

PAPER • OPEN ACCESS

Android Based Information System of *Indekos* Booking and Rentation Locations in Cianjur District

To cite this article: Tarmin Abdulghani *et al* 2021 *J. Phys.: Conf. Ser.* **1764** 012157

View the [article online](#) for updates and enhancements.

You may also like

- [Evaluation of Total Armada Transport City Route 05B in Cianjur City](#)
Devi Setiawan
- [Effectiveness of ginger supply chains in rural communities as a form of farming sustainability \(study case in Cianjur district\)](#)
S R H Khotimah, W Gunawan and A Dwiartama
- [Protection of Paddy Field and Recommendation of Regional Planning in Cianjur Regency, West Java, Indonesia](#)
Khursatul Munibah, Rani Yudarwati, Enni Dwi Wahyunie *et al.*



245th ECS Meeting

San Francisco, CA
May 26–30, 2024

PRiME 2024

Honolulu, Hawaii
October 6–11, 2024

Bringing together industry, researchers, and government across 50 symposia in electrochemistry and solid state science and technology

Learn more about ECS Meetings at
<http://www.electrochem.org/upcoming-meetings>



Save the Dates for future ECS Meetings!

Android Based Information System of *Indekos* Booking and Rentation Locations in Cianjur District

Tarmin Abdulghani*, Lalan Jaelani and Japar Sidik

Teknik Informatika, Universitas Suryakencana

*tarmin@artagani.com

Abstract. Cianjur regency has a very wide area with a travel time of up to 7 hours to the city of Cianjur from the southern area. The city of Cianjur is one of the tourist destinations and the place of education especially for citizens come from this area. During the vacation or study, they stay in Cianjur for several days. It can be long or short stay. Due to the unpredicted amount of time to stay, travelers or the sholars need to find out a temporary shelter quickly and easily. Mobile-based information technology is one of the easiest ways to provide solutions to help finding a temporary housing in Cianjur. This application provides information of the location, facilities, and prices of boarding houses. As they find the suitable criteria of the house they can order and pay directly to occupy the boarding house.

1. Introduction

Today the technology of information has growth very rapidly and changed the way people live, especially in how they interact, learn, work and do business. Informatics offers a very wide range of possibilities to coordinate all activities by means of modern, creative, fast, secure, timely and efficient ways of managing all knowledge. Almost every work process and contents will be transformed from physical, static, digital, mobile and virtual with information technology, increasing the business output exponentially.

Android is an information system for cellular phones based on Linux. Android provides an open platform for developers to create their own applications to be used by a variety of mobile devices. Android is commonly used on smartphones and tablet PCs.

Information system is a collection of people working with the provisions of the systematic and organized rules to form a unit which performs a task to achieve a goal. The system has several features consisting of system components, system borders, out-of-system setting, system configuration, system input, system performance, system deception and system objectives. Information is data that is processed to make the user more efficient and meaningful, as well as to reduce confusion about a situation in the decision-making process [1],[2],[3].

Boarding is living without meal in someone else's house (by charging monthly). Boarding houses are also referred to as boarding terms, means temporary houses for each specified time for a certain amount [4],[5],[6].

In Cianjur district there is a location that provides temporary shelter which is often called a boarding house. The boarding house is a temporary residence provided for migrants from outside the city or the local community. Migrant communities from outside the city also approach Cianjur city for several



things like job, education, and others. The population is gradually growing from time to time due to the cycle of an urbanization and transmigration that triggers the need for temporary housing or known as the boarding house. Newcomer boarding houses, don't know anything about other locations in Cianjur, either of the boarding houses' providers or facilities.

Newcomers also inquire and find the location of indigenous boarding houses where indigenous people are not generally aware at reasonable rates of appropriate and reliable information about boarding locations and facilities[7]. This issue also arises in the sub-district of Cianjur because there is no information system regarding the location of the providers or facilities of boarding houses. Hence we need an information system that can help the newcomer group find boarding locations in the district of Cianjur. Based on the background of the problems above, then the title of this paper is “Android Based Information System of *Indekos* Booking and Rentation Locations in Cianjur District” by answering the following two questions; how to design an information system that can make it easier for newcomers to find a boarding location in the district of Cianjur and how to develop information systems that can provide information about facilities at affordable and accurate boarding prices. Therefore the purpose and the objective of this study are to implement an informative and interesting information system so that it can facilitate to find of boarding houses for users especially the newcomer community and can facilitate users in determining the best route to the boarding house destination and to create a boarding information system that can provide detailed boarding information including location, price and boarding facilities[8],[9].

