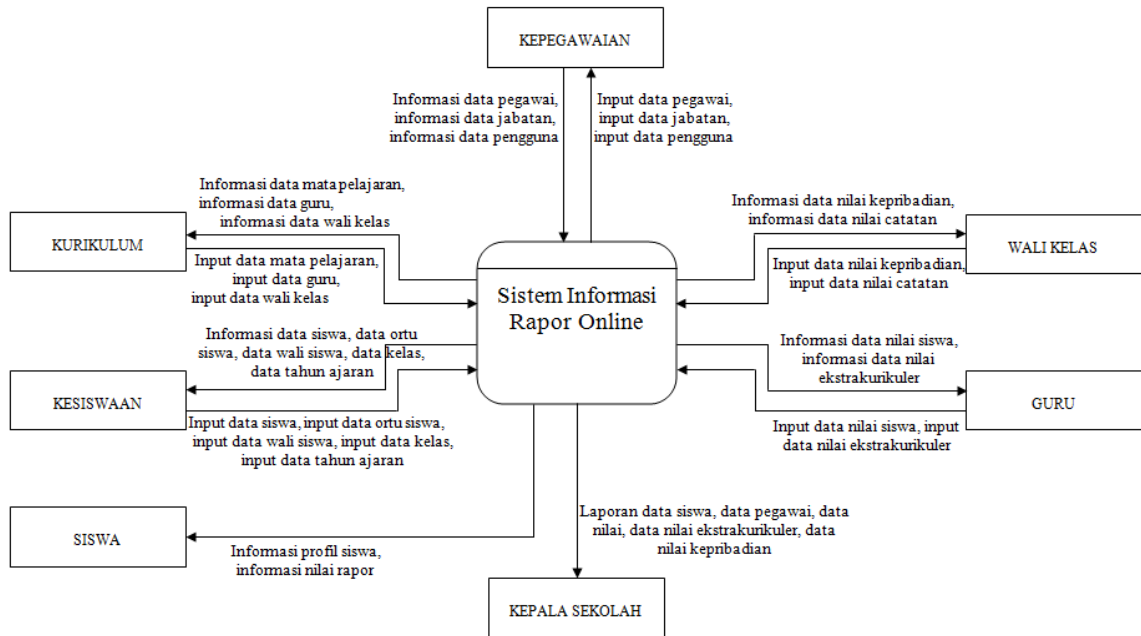


Figure 2. Data Flow Diagram Level 0

Figure 2 shows that the application of data processing is divided into 6 sections which will be split again in the Level 1 DFD, the DFD level 0 is universally explained that there are two processes

that occur to the data, ie data processing and reporting process by Admin (Administrator), while the user is only able to process the data without any data reports.

