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THE VIRTUAL WEBBOARD

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Abstract

Whiteboard is one of the media to illustrate knowledge to the student. However, whiteboard only seen by teachers and students in the same room, but learning system has evolved into distance learning. Media learning technology developed to improve the quality of students' absorption. To help distance learning we develop virtual board and expected of teachers and students who are in distance learning can see the same whiteboard

This virtual board developed using software development methods. We develop as teachers and students culturally appropriate in the use of whiteboards in the classroom. We purpose the no distance problem between teachers and student and learning process can be held as in the same room.

This virtual board called the Virtual Webboard. Virtual Webboard developed a web-based so it can be accessed from anywhere at any time. Many features accessible in virtual webboard. Virtual Webboard editing features facilitate with write, typing, drawing, erase, select font, select pen. To the more advance use of virtual board is equipped with chat features and sharing the graffiti boards to social media.

Key Words: *distance learning, whiteboard, webboard*

I. Introduction

Whiteboard usually used in a room where the presenter and the audience were in the same room. Audience receive the information directly that will be provided. With the whiteboard participants can receive the described information and can be copied back into their self-note based on information or orders which have been described presenter on a conventional whiteboard. The whiteboard has been a distinctive culture in learning activities. Distance learning is a learning model that implemented for overcoming differences in distance, time, and place in the process of organizing an education. The main characteristics of distance learning is implementation that can be held in a different place and time. This is the distinguishes distance learning with conventional learning. Thus the implementation of education can reach students who are far away from the teacher or the organizing institutions Reni, A. (2014). In the distance learning implementation, technology has an important part. Information technology can improve the quality of long-distance lectures. Distance learning with technology base can increase student interest and motivation to learn (Sungkono, 2005). In the

distance learning, culture to writing some note based on presenter information in the whiteboard cannot directly worked. Based on this problem, we propose a virtual webboard. Virtual webboard expected to be media communication to deliver more real information to the audience.

II. Method

The research study was undertaken with several step below:



Figure 1 Research Method

The study of literature was undertaken in an attempt to identify some of the key issues in distance learning and determine suitable technology to implementation.

In the system design step, we describe requirement system and feature needed. System requirement illustrated with some figure below.