2. Theoretical Foundation

2.1. Definition and Information

Generally, information systems is defined as a system within an organization that is a combination of people, facilities, technology, media procedures and controls aimed at obtaining important communication lines, processing certain types of routine transactions, giving management and the other signals for important internal and external events and provides a basis for information for decision making.

Information system is a collection of people working together with the provisions of the rules systematic and structured to form a unit that carries out a function to achieve a goal. The system has several characteristics consisting of system components, system boundaries, the environment outside the system, the system interface, system input, system output, system deception and system goals. Information is data that is processed to be more useful and meaningful to the recipient, as well as to reduce uncertainty in the decision making process regarding a situation [1],.

2.2. Definition of Homestay

Boarding house or often called a homestay is a kind of rental room rented (booking) during a certain period of time in accordance with the agreement of the room owner and the agreed price [10],[6]. Generally booking a room is done for a period of one year. However, there are also those who only rent for one month, three months and six months, so that the term is annual, monthly, three-monthly and semi-annual rent. In contrast to rented house is a form of one rental house that is rented out to the community, especially for students and students who live around campus, for a certain period of time according to the rental agreement and the agreed price.

The boarding purpose is essentially temporary housing facilities for communities of migrants who usually come from outside the city. Temporary housing facilities for the general public who work in offices or who do not have a house close to the workplace, a way of developing personality to be more stable, autonomous and responsible as it is far from home, a place where social connections with the local community can be improved[11]. The boarding house feature, which has been a place to stay, then evolves and impacts on the world around it. The community around the boarding house then plans additional support facilities to allow them to travel, both within the boarding house location itself and outside the boarding house. One example is the provision of facilities such as laundry, restaurants, health centers, internet access, etc[12].

2.3. Definition of Android

Android according to Safaat [13] is an operating system for cellular phones based on Linux. Android provides developers an open platform to build their own applications for use with a variety of mobile devices. Android is commonly used on smartphones and tablet PCs. It functions the same as the Symbian operating system on Nokia, iOS on Apple and BlackBerry OS. Android is not tied to just one Mobile brand, several well-known vendors that have used Android include Samsung, Sony Ericsson, HTC, Nexus, Motorola, etc. In July 2000, Google collaborated with Android Inc., a company based in Palo Alto, California United States. The founders of Android Inc. working at Google, including Andy Rubin, Rich Miner, Nick Sears, and Chris White.

At that time many people consider the function of Android Inc. Much like cell-phone apps. There have been reports after then, then Google is going to enter the market for mobile phones. At the Google Company, the team led by Rubin was tasked with developing a mobile device program supported by the Linux kernel. This shows an indication that Google is preparing to face competition in the cellular phone market.

2.4. Understanding Website

The website is referred to as an internet facility, which links documents to both local and remote environments. The document with a web page and website link allows users to switch pages (hyper text), both between pages stored by the same server and servers around the world. Browsers used to access and read pages include Netscape Navigator, Google Chrome, Internet Explorer, Mozilla Firefox, etc [14],.

2.5. MySQL

MySQL is a popular Open Source database today. Although based on open source and free, this database has several advantages, one of which is an ideal database to use if you want to build a PHP-based website [15],

3. Method

The research method is a plan regarding the system to be built. The research method that was used is Prototype paradigm of Pressman[16]. As it is shown in the Figure 1.

