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***Research paper***

# Application program learning based on android for students experiences

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**Abstract**

With the advancement of the era that increasingly rapidly affect the pattern of all-dependent life with advanced technology that allows us to do many things in everyday life in accordance with our needs such as using gadgets as a medium of learning. By using Android based gadgets we can use it to learn to play guitar that is supported by the Android application program that presents learning about playing guitar. Using gadgets as a medium of learning is an interesting and very easy. Android application program about learning to play the guitar is facilitate us in learning. Gadget as a medium of learning is an utilization technological developments that are worth positive and useful for us. Android guitar application presents about the correct guitar playing procedure and there chord and chord sound, not only see the chord form but we can listen to chords. Application made using prototyping method so that will continue to be fixed when there are deficiencies. This application will continue to grow in accordance with the needs of the user. This application is made to facilitate the learning process. Application users will continue to be developed to fit the needs of users and become the right facilities and useful for its users.

***Keywords***: *Learning; Application; Gadget; Android; Student.*

## 1. Introduction

### 1.1. Background

The rapid development of technology today is very easy for us as users to be able to access it according to our needs [1-3]. Just by using gadgets that we have we can do many things such as using gadgets to exchange news with friends, family, relatives even we can use our gadgets as a learning medium [4-6]. In this modern era the majority of Indonesia's population has been using gadgets as a very important facility to help finish the work done.gadgetpun is an important requirement because it has become the demands of people's lifestyle at this time [7-9].
In the software industry, gadgets refer to computer programs that provide services without the need for an independent app to be launched separately, but instead run in an environment that manages multiple gadgets [10-12]. There are several implementations based on existing software development techniques, such as JavaScript, input form and various formats picture [13-15]. Some examples of such software are Google Gadgets, Microsoft Gadgets, google desktop and Apple Widgets Dashboard software [16-18]. In the current era of many features Android-based gadget applications that can be created as a learning medium for users such as learning applications Android based guitar.

### 1.2. Problem formulation

How to design and build an Android guitar based learning program?

### 1.3. Objective

1) Creating applications to simplify the process of learning to play the guitar.
2) Learn creatively and innovatively by creating and developing application programs.
3) With the creation of Android guitar-based learning applications then the process of learning to play the guitar will be easier

## 2. Theoretical

### 2.1. Application

Understanding the application is a program that people use to do something on a computer system [19-21]. Mobile can be interpreted as an easy transfer from one place to another, for example a mobile phone means that a telephone terminal that can move easily from one place to another without disconnection or disconnection of communication [22-24]. Mobile app systems are

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applications that can be used even if the user moves easily from one place to another without the interruption or disconnection of communication. This app can be accessed via wireless devices such as pagers, such as cell phones and PDAs.

### 2.2. Android

Mobile application programming of smartphones and tablet PC based on Android is an operating system on mobile which is open and based on Linux operating system [25-27]. Android can be used by anyone who wants to use it on their device. Android provides an open platform for developers to create their own applications that will be used for a variety of mobile devices. Initially, Google Inc. buy Android Inc., a newcomer who makes software for mobile phones. Then to develop Android, the Open Handset Alliance was formed, a consortium of 34 hardware, software and telecommunications companies, including Google, HTC, Intel, Motorola, Qualcomm, TMobile and Nvidia. At the inaugural release of Android, November 5, 2007, 10 Android alongside the Open Handset Alliance stated it supports the development of open standards on mobile devices. On the other hand, Google released Android codes under the Apache license, a software license and an open standard mobile device.

1) Methods
2) The process of building this program using prototyping method is the application program will continue to be tested and carried out an update to improve the effectiveness of the application as a medium of learning:
3) Design program. Designing the program to be built.This stage is the earliest stage.perancanagn required for the process can run according to procedures that have been designed.
4) Design. At this stage the program to be made done this designing stage is the second stage after designing. this is the start of program development process until become the desired application.
5) Testing. Conducted testing after the application program is built and implemented to test whether this application has been successfully built properly.
6) Implementation. After the application program pass the testing phase it is time to implement it and evaluate in order to know the deficiencies in this application.

