

## Design and Implementation of Android-Based Public Transport Trayek using Cloud Computing Infrastructure

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### ABSTRACT

Transportation Route System is a system that was built to improve and to meet the needs of public transport users with technology at the present time. the purpose of making the transportation route system is to facilitate the public so that it can create facilities when searching for the desired transportation. The transportation route system uses SDLC (system Development Life Cycle) technology in building it so that the system is made more neat and complex. Google maps technology becomes the main thing on the transportation route system because Google Maps will show the route when the transportation is running.

**Keyword : Transportation, SDLC, Google Maps.**



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### 1. INTRODUCTION

Android is starting to become the needs of the community with the many technologies and applications available and can facilitate the community [1]. At present the search for public transportation routes is still using the manual method, for example, users must ask first when they want to travel using public transportation when the destination is not known what public transportation routes should be used. In searching for this information, many users only rely on information media such as track boards and information banners at the terminal, this media has not provided a little information. Barriers to finding information occur if the user does not find the information media. The results of Luqman Jiwa Winanda's research (2014) Broadly speaking, the application that was designed to provide complete information about public transport routes, operating hours, rates and photos of public transport in South Tangerang [2].

According to Peter Mell and Timothy Grance (2012) Cloud Computing is a model that allows ubiquitous (anywhere and anytime), convenient, on-demand network access to computing resources (for example: networks, servers, storage, applications, and services) that can be quickly released or added [4]. Based on the description above, it is deemed necessary to use the Android-based public transport route application using the Cluod computing infrastructure as a medium or tool used by users of public transport transportation services. The purpose of this study is to make this application as a medium that is a need for users of urban transport and to design an Android-based public transport route application using cloud computing infrastructure.

### 2. LITERATURE REVIEW

According to Harsono (2011) implementation is a process for implementing policies into policy actions from politics into administration. The development of policies in the context of perfecting a program. The above understanding shows that the word implementation boils down to activities, the existence of actions, actions, or mechanisms of a system [7]. According to Yuhefizar (2012) an application is a program created in a software with a computer to facilitate the work or tasks such as the application,

use and addition of data needed. According to Sutabri (2012), an application is an applied tool that functions specifically and integrated according to its capabilities. [6]. According to Pressman (2012) software is instructions that when run provide features, and desired performance, data structures that allow programs to manipulate information; And descriptive information on printed copies and virtual forms that describe the operation and use of programs [5]. According to Safaat (2012) Android is a Linux-based operating system for cellular phones, smart phones, and tablet computers. Android is an open platform for developers to create their own applications that can be used by a variety of mobile devices [3].

### 3. RESULTS AND DISCUSSION

Implementation of the Android-based city transportation route system that uses the PHP programming language and MySQL database that can be operated using the Android operating system along with supporting applications found on Android and can be used in a variety of hardware with supporting device specifications. Implementation is done by selecting laptop hardware with Microsoft Windows 7 operating system

At this stage will be explained part of all the functions that exist in the STTH Medan student document publication system and how the work of applying cloud computing such as inputting, displaying, deleting, and editing data can be explained in the steps below. So that system users can understand in more detail how the system works.

The main menu display is the display displayed by the city transportation route system, the user can see the main menu display which consists of menus such as the home menu, search, angkot, maps and about. on the main menu display system looks at the following Figure 1:



Figure 1 main menu display

Display user menu is a display that displays directly the menu list on the system such as the home menu, search, angkot, maps and about, see Figure:



Figure 2 Display Menu system

Search menu display which functions to search for routes that are already available by the system and so that users can easily search for the route they want, the search menu view see image:

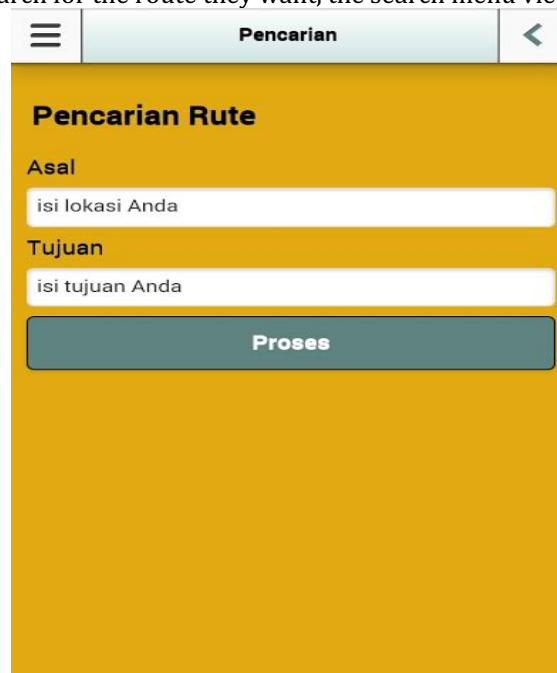


Figure 3 Display edit profile

Angkot menu display functions so that users can see a list of transports that are already available by the system, see the figure 4:



necessary and must be noted that In the next stage of development, it is recommended for anyone who will continue the system needs these consumables add facilities or a device that if possible to support the smooth process of information on urban transport routes. There is a need for better implementation and maintenance of the system that has been created, so that the system can be used in accordance with the needs of urban transport users.

#### 4. CONCLUSION

In the description of the series starting from the process of making the Android-based city angkuta route system, it can be drawn several important conclusions that the Android-based city transportation route system that is designed is expected to minimize the ineffectiveness in the use of android-based technology in city transportation and can facilitate lay users of city transportation with various types of city transportation. This city transportation route system can help simplify and speed up the process of finding transportation routes for users.

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