Implementation of Android Application for Lecturers Existence

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Abstract—Android-based smartphone is the device that widely used by people, especially in Indonesia. A smartphone not only lets someone make telephone calls but also easy to access the internet, send and receive an email, open social media accounts like Facebook, Twitter and others. In addition, many chat applications such as Whatsapp, Blackberry Messenger, Line and others can also be run via a smartphone. Moreover a smartphone also can be utilized in monitoring and controlling a system in various fields such as education, transportation and so forth. In this research, an android-based smartphone was implemented for the information of lecturers existence. When a lecturer is very busy, it is difficult for the students to meet them to discuss about their study. The students do not know their lecturer existence, whether they are teaching, meeting or even be out of town. They often spend their time to wait for the lecturer. If they know the lecturers existence, they can spend their time for useful activities. Based on this case, lecturers have been created an application that will facilitate them in telling their existence. The Application is also provided for students and others that allows them to know the existence of the lecturers. This application was designed using an Android Studio Program, while the web server was built using Xampp Software. In the initial stages, this application is running on local host only. This is done to ensure the system is running as desired before will be realized online via the internet. This research has resulted The applications that are easy to use by lecturers and students. Hopefully, the implementation of this application can contribute to the smooth communication between students or academicians with lecturers, so that the teaching and learning process goes smoothly.

Keywords—Smartphone, Android Application, Lecturer existence

I. INTRODUCTION

Every University wants to finish its students on time with a good GPA (GPA) and get the job as fast as possible. To achieve this goal, universities should create a good education system, starting from the process of proper admission, planned and controlled teaching and learning process and good academic atmosphere. Besides that, the other important thing is communication between students with lecturers, education staff and leadership majors or other unit leaders in the college must run smoothly. But sometimes because of a very busy, students have difficulty meeting with lecturers to consult about the teaching and learning process. Students sometimes do not know the existence of the lecturers they will meet, whether teaching, meeting or even being on duty outside the city. If they know the existence of the lecturers they will meet, they can use that time by doing useful activities. Actually in some institutions already have an information system about the existence of officials who are there, but the information is still limited presence or absence of officials concerned and still done manually. Meanwhile, information about the existence of the lecturers is still very rare. The same problem was encountered in several universities. Besides, information technology is developing very fast. The information needed is faster obtained or accessed through the internet using a smartphone or other communication devices. Should the above problems can be solved by utilizing a smartphone that is mostly based on the Android operating system. In a company, a manager will more easily monitor the activities and behavior of employees while working using this Android-based Smartphone [1]. Through the features of this device, the tracking of one’s existence can also be done [2]. Smartphone utilization today seems to have become a primary need in everyday life. Smartphones are not only used for communication, but also used in various fields such as monitoring and controlling a system, such as a smart house system that has been developed by researchers and industry practitioners. The Android app is built to monitor and control doors, windows, temperatures, light intensity, movement and electrical energy consumption [3]. This system is built to provide services to humans, especially for people with disabilities and the elderly [4]. In fact, the advanced technology used in this smart house is intended to provide comfort and security to humans in performing daily activities [5]. Bluetooth facilities, existing WIFI on smartphones are often used for communication between controlled equipment. Similarly, in the field of transport, the Android app is also used as a tool for tracking the positions of a bus or public transport [6] and guides in providing route information [7]. The Android app also applied to the provision of tourist information, hotels, restaurants, historical places and so on that tourists can use in traveling [8]. In addition to the health sector, Android applications can be used as a sender of initial information by healthcare workers or the public to the hospital when a patient with an accident or heart attack is still on his way to hospital [9]. The Android application on the smartphone is used to monitor and
control patients who experience leg orthosis while doing the exercise on the physiotherapy process [10]. In the world of education, Android applications have also been applied to create teaching modules in the field of electrical engineering [11]. Through the teaching module, students can learn about the topics delivered and also can try to complete the exercises provided. Based on the above problems and the utilization of Android applications in various fields, then made an android application that is implemented to provide information about the existence of lecturers. The aim of this application to facilitate lecturers in informing their existence, and also allows students to know the existence of lecturers they want to meet.

