

# Designing A Virtual Jakarta Tourism Application On Android Os And Virtual Reality Tools

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## Abstract

*The background of this research is to make a prototype of a Jakarta virtual tourism application system using Android OS and using virtual reality tools. The method used by this panel is to use a literature review and create an application prototype that will be applied to the making of a virtual Jakarta tourism program. The results of this study are the application of virtual reality tools on the Jakarta virtual tourism application which aims to help the tourism sector affected by the COVID-19 pandemic and the manufacture of application prototypes that use the Android OS. The limitation of this research lies in making an application prototype using the Android OS which is not perfect and has not produced a real application. This research is very useful for the development of the tourism sector during the COVID-19 pandemic and in the future, so that tourists can choose to travel online or offline.*

**Keyword :** *Tourism, Jakarta, Virtual Reality, Android.*

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## I. INTRODUCTION

One of those affected by the COVID-19 pandemic is the tourism sector, because many countries have implemented a lockdown that makes foreigners unable to leave or enter a country, in Indonesia tourism has a very severe impact, many hotels are closed and employees are laid off because there are no foreign tourists or domestic tourists who come, with this impact, therefore making a smart system is the right solution [1]. The current system by limiting tourist visits to Indonesia, tourists can come and visit with many conditions, such as a negative covid 19 result based on the PCR test results from the country of origin and being tested again when arriving at the Indonesian airport [2]. The research problem raised in this paper by utilizing virtual technology in helping tourism problems during the covid 19 pandemic, with virtual reality will be able to give a real picture to tourists who miss real real tourism [3].

The method is carried out using a literature review in order to find the latest research problems and can be the basis for research now and for the future [4]. In this paper, we will be able to produce a prototype system that can help tourists visit tourist attractions virtually by using virtual reality tools, so tourists will see virtually but can be seen in real with virtual reality tools [5]. Jakarta has a lot of tourist attractions, Jakarta is divided into 6 regions, namely South Jakarta, West Jakarta, East Jakarta, North Jakarta, Central Jakarta, the Thousand Islands, each region has its own tourist attractions that have the characteristics of the city of Jakarta, such as the Monument National (Monas) which is located in Central Jakarta, and many others in every area of the city of Jakarta [6]. Virtual reality has been widely used in the world of digital games or online games, and has begun to be widely applied to the world of education which can make students feel as if they are learning directly in class, with this concept, the creation of an intelligent system can help the tourism sector so that tourists can travel on the time of the covid 19 pandemic [7].

## II. RESEARCH METHODS

The research method used in this study uses the literature review method and the creation of an android software prototype that will be used in making the proposed application, literature review by reading journals that are similar to research as many as 100 international journals and 50 national journals, by reviewing many journals can make research This paper develops with previous research [8]. The tools used in this study use virtual reality tools that tourists will use so they can see tourist attractions like real ones like studying before the COVID-19 pandemic [9]. The software that will be used in making the prototype uses the android studio application which will produce an application that will be placed on the play store application so that tourists can download it so that virtual reality tools can run well and can see tourist attractions virtually [10].