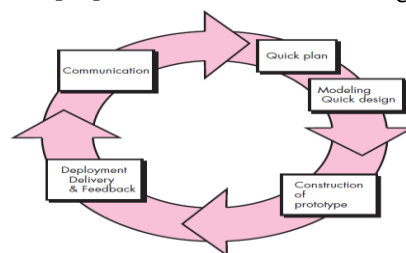


Figure 1. Prototype Research Method Based

3.1 Communication

The first stage of the prototype model is Communication, where the developer authors communicate with consumers to define the overall format of the software, define all requirements, and outline of the system to be developed. Communication in this final project research is collecting data on what information is needed to build a boarding geographic information system. At this stage the data was collected by interview and observation methods to the homestay owner.

3.2 Quick Plan

At this stage the developer plans quickly, such as what methods will be carried out and what method is needed by the system to be made. Planning on research on this task is to collect data related to boarding house data such as the price of facilities, and location. Planning on research on this task is to collect data related to boarding house data such as the price of facilities, and location.

3.3 Modeling Quick Design

The author begins to make a modeling of the general plan that has been made, and focuses on the representation of all software that will be seen by end users, especially the design of the interface (user interface). Designing web-based geographical information systems.

3.4 Construction of Prototype

The manufacturing stage of the prototype commences based on the device specifications that were previously defined in accordance with user needs. The architecture of this geographic information system is focused on the stages of rapid plan and rapid modeling design. The stages of manufacture are as follows 1) Preparation of Boarding items, 2) Making a GIS application, 3) Testing the application using a black box, 4) Evaluation of application testing, 5) Implementation to the user.

3.5 Development Delivery Feedback

At this stage, the prototype system is left to the company and will be tested by users. Then do a re-evaluation of the deficiencies of user needs to improve the existing prototype system. In applications that have been built into web-based applications can be accessed by users of these applications using devices that support web browsers.

4. Finding and Discussion

4.1 System Analysis

4.1.1 Analysis of the Problem

In Cianjur district there is a location that provides temporary housing which is often called a boarding house. The boarding house is a temporary residence provided for migrants from outside the city or the local community. Cianjur City is often approached by migrant communities from outside the city for several purposes such as work, school and others. The population is increasingly growing from time to time due to the cycle of an urbanization and transmigration that triggers the need for temporary housing or known as the boarding house. But basically the newcomer community has known well about a particular location in the city of Cianjur, one of the providers or residential accommodation services. Newcomers often ask and find the location of boarding houses for indigenous people in places where indigenous people do not know the relevant and accurate information about boarding locations and facilities, at affordable prices. This problem often occurs in Cianjur sub-district because there is no information system regarding the location of the boarding house providers or services. Therefore we need an information system that can help the newcomer community in finding boarding locations in Cianjur District.