II. THE MATERIAL AND METHOD/ALGORITHM

The Android app for lecturer information is created using MIT App Inventor. This free software can be obtained through the website http://ai2.appinventor.mit.edu. The software is divided into two parts, namely the designer part and the blocks part [12]. In the designer, menus that will be used as user interface can be designed. Features such as buttons, labels, textbox and so on can be selected depending on the desired conditions. Likewise with the process of connecting, data storage, sensors used to support applications that want to designed also been provided. The menu designer ini. The menu designer is shown in Figure 1 below.

The block section is the App Inventor programming editor section. The programming used is not a text program as it is in some other programming languages, but to make the desired program quite simply by drag and drop the syntax to be used. Users can use the syntax without having to understand a programming language that is sometimes complicated to understand. The most important thing is the user can use the logic programming in selecting a control, logic, math, text, procedures and other features in solving the problem of the application you want to create. The block editor section is shown in Figure 2.

In this study, App Inventor is used to create applications for lecturers in providing information on its existence and application for students to know the existence of lecturers who want to meet. Applications created for lecturers consist of five menus are login menu, register menu, data entry menu, information search menu and search result menu.

The login menu is used to enter the username and password of the registered lecturer. On this menu also provides a link to register for lecturers who have not registered and links to find out the existence of lecturers who have entered the information existence. The design of this login menu is shown in Figure 3.

The register menu is used for registration for unregistered lecturers. This menu is also created for the determination of a username and password that will be used when the lecturer will enter the information existence. The display of the menu register is shown in Figure 4 below.
The data entry menu is used as a menu for lecturers to provide information about their existence, this menu is simple and easy to use. Display login entry menu can be seen in figure 5.

Information Searching menu used to know the existence of lecturers. This menu is also made simple so that students or other interested parties just enter the name of the lecturer they want to search after that search results lecturer data will appear on the search results menu. Display information search menu and search results can be seen in Figure 6 and Figure 7.

After the user interface menu on Android is designed, then Web Server is built using Xampp application, user interface using PHP and database using MySQL. Web Server that has been added database is used to store data of the existence of lecturers, so that data can be accessed by students through the Android application. The database, display in phpMyAdmin is shown in Figure 8.
The interface program between android and MySql also built using PHP. The interface program created for every menu in our Application. Here’s one of PHP program examples in the lecturer data registration process shown in Figure 11.

IV. RESULT AND DISCUSSION

This study has produced an Android app that can be used by lecturers and students. Lecturers can enter their existence information and students can get information on the existence of the lecturer.

Actually, the Interfacing program of Android application is almost the same with the program of the information system through the website. Web servers, user interfaces, and databases are required. Web Servers that use Xampp Applications are selected for free and general public licenses. Besides, this software running on the background side, and does not disturb other systems and keep running, although the system is logged-off.

It’s just that the characteristics of this Android app are a simple and light to be accessed, compared with the version of the website is more complete and somewhat heavy when it wants to run. Therefore the menus are made on Android app is also simple and easy to use, so the lecturers can quickly enter the information of its existence. Besides that, the App Inventor is also chosen because it is free and easy to use. Applications can be built online without us having to install the application program on the computer. In addition, the App inventor also does not require high computer specification in building this application.

The lecturer data that has been entered into this application is stored in the database. To get information about lecturers who want to search, students just go to the search menu and type the name of the lecturer that want to search. If the name entered is in the list, then the lecturer’s existence will be displayed in the search results menu. Display of search menu and search results of the lecturers existence information can be seen in Figure 12 and Figure 13.
application can be applied in Telecommunication Engineering Program of State Polytechnic of Padang, so that clearly the existence of the lecturers, students can arrange their meetings with lecturers and can optimize their time with more useful activities.

ACKNOWLEDGMENT

We would like to thank to the Ministry of Research, Technology and Higher Education of Indonesia who has funded this research through the Applied Product Research scheme in 2017 with the contract number 050/PL9.1.4/LT/2017.

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