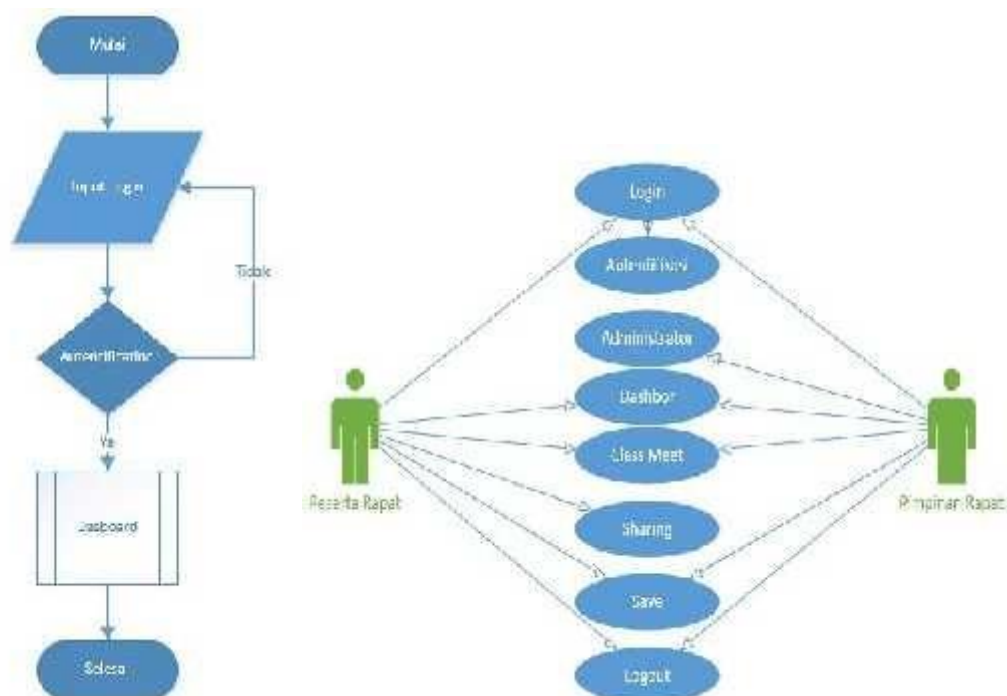


Figure 2 Flowchart General System and Use Case System

In Figure 2 can be explained that there are flowchart virtual whiteboard system in general. Can be explained that the first step in a virtual whiteboard system in general is input user ID and password into the system, the next step is the system will read the ID and password that have been fed with correction of ID and Password. If the ID and password are correct, the system will directly enter the web dashboard, and when the ID and password is not correct then the system will loop back to the login input. Use-case diagram to explain feature of the system as seen as people who are outside the system or actor. The design process that occurs in virtual whiteboard system can be described in the figure 2. This system topology is the topology that is used to run virtual whiteboard where this topology there is a server and client, the server uses a computer that serves the client computer requests by providing resources such as more memory, hard drives with high capacities. The topology present in figure 3 below.



Figure 3 Client Server Topology Client

In the implementation step, which means the process of making the application that implemented on the server and client, code the things that implementation with HTML 5 features in it. HTML 5 could include the manufacture canvas for whiteboard, application of video, audio and storage web. Node.js itself is used as a platform that uses language javascript to be executed as a server. The advantages of node.js itself could use javascript executed as a server-side, another advantage is non-blocking technique that is executing an operation

without waiting for the previous operation completed its execution, resulting in web applications more quickly and efficiently.

III. Result and Discussion

The result webboard home as seen at figure 4 below.



Figure 4 Home webboard

The initial page at figure 4 are the webboard will start the activity. There contain registration form and a login form for users. Sign up or the registration form has a function as a registration for the user who wants to use this virtual board, where the user must fill out the registration form to be able to access the virtual board. The login form using for user that has account in the system before, each user will be able to explore this webboard.

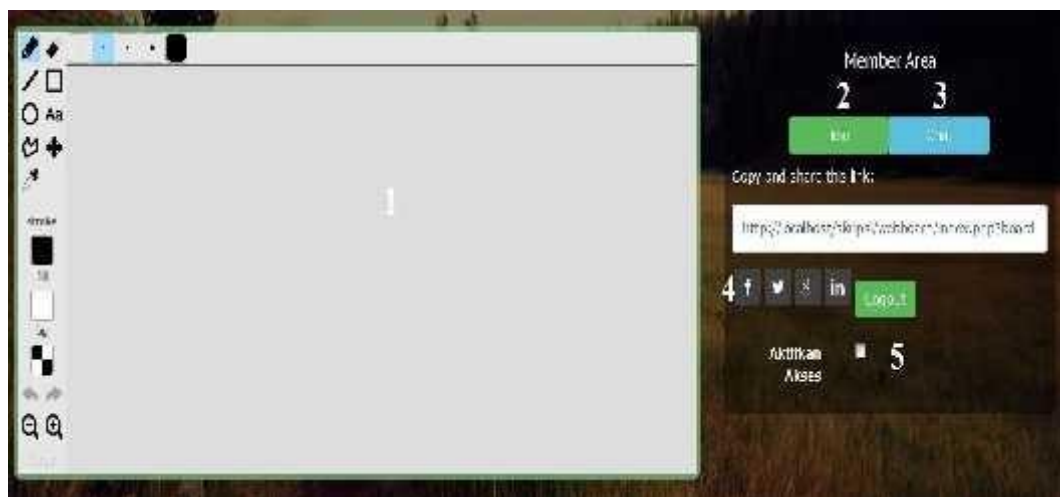


Figure 5. Webboard

As seen as figure 5, there are the webboard home page. With sign number 1 is board that has functions as a whiteboard, the main user or assignee can access to draw or write down their information on the board. Sign 2 are Join function that

provide links to other users or students can enter in to the group that has made a major user and see the pictures on the board. The chat function as sign number 3 developed for communication between online users, where users can interact in a chat to exchange information.

IV. Conclusion

In this research has been develop to support webboard illustrating the information in distance learning. We hope webboard can be utilized to improve the quality of distance learning.

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