

Web-Based Attendance Information System At Bogor Technology Academy

M.Fahmi Rammdani^{1*}, Annas Rifai², Istiqoomatun Nisaa³

^{1,2,3} Program studi teknik Listrik. Akademi Teknologi Bogor

ABSTRACT

The influence of the development of information technology has now reached all fields of education, the need for accurate, precise and fast information in presenting very complete data is one of the important goals. For this computer plays an active role in all fields and will facilitate human work. The purpose of this research is to provide convenience during the process of processing student attendance data and minimize the worry of losing data or damaged data. The system development method uses the waterfall model. The software used is : windows 7 32-bit, Microsoft Visual Basic 2010, MySQL and Xampp. named: desktop-based student attendance information system, an application. The result of this research is a website-based employee attendance information system to manage employee attendance data that is still done manually so that it can be processed more efficiently. Web-based attendance can also be used as a benchmark in employee development.

Keywords: System; WEB; Usecase.

Corresponding author: mfamiramdanii@gmail.com

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Introduction

The utilization of information exchange technology will be simpler and faster, besides that information technology also has an important role in the process of data processing, information management and data management, including the utilization of the use of the internet in processing attendance information. attendance is a data collection activity to determine the presence and absence of a company employee. Employee attendance is very influential on work productivity in achieving employee performance in an institution.

The information system is very important for everyone, with information there will also be reciprocity in good progress in all fields. From the existence of such a progress, a change will occur, and changes will occur if there is information created and with the existence of information, a new discovery will be developed. Bogor Academy of Technology is one of the universities in Bogor City, which opens the Electrical Engineering and Mechanical Engineering study programs. To support the process of learning activities, it is necessary to have interaction between employees and the position holder or leader which is realized in the form of attendance or attendance to measure employee performance.

The attendance process at the Bogor Academy of Technology is still done manually. Manual attendance is a way of entering attendance or arrival by using a pen through signatures and paper. Attendance is carried out on the attendance sheet prepared by the officer, so that data collection of attendance hours, exit hours, recapitulation of employee attendance and absent information requires a relatively long time in the calculation process. In addition, this manual attendance process is prone to data loss and the difficulty of the data search process which is feared to affect the credibility of the data used for making employee attendance reports, so an attendance information system is needed to help manage employee attendance. The manual attendance system is more directed at employee honesty, but there are still those who use the system on the grounds that it is not ribert.

To overcome these problems, a website-based employee attendance information system is needed which is used to manage attendance data which can be used as one of the benchmarks in employee performance assessment. Website technology was chosen because it has several advantages including being able to run on any operating system as long as it has internet access, and does not need high computer specifications to use website-based applications so it is suitable to be implemented. With this information system, it is hoped that it can minimize attendance problems at the Bogor Academy of Technology.

Based on the description above, the problem is How is the web-based attendance system at the Bogor Academy of Technology. While the research objective is to find out the web-based attendance system at the Bogor Academy of Technology. System according to Raymond McLeod (in Al-Bahra Bin Ladjamudin, 2013: 3) System is a group of elements integrated with the same purpose to achieve a goal.

purpose. Meanwhile, according to Gordon B. Davis (in Al-Bahra Bin Ladjamudin, 2013: 3) System as interrelated parts that operate together to achieve several goals or objectives. Definition of the system according to Abdul Kadir (2003: 1) in the book Introduction to Information Systems, namely: "The system is a set of interrelated or integrated elements intended to achieve a goal". Tata Sutabri (2012: 38) Information system is a system within an organization that brings together daily transaction processing needs that support managerial organizational functions in the strategic activities of an organization to be able to provide certain external parties with the necessary reports. Meanwhile, according to Al- Bahra Bin Ladjamudin (2013: 13) describes the information system as a set of organizational procedures which when implemented will provide information for decision makers and / or to control the organization.

The web is one of the most widely used internet services compared to other services such as ftp, gopher, news or even email. A web-based information system is a set of interconnected components that function to collect, process, store and transfer information in the form of text, images, sound, and information presented in the form of hypertext and can be accessed by software to support the creation of activities in the organization in achieving goals.

To translate hypertext documents into documents that can be understood by humans, the web browser through a web client will read web pages stored on a webserver through a protocol often called HTTP (Hypertext Transfer Protocol). PHP stands for Hypertext Preprocessor, which is a scripting language attached to HTML with the aim of being widely used to handle the creation and development of a web. PHP was first written and introduced around 1994 by Rasmus Lerdorf through his site to find out who had accessed his online summary.

Research Method

The method used in designing the attendance information system in this research is the waterfall method. This research is the waterfall method. The waterfall method is a sequential and systematic information system development model, so that each stage must be carried out in order. the waterfall model provides a sequential or sequential software lifeflow approach starting from analysis, design, coding, testing, and supporting stages.

