Design and Build Minang Music Applications Based on Android

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Abstract: Minang music applications are rarely found in the play store. As for some regional music applications that already exist but have many shortcomings such as not having lyrics and some have no features other than playing songs. Based on the data collection, a music application was created which aims to create an application that is not only a music player but also has other features such as viewing lyrics, adjusting the equalizer, having a sleep time feature and a search feature. Minang music application is designed using the waterfall method. The waterfall method is carried out through a systematic approach. Starting from the system requirements stage then to the analysis, design, coding and testing stages. The first aspect is to conduct interview sessions with related communities that are faced when they want to listen to music. In addition, interviews were also conducted regarding what features the community wanted. The second aspect is to compare the existing application with the application to be designed. Later, the application designed to be the right choice by users because it provides various features that are not found in other music player applications, especially for regional music applications. Then proceed with the design of the application which will be made using the android studio software. The resulting application is expected to become a popular application among users because this application is the latest application with complete features. The developed application can also be run when it is online or offline.

Keywords: Application; Music; Androids; Technology; design

INTRODUCTION

Regional music has become a culture and characteristic of the region itself. Regional music that is characteristic of the region is almost unknown to today's young generation (Puspita and Aminah 2021). There are quite a few Minang music fans in the West Sumatra area. Traditional art is accepted as a tradition given by the older generation to the younger generation (Hidayat, Wimbrayardi, and Putra 2019). In interviews with the older generation, there are still some who have an interest. The problem faced is the difficulty of finding the Minang music. Along with the development of the times, now there is a youtube that can also access Minang music. However, based on interviews with several people that the author did about YouTube, users must remain connected to the network. If there is no data package, then youtube cannot be used. This becomes a serious problem because the data package is obtained through the purchase of internet quota.

Based on interviews with several people outside West Sumatra or people who have a different culture from West Sumatra, there is a sense of curiosity about how Minang music is. The obstacle faced is the difficulty in following the song lyrics because most of the Minang song lyrics use regional languages. It is true that on YouTube you can download it first, but within a certain period of time the downloaded video or music must be updated. If it is not updated, the downloaded music cannot be listened to or played.

There are also quite a number of music applications that have developed. The developed music application does not provide features that can help users in using the application. Lack of features is a major problem because users become uncomfortable if no features are provided. Applications that do not have features become unpopular with users because these applications are only for playing songs. The main thing a music app should have is a search feature. The search feature is very useful for quickly searching for song titles. The search feature

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is the main point in using application navigation (Maharso 2019). Later this navigation serves as an alternative search that makes it easier for users to use the application.

LITERATURE REVIEW

Local music is rarely sought after by children. Regional music which is a characteristic of regional culture itself is almost unknown to today's young generation (Puspita and Aminah 2021). Based on the results of interviews, it can be concluded that currently they are still using book media to introduce berejung. This study aims to produce an Android-based application for recognizing Pagar Alam city music which will later be used to introduce fighting.

Minang music is a genre of music originating from West Sumatra. Minang music is currently rarely found among the younger generation because of cultural influences that cause Minang music to fade. traditional inheritance is accepted as a tradition and passed on to the younger generation (Hidayat et al. 2019).

Android is the result of the development of a Linux-based operating system designed for smartphones and tablet computers. Android is a Linux-based operating system used for smartphone devices (Dewi, IP.Mursyida,Lativa.Smala 2021). Android provides an open platform for developers to create their applications.

The use of technology for audio programming is very rare nowadays. Most technologies use a web-based system which will later be associated with programming the Android operating system. The learning media used so far are less effective because they do not use technology-based information systems, as a result, students do not understand what the teacher is saying (Sulistiyawati, Prabowo, and Ulumuddin 2017). The development of information technology currently has a lot of positive impacts on the progress of the field of education, one of which can be used to support media in the learning process. The purpose of designing this learning media is to utilize information technology, namely audio-visual media.

In the use of technology in the field of music, the main thing that a music application must have is a search feature. The search feature is very useful for quickly searching for song titles. The visual aspect is the main aspect in using audio content application navigation (Maharso 2019). The research was conducted with qualitative content analysis to examine the SIPT cues contained in the navigability aspect in the MAIN model, later this navigation serves as an alternative search that makes it easier for users to use the application.