4.1.2 Analysis of the Current System

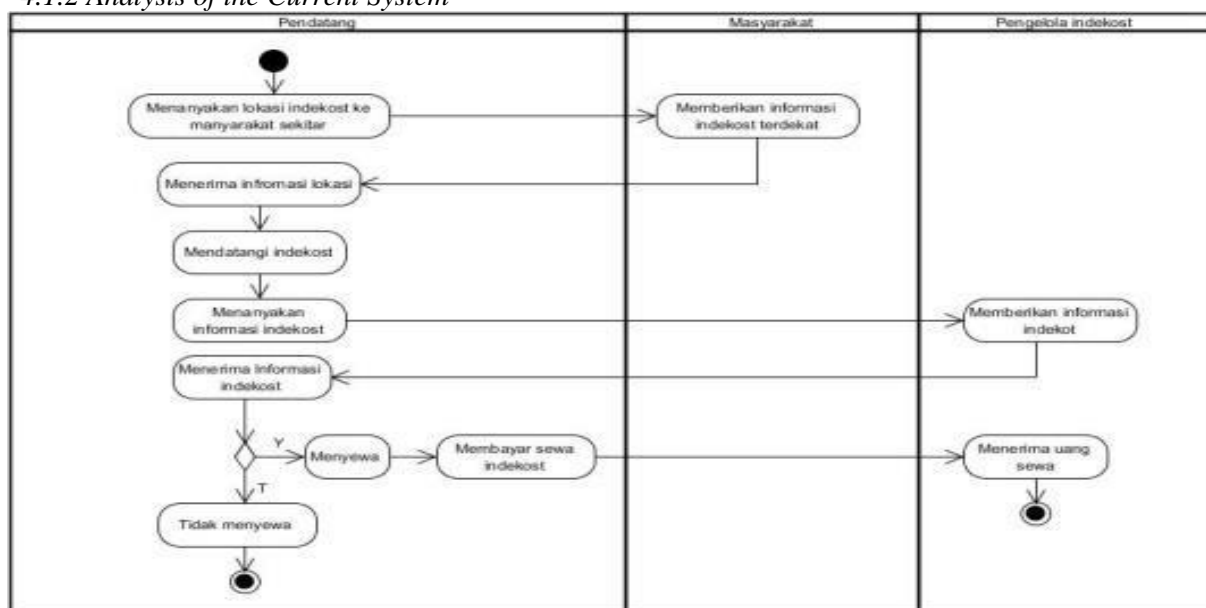


Figure 2. Current System

Figure 2 explains the flow of activities in obtaining boarding information and boarding bookings in Cianjur sub-district.

4.2 System Design

Design is done before the application is made. Design means we stand in two worlds, the world of technology and the world of people and their goals, and try to unite together. Design modeling aims to detail the software architecture, data structure, interface and other components that aim to implement the system.

4.2.1 Usecase Diagram

Figure 3 is a usecase diagram that illustrates the expected functionality of the Information System for rental and boarding location reservations in the Cianjur district.

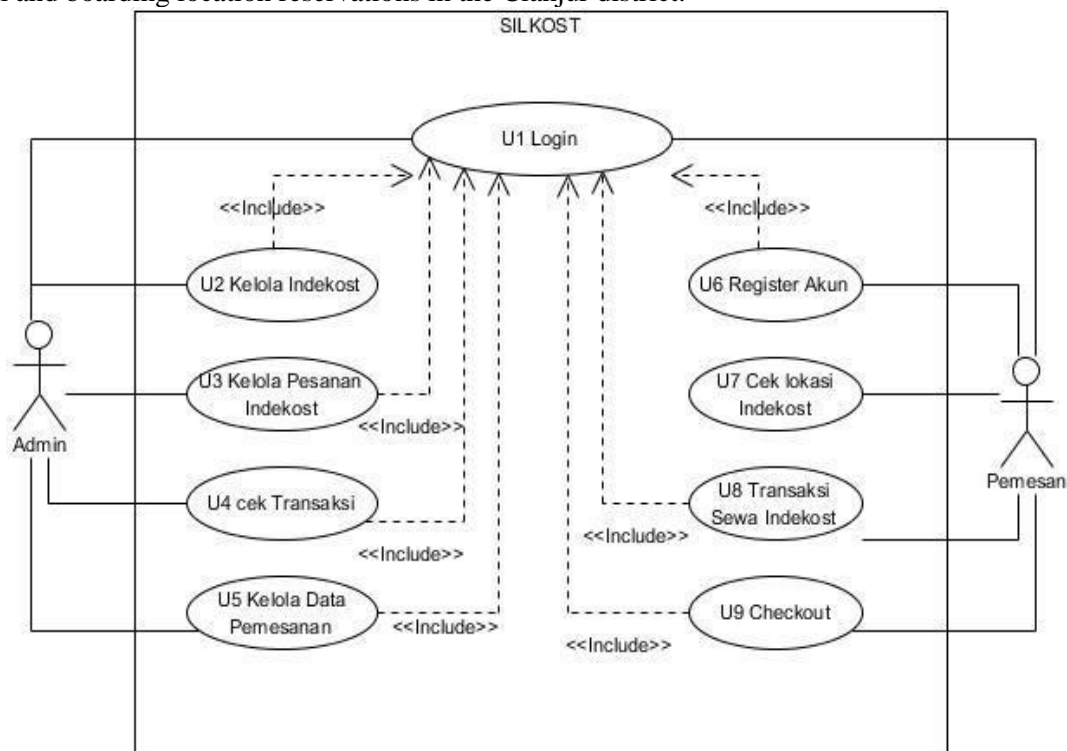


Figure 3. Usecase diagram

4.2.2 Class Diagram

The following figure is a class diagram of the geographical information system of boarding and booking locations in the Cianjur district area.