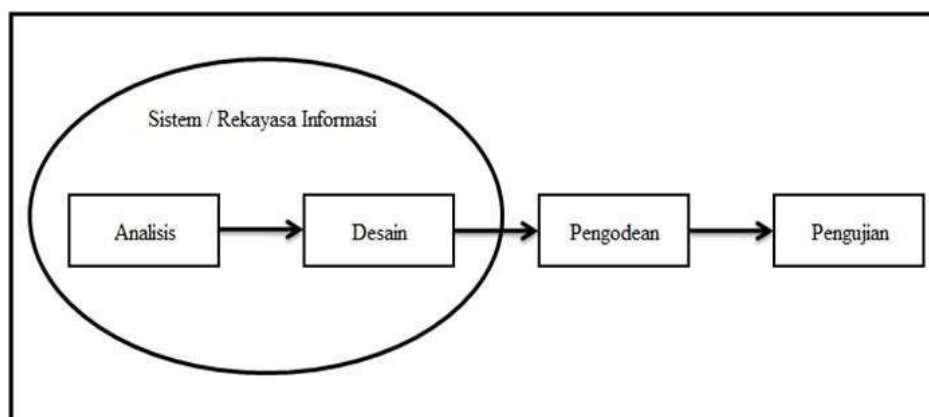


Fig 1. Waterfall Method

Below is an explanation of each stage in the waterfall method found in Figure 1.

1. Software requirements analysis
The process of collecting needs is carried out in an initiative to specify software requirements so that it can be understood what kind of software is needed by the user. The author analyzes software needs by directly observing how the Attendance workflow occurs at the Bogor Academy of Technology, interviewing related parties and asking what characteristics are needed in the information system to be created.
2. Design / Design
At this stage the author carries out a multi-step process that focuses on the design of making software programs including data structures, software architecture, interface representations, and coding procedures based on the analysis of software requirements that have been carried out previously.
3. Implementation
The design created must be translated into a software program. The results of this coding stage are in accordance with the design that was made at the design stage.
4. System Testing
Testing the program that has been made is done to minimize errors and ensure the resulting output is as desired.
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5. Support or maintenance
After the program is successful in the testing stage, the program will be submitted to the user. However, it is possible that there will be changes to the program that the user wants to make. In the support or maintenance stage, you can repeat the development process starting from analyzing specifications for changes to existing software, but not for creating new devices.

The Web Attendance System consists of several inputs, including the following:

1. Division data input
2. Employee data input
3. Attendance data input

Some outputs (outputs) of the Web Attendance system, such as the following:

1. Employee data attendance report
2. Attendance report of division data

Some processes of the Web Attendance system, such as the following:

1. Division Data Process
2. Employee Data Process
3. Attendance Data Process
4. Report Recapitulation Process

Result

1. System requirements analysis System requirements analysis is divided into two parts, namely functional requirements analysis and non-functional requirements analysis.
 - a. Functional Needs Analysis
Functional needs analysis aims to find out what features or functions the system must provide to meet user needs. There are 4 Use case diagrams in the attendance system. Use case diagram is an overview contained in the system, this has input, process and system output.
 - b. Non-functional Requirement Analysis
Non-functional requirements are limits to the services or functions offered by the system such as time limits, limits to the development of standardization processes, and others. Non-functional needs of the Employee Attendance Information System include:
 - 1) Intranet technology is used in the implementation of this system.
 - 2) The system can be run on several web browsers including Internet Explore (edge), Google Chrome and Mozilla Firefox.

- 3) Each employee can only take attendance (in and out) once per day.
2. System Design
System design uses class diagram modeling. There are 4 classes in the attendance information system, namely login, employee accounts, attendance, and reports. In starting the application the user will be directly faced with the Login Menu display.
3. Implementation is a data input method that focuses on the functional needs of the software, therefore data input trials allow software development to make this application.
4. System testing in this study using the Blackbox Testing method. Based on the unit test results shown in the table below, it can be concluded that all the desired functionality requirements have met the criteria or run smoothly. Testing the proposed system is carried out to determine the success or failure of a program designed according to the needs of the employee attendance application. Testing is done with the data entry method. The data input method focuses on the functional needs of the software, therefore the data input test allows software development to make this application. Data input testing is done to see and track student attendance data on the functional requirements of the application without ignoring the internal workings of a program.

Conclusion

Employee attendance is very influential on work productivity. Attendance and punctuality are also used as indicators in employee performance appraisal. Website-based employee attendance information system to manage employee attendance data that is still done manually so that it can be processed more efficiently. Web-based attendance can also be used as one of the benchmarks in employee development.

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