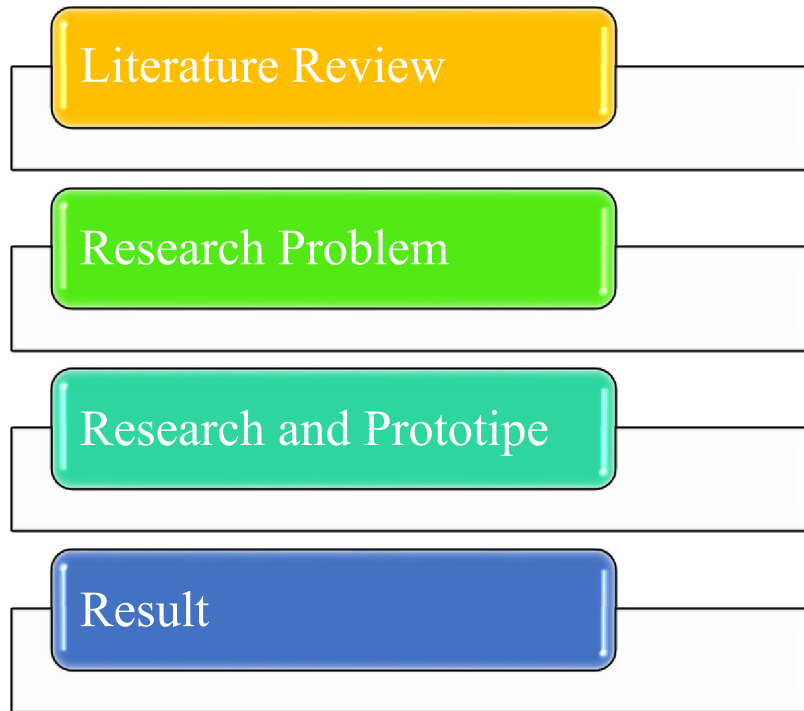


Fig 1. Research Method

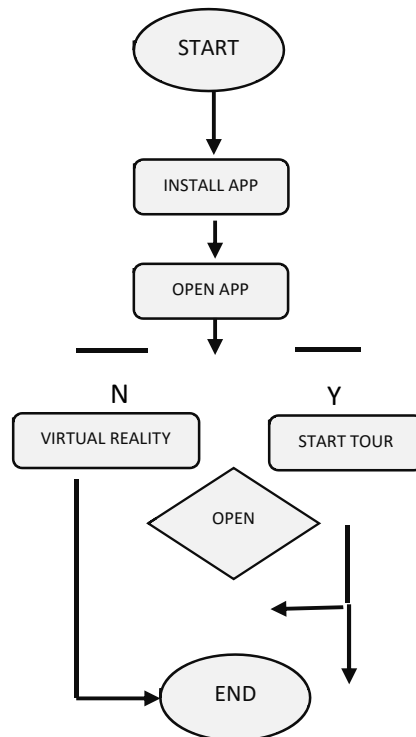
## III. RESULTS AND DISCUSSION

Based on Figure 2 of the research model below, it can be explained that tourists install the android tourism application on their smart phone, when they have installed the virtual tourism android application, the tourists can connect the application with virtual reality tools, once connected, the tourists can start virtual tours and see tourist attractions like real through virtual reality tools [11].



Fig 2. System Model

Based on Figure 3 flowchat below, it can be explained that starting with installing the application, then connecting with virtual reality tools and using virtual reality tools to see virtual tourist attractions in Jakarta.



**Fig 3.** Flowchart

Based on Figure 4 below, an image of the home menu display on the Jakarta virtual tourism android application, which contains the login, login, register menu, login when the tourists already have a username and password, enter when they have entered the username and password, register when the tourists don't have one Jakarta virtual travel account.



**Fig 4.** Home View

Based on Figure 5 below, an image of the list display used to register tourists so that they can use the Jakarta virtual tourism android application, which consists of a username, password, name, ID id, address, origin, date of birth, place of birth and two back and buttons list.



**Fig 5.** List View

Based on Figure 6 below, an image of the menu display on the Jakarta virtual tourism application, which consists of a menu of choices, namely tourist attractions, regions, settings and maps, tourist attractions explain tourist attractions, region describes areas in Jakarta that have tourist attractions, settings explain Regarding the account of the owner of the virtual tourism application, the map explains the location of tourist attractions in Jakarta.



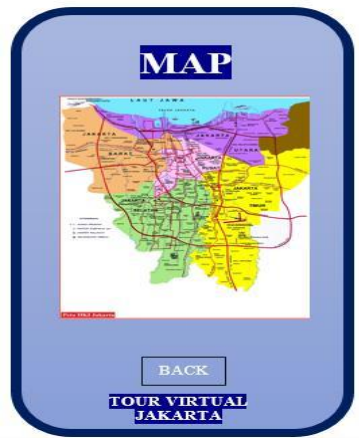
**Fig 6.** Menu Display

Based on Figure 7 below, an image of the menu display for tourist attractions in Jakarta on the Jakarta virtual tourism android application, there are options for TMII, Ancol, Monas, GBK, and a back button to return to the main menu.



**Fig 8.** Display of Tourist Place Options

Based on Figure 9 below, it is an image of the map display of tourist attractions in Jakarta on the Android application, which contains an image of a map of tourist attractions in the city of Jakarta, showing the complete road and the back button to return to the main menu.



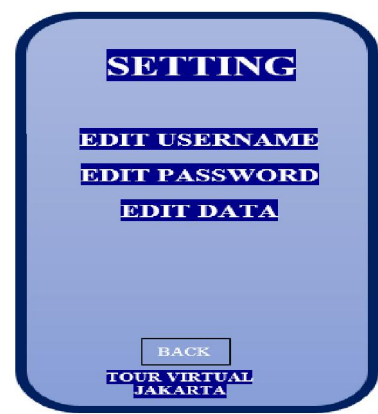
**Fig 9.** Tourist Map Display

Based on Figure 10 below, an image of the display of tourist attractions in Jakarta on the Android application, which contains a selection of Jakarta divided into 6 regions, namely South Jakarta, West Jakarta, East Jakarta, North Jakarta, Central Jakarta, Thousand Islands, each region has a place to visit. each tour that has the characteristics of the city of Jakarta and the back button to return to the main menu.



**Fig 10.** Display of Tourist Area

Based on Figure 11 below, an image of the display of tourist settings in Jakarta on the Android application, which contains an edit username menu that functions to change usernames, edit passwords that function to change passwords, edit data that functions to change personal data, and a back button that functions to return to the main menu.



**Fig 11.** Edit Menu Display

Based on Figure 12 below, it is a display image of tourist attractions which contains pictures of tourist attractions and buttons that connect the application with virtual reality tools and the back button which functions to go to the main menu.



Fig 12. Display of Tourist Attractions

#### IV. CONCLUSION

The use of virtual reality tools in the tourism sector is very appropriate during the covid 19 pandemic, with virtual reality tourists can travel through virtual tours through the Jakarta virtual tourism application, with the ease of using applications that use the Android OS so that it can be used by many people because the Android OS is already widely available. used by many groups, from children to the elderly, so the target of the Jakarta virtual tourism application can reach all people who can help Jakarta tourism exist despite the covid 19 pandemic. Future research by making applications and applying it to the Jakarta tourism office for tourism promotion media Jakarta city.

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