Figure 1 shows scheme of application program development process:

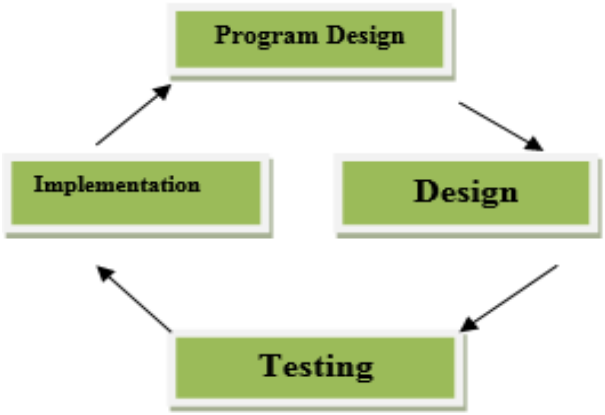



**Fig. 1:** Scheme of Application Program Development Process.

## 3. Results

Development of Android based application program can be done by using MIT appinventor, this software provides features to build an Android based applications that we also can sell through google playstrore. Many applications model that can be made in mit appinvertor like game applications, social media. The author conducted an experiment to build an application based on Android guitar learning, which contains about tutorial how to learn guitar in the hope this application can be a reference as an interesting learning media. Here is a step-making application learn based on guitar Android using mit app invertor.

1) Sign in to MIT App Inventor

The first step is we have to go into mit appinvertor by:

- open the browser according to taste, eg google chrome.
- Call MIT appinvertor by typing "MITappinventor" in the URL field to go to
- Make sure the computer has an Internet connection.
- Once inside the MIT appinventor page click CREAT APPS. Figure 2 shows MIT App Inventor.

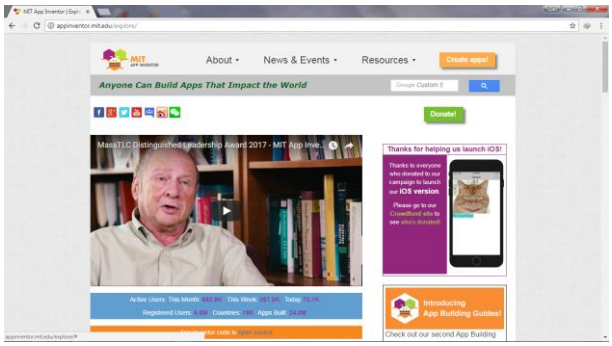



**Fig. 2:** MIT App Inventor.

After click creat apps it will go to the following page:
Here is the description of the image above:

1) Start New Project: To create a new application project
2) Delete: To delete the application project that has been created
3) My Project: Contains a list of project names, cure project date created and project date modified

2) Aplication Design

Before doing the machining then we must know in advance the function of the existing components in the appinvertor. After know the components that are in the appinvertor then we click the new project and give the name of the application to be made as shown in Figure 3.

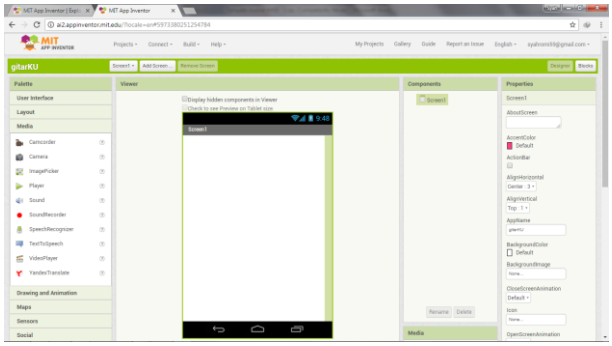


**Fig. 3:** New Project.

At design stage, we can use PALETTE which is on the left side of the screen to do design. At inside there are PALETTE user Interface, Media, Layout, Drawing and Animation, Maps, Sensors, Social, Conectivity. Use as needed. in the middle of the screen there is VIEW to see the process being done, right side there is PROPERTIS to set the display as shown in Figure 4.

- Viewer Column: Works to display / locate the selected component. All that is in this viewer section that will be visible when the project is run
- Components Column: Contains a list of all the components we use / insert in the project / viewer. When we add a component to the viewer / project, then the table of contents
- Components will increase according to the type of component that is inserted

- Media Column: Contains a list of media (images, clip art, sound, music, or movie) that we insert into the project
- Properties Column: Works to set the properties of the components we use.