Regional music applications can be used as a medium to introduce a genre of regional music to the younger generation. Thus, the regional music will not disappear over time. Designing a musical instrument recognition application aims as a learning medium by the community (Gunawan and Esabella 2018).

METHOD

The research method used in this study uses the waterfall. The waterfall method is a systematic and sequential information system development model (Sasmito 2017). The following are the stages in the waterfall method:
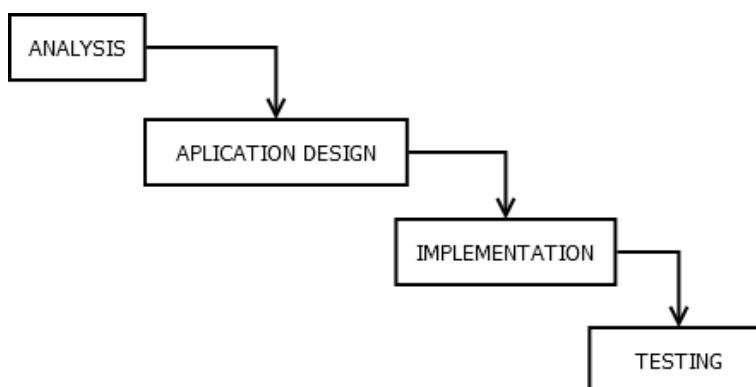

Figure 1. Waterfall Method
[source: Author's Document]

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1) Requirements analysis and definition

At this stage, it is carried out to formulate the basics of a multimedia project that will be planned and developed (Dewi et al. 2022). The purpose of making Minang music applications is obtained in two ways. That is by conducting interviews with several people who come from West Sumatra and outside West Sumatra and examine the shortcomings of regional music applications that already exist in the play store.

2) System and software design

This stage determines the design of the application that will be made. In this case, you will get application flowcharts, application use case diagrams and activity diagrams. Here is the application design:
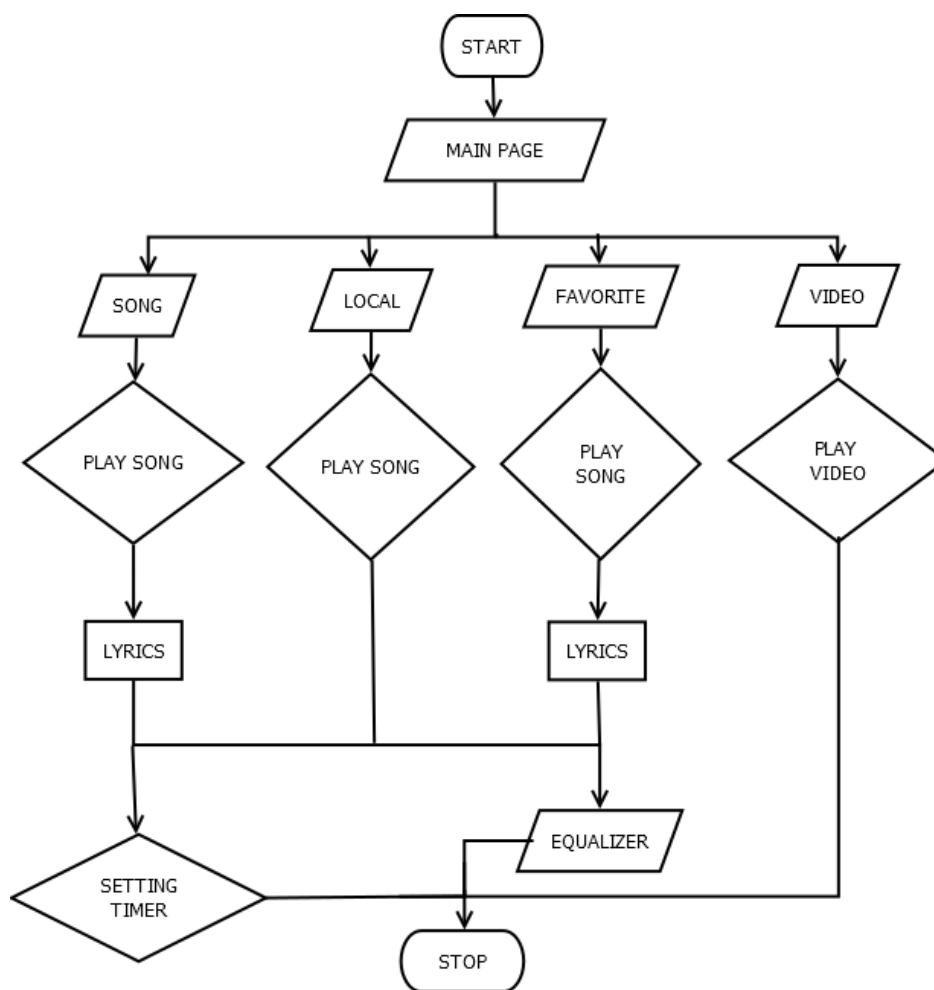