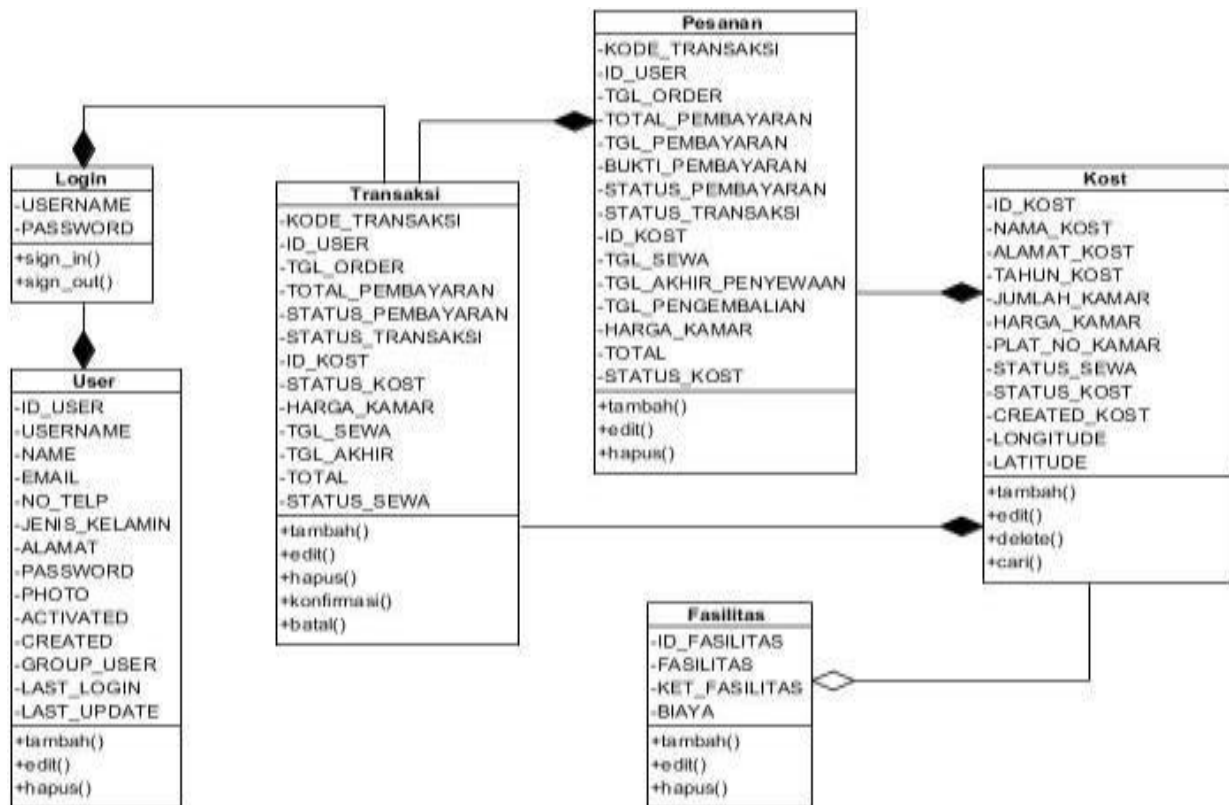


Figure 3. Class Diagram

4.2.3 Entity Relationship Diagram

The following is an Entity Relationship Diagram of the geographical information system of boarding and booking locations in the Cianjur District area.