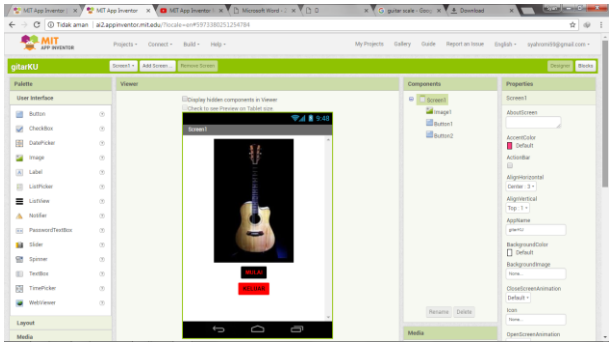


**Fig. 4:** Project Properties.

After the application has been completed at the next design stage set the command of the components that exist in the application by clicking the block icon on the top right corner of the screen then set according to the needs as shown in Figure 5.

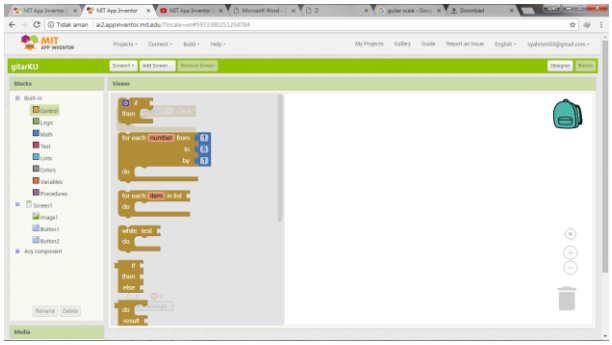


**Fig. 5:** Set The Command of the Components.

The last process after the previous steps are done next we make the application we have created into an Android app or apk. Go to the build menu and select the app (save to my computer) as shown in Figure 6.

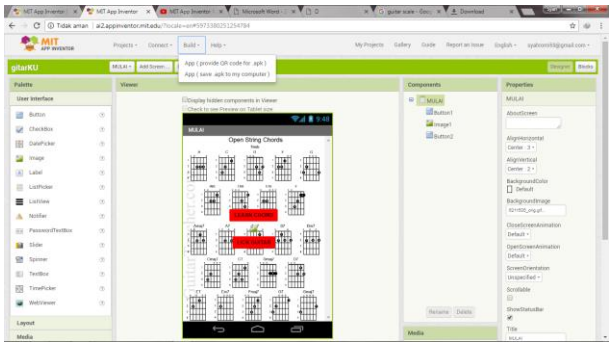


**Fig. 6:** Apkdownloading.

After successfully downloaded apk file transfer to Android we then install and use the application. Learning application through notebook for instance could be determined with the particular trends to give insights into considering the adoption of technological devices [28-30]. Widely adopted to help access to the interactions amidst the human daily life [31-33], the wide range of benefit could be transmitted into learning, business, communication and other tasks [34] [35] [36]. Developed with the distinctive features, giving facilitation on the Android basis mode could be facilitated more simply through the basis of one touch screen [37-40]. This initiative should do with encouraging the entire basis in enabling them freely to expand the users' creativity [41-44]. Through this initiative, the emerging trends to commit with measurement in maximizing Android-based learning model should bring along with enlarging the skills linked into the personalized behavior [45-47]. Moreover, the number of subject expertise points out considering the necessity to elaborate the way in managing the featured contribution to run the learning analytic [48-50]. In terms of enlarging the initiative to strengthen the initial value of expanding the way in the selection process, attempts to enhance the innovative approach in determining the quality assurance of this model basis should bring along with achieving the wide interaction to incorporate the analytical process together with the appropriate means [51-53]. With this initiative [54-56], the way to have good appointment in achieving the core point of value in underlying the interaction along with interactive and innovative basis [57-58] refers to expand the attempts to deliver the strategic initiative of application through Android based learning approach. Incorporate into the wide range of approaches with the particular attention, the valuable contribution in obtaining the basic involvement through expanding the process itself should do with procedural context to achieve a significant attribution enhanced in line with gaining the core component in an insightful performance into achieving the good appointment. As a result, the learning application with such approach initiative would have a significant role in delivering the transfer basis into achieving the good result

## 4. Conclusion

This Android guitar-based learning application is very easy for us in learning to play the guitar because we can do it yourself by following the guidelines that exist in the guitar learning tutorial in this application. This application is only as a basic reference of learning that is basic to become more experts needed latian routine and diligent search for the latest references.

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