Figure 2. Application Flowchart
[source: Author's Document]

In the application flowchar design, the main menu has sub menus which include songs, local, videos and favorites. Each menu can play songs except the video menu which can display videos at once. Songs contained in the application or not local songs that are built into smartphone memory are equipped with lyrics features. After the lyrics feature is accessed, the user can also access the timer and equalizer features.
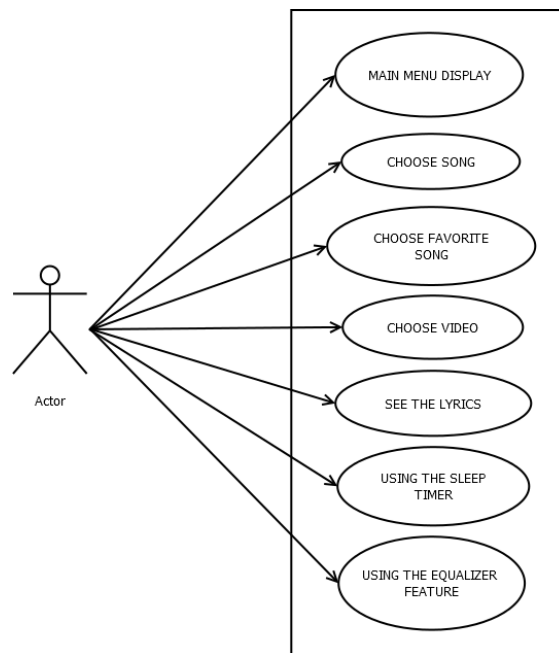
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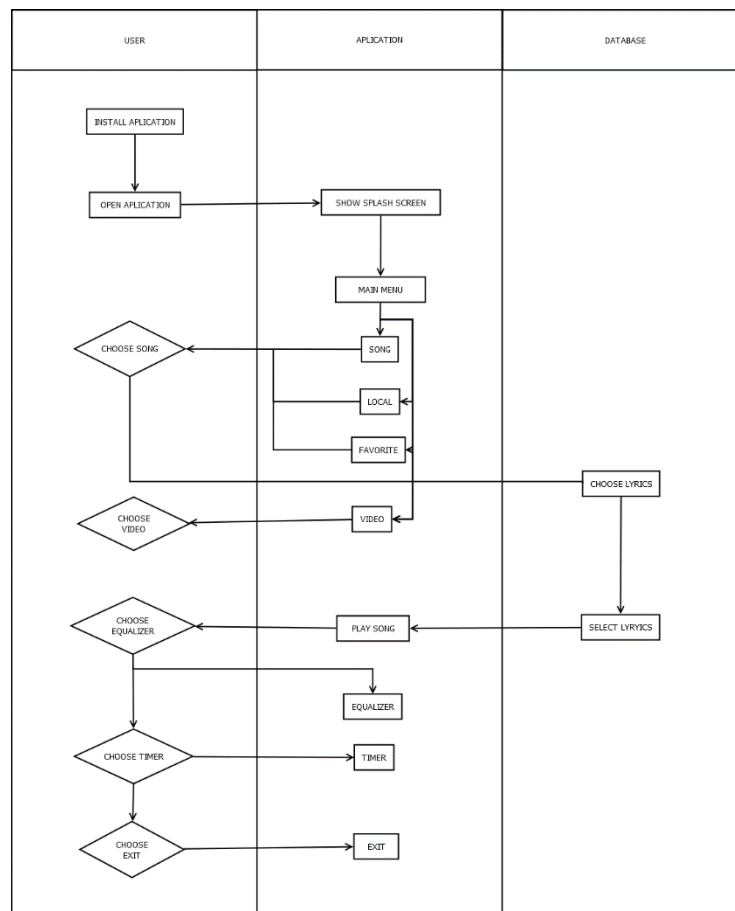
Figure 3. Use Case Diagram
[source: Author's Document]