Definition of all processes that occur in level 0

b. Data Flow Diagram Level 1

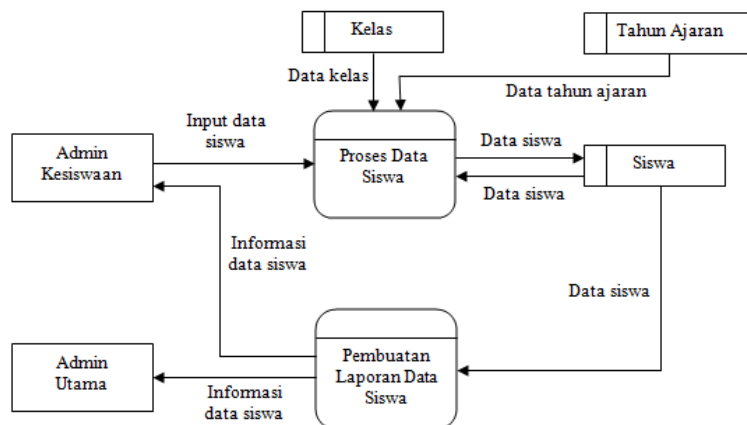


Figure 3. Student data processing

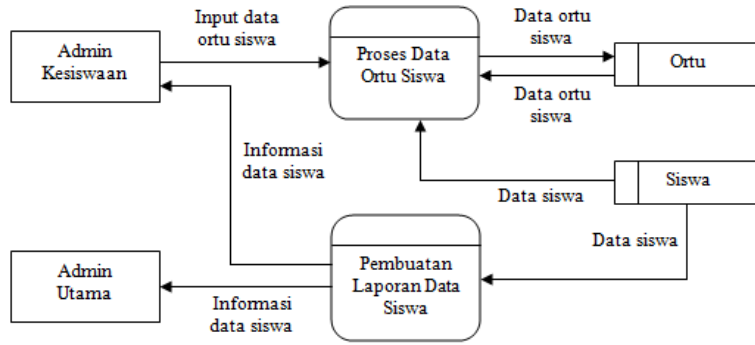


Figure 4. Student's Parent Data Processing

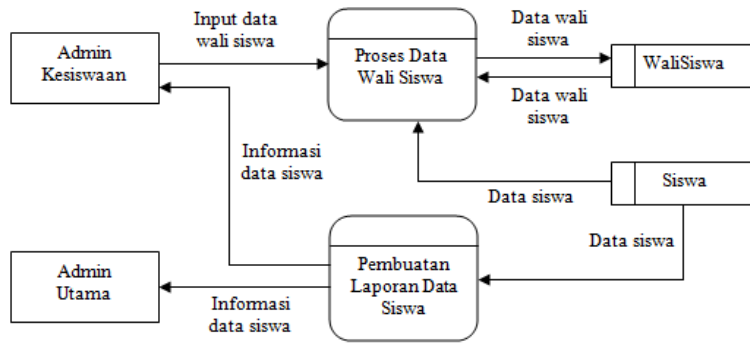


Figure 5. Data Processing For Guardian's Student

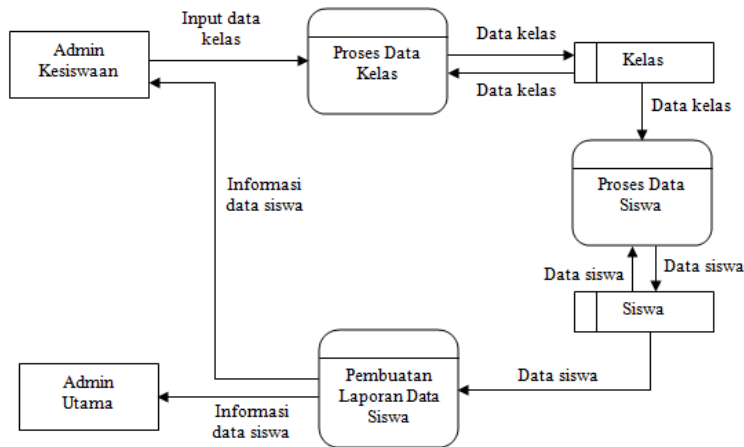


Figure 6. Processing Data for Class Data

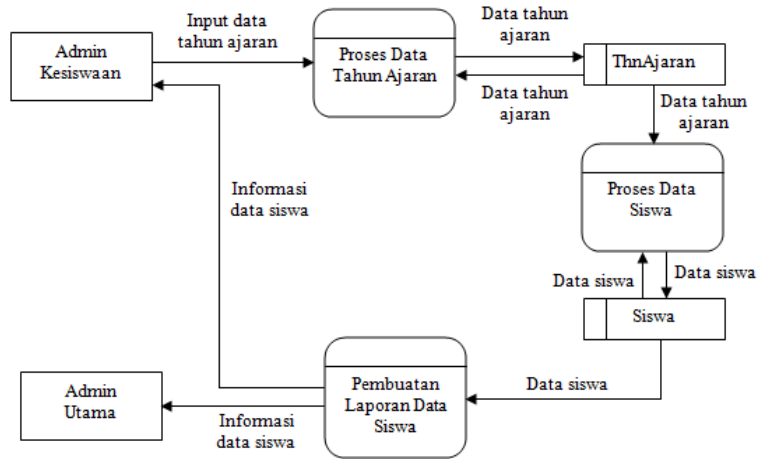


Figure 7. Processing Data for Student Data Report

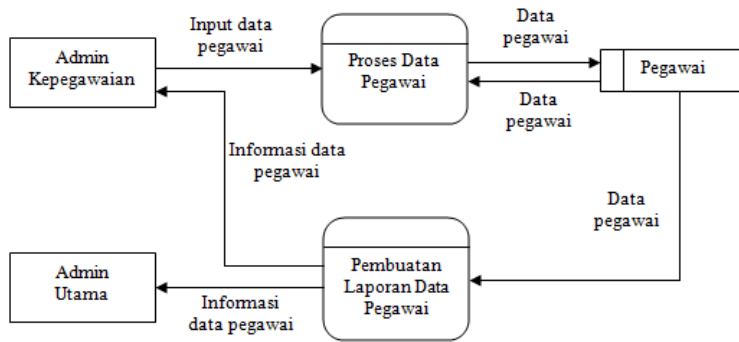


Figure 8. Processing data for Report employee data

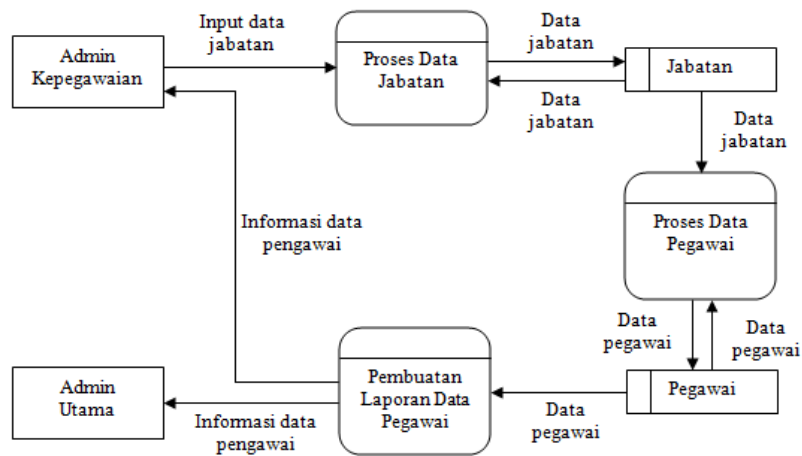