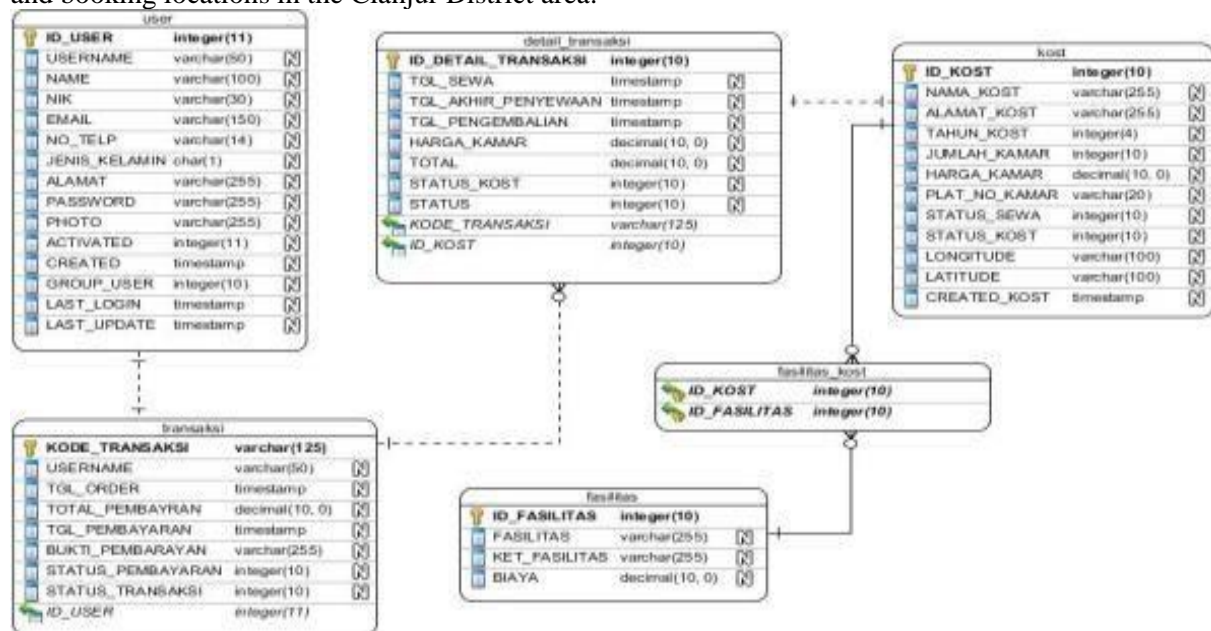


Figure 4. Entity Relationship Diagram

4.2.4 Interface Design

4.2.4.1 Web Interface Admin Login Page

Figure 5. Web Login Interface

The main page interface is the first display when accessing the application and there is a button login to enter the next page in the Geographical Information System for Booking and Renting Rooms in the Cianjur District Area.

4.2.4.2 Homepage Page Web Interface

No	NAMA KOST	TAHUN KOS	HARGA KAMA	NO KAMA	STATUS SEWA	STATUS KOS	CREATED KOS	Action
1	Kost Putri Pelan	2010	Rp. 500.000	1	Tidak Disewa	Tersedia	2019-07-01 01-01-	edit Detail Dele

Figure 6. Web Interface Homepage

Web page interface boarding is a display from the boarding menu showing boarding manage data.