Figure 4. Activity Diagram
[source: Author's Document]

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Activity diagrams explain how a system runs. First the user installs the application and opens the application. After the application is opened, the system will operate and display a splash screen containing the initial information for the application such as the title and content of the application. Furthermore, the system will provide several menu options that can be accessed by the user. The song menu is for listening to songs provided by the application makers, the local menu is for listening to songs stored in memory or which have been downloaded by the user on the previous smartphone device and the video menu is for displaying videos that will later be taken from YouTube. After the user selects a song, then proceeds to the database which will find songs and lyrics to run. After that the user can also activate various features such as equalizer, search and timer.

3) Implementation and unit testing

At the implementation and testing stages, all designs are realized as executable applications. This test is carried out whether the design carried out does not have errors in making the program.

4) Integration and system testing

This stage is testing the system into smartphone devices that can later be used and enjoyed by users. The test is carried out whether the music sounds clear to the user and whether the features provided are functioning properly so that no problems are found when the user runs the application.

RESULT

Application testing is done using an Android-based smartphone.

On the home page there is a song selection menu, a local selection menu, a video menu and a favorites menu. In the song selection menu, the user can select several Minang songs available in the application. This selection of songs can be played both offline and online. In the local menu, the available songs are songs that are already in the user's smartphone memory or songs that have been downloaded by the user. In the video menu view, users can view videos and listen to music at the same time. This video is obtained via youtube and the user must be connected to the network. The favorite menu contains songs that are favorited by the user. How to add a song to your favorites list is quite easy, by pressing the favorite button when the song is playing.
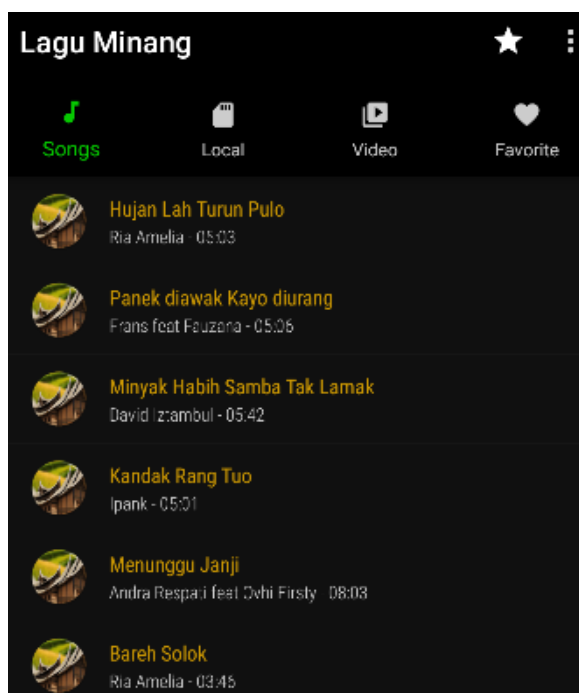

Figure 4. Application menu display
[source: Author's Document]

The developed application also adds several features such as lyrics, equalizer, timer and search. Here are some of the features found in the Android-based Minang music application:
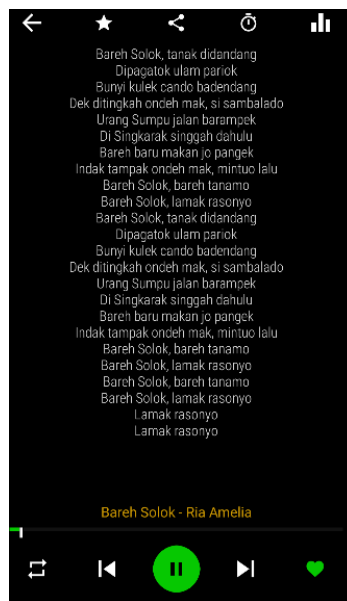
*name of corresponding author