Figure 9. Data Processing for application's user

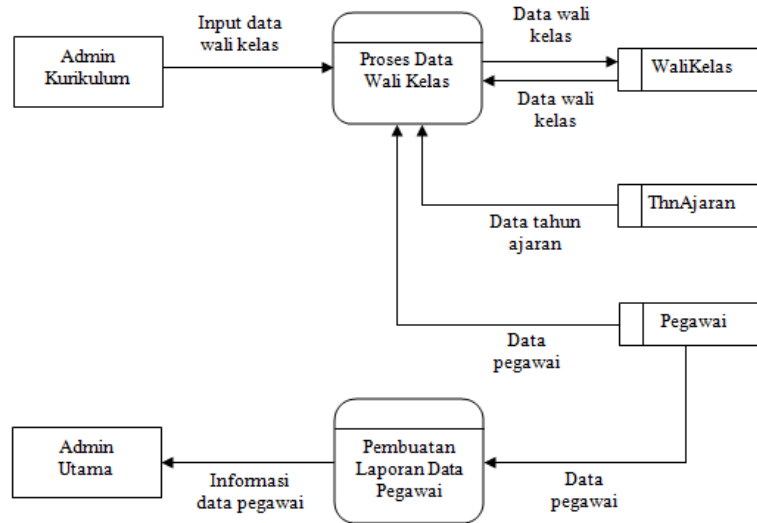


Figure 10. Processing Data for Student's homeroom

4. Conclusion

The design of the resulting system can provide faster, more precise and accurate than the old system, as well as providing ease of library staff in taking the necessary decisions. Data storage to form a file has several advantages such as:

- For faster access and space used is not too large.
- The errors arise frequently performed by the system can be reduced.
- Ease of service in making the report.
- Reports can be made with a variety of formats easily, quickly and accurately

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