Figure 5. Lyrics Features
[source: Author's Document]

The lyrics are added with the aim that users can more easily follow the songs they listen to and make it easier for people who don't really understand Minang language but like Minang music.
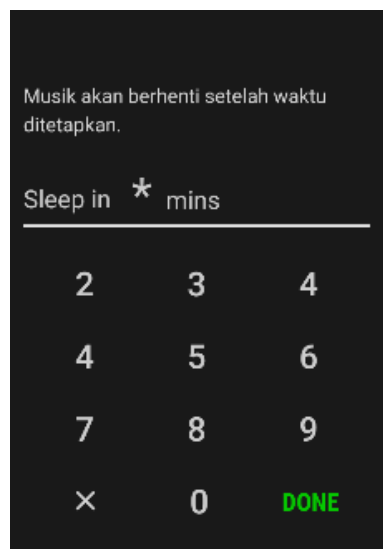

Figure 6. Sleep Timer Features
[source: Author's Document]

The sleep timer feature is used to turn off the song within a predetermined time. This feature is intended for users who may fall asleep but the application is still running and it can cause the smartphone battery to drain quickly.
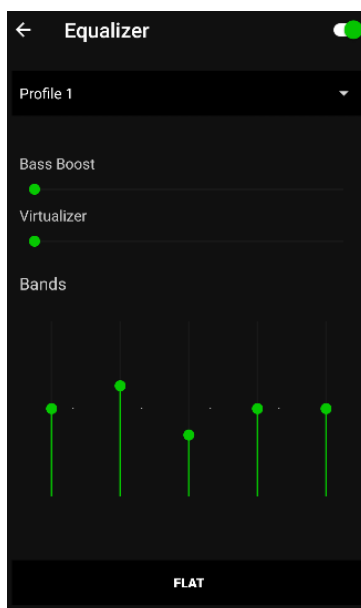
*name of corresponding author

Figure 7. Equalizer Features
[source: Author's Document]

Equalizer is used to adjust the frequency response of a sound system. The equalizer can change the character of the sound completely or partially. Later users can be creative according to the part of the tone that they want to hear more.
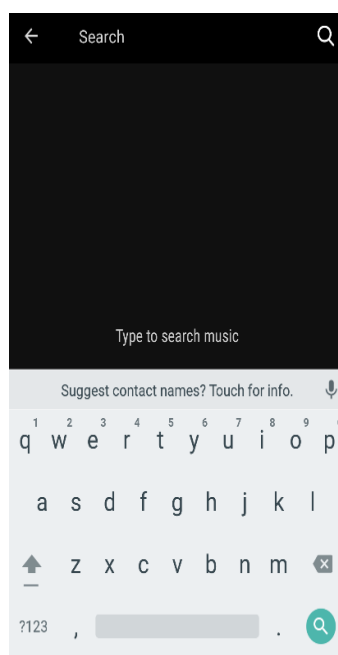

Figure 8. Search Features
[source: Author's Document]

The search feature is used to quickly search for songs. Using the search feature is quite easy, by typing the title of the song you are looking for, the song will appear. This feature can also be accessed when online. Even songs that are not in the database can be called globally by this feature using the google intermediary.

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DISCUSSIONS

The results of the test are carried out to find out whether the application that is made has problems when it is run. Testing is done by installing the application to a smartphone that has an Android operating system by installing an application that is still an apk. In the application testing carried out, there were no obstacles encountered on two different devices. The application runs smoothly and the features provided work very well.

CONCLUSION

Based on the design of the Android-based Minang music application that has been carried out and run, it is concluded that the application developed can make it easier for users to listen to regional music, especially Minang music. The features available in the application can also be run without any problems. This can be the latest innovation compared to existing music applications but do not have features such as the features in the applications that are being developed. The application can also be used offline and online and there are videos available for users who want to view videos. The videos are sorted by popular Minang music keywords on YouTube. Later popular music will be recorded online.

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