4.2.4.3 Homepage Facilities Interface Web Interface

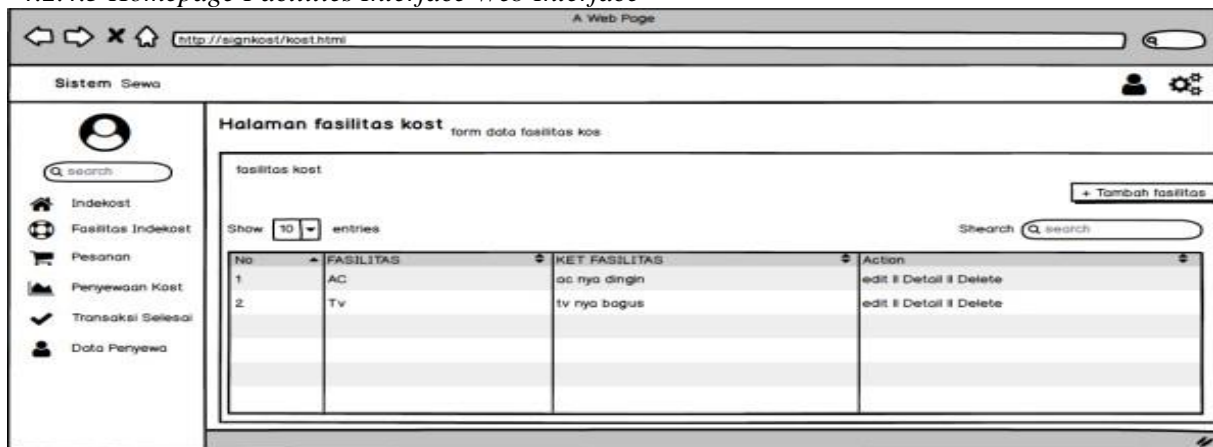


Figure 7. Web Interface Indekos Facility

The boarding house web page interface is a display of the boarding house menu showing the boarding facilities management details.

4.2.4.4 Android Interface Customer Login Page



Figure 8. Android Interface Customer Login

Android interface, the customer login page opens the customer's login display. Android Interface Main Menu Page is the android main menu display.

4.2.4.5 Interface Android Transaction History Page



Figure 9. Interface Android Transaction History

Android Interface Transaction History Page is an android display of the customer.

4.2.4.6 Android Interface Singkost page



Figure 10. Android interface of the Singkost

The Android interface of the SINGKOST page is an android display.

5. System Testing

Testing is an important part of the software development cycle. Testing is done to ensure quality and also to know the weaknesses of the software. The aim of this test is to ensure that the developed software is of reliable quality. The black box evaluation method is used when evaluating this program.

6. Conclusions

Based on the results of the analysis during the research it can be summarised that this research was aimed making the Information System for Booking and Leasing of boarding house in the Android-Based District of Cianjur. Then the conclusion can be drawn as follows; With this device, a customer can reliably check for information that is not correct in Cianjur District, without wasting time searching and asking local residents, Specific information on boarding can be obtained with the boarding information system, Data about location, price and boarding facilities can be provided with the boarding information system.

7. Suggestions

This boarding system has two website-based applications and Andoid. This application is still far from perfect both in terms of appearance and content, therefore, to perfect the advice of the Geographic Information System booking and rental applications based on Android. It is suggested for the further development this system can show locations in various sub-districts in the city area Cianjur, the device can then automatically calculate the distance between locations and users. Through further progress this program is hoped to be able to address tax on boarding.

References

- [1] Elisabet Yunaeti Anggraeni dan Rita Irvani, *Pengantar Sistem Informasi*, I. Yogyakarta: Andi Jl.Beo 38-40, Yogyakarta 55281, 2017.
- [2] W. Setyaningsih, W. Nuryanti, B. Prayitno, and A. Sarwadi, "Urban Heritage Towards Creative-based Tourism in the Urban Settlement of Kauman - Surakarta," *Procedia - Soc. Behav. Sci.*, vol. 227, pp. 642–649, 2016, doi: 10.1016/j.sbspro.2016.06.127.
- [3] K. Pradinie, A. Pamungkas, H. Idajati, J. Krisdianto, and D. A. Ardianta, "Tourism Innovation System (SIDA) in Pringgabaya Based on Sea Waves Energy Development Initiative," *Procedia - Soc. Behav. Sci.*, vol. 227, no. November 2015, pp. 680–685, 2016, doi: 10.1016/j.sbspro.2016.06.132.
- [4] KBBI, "indekost." <https://kbbi.kemdikbud.go.id/entri/indekos> (accessed Dec. 05, 2018).
- [5] N. Sangle, S. Sanap, M. Salunke, and S. Patil, "Smart Home System based on IoT," vol. 6, no. 9, pp. 168–170, 2016.
- [6] R. Alvionita, S. Silfeni, and H. Suyuthie, "Strategi Pengembangan Prasarana dan Sarana Objek Wisata Candi Padang Roco Kabupaten Dharmasraya," *J. Home Econ. Tour.*, vol. 12, no. 2, 2016, Accessed: Jan. 06, 2018. [Online]. Available: <https://www.neliti.com/id/publications/73330/strategi-pengembangan-prasarana-dan-sarana-objek-wisata-candi-padang-roco-kabupa>.
- [7] W. Setyaningsih, T. Y. Iswati, and S. Yuliani, "Urban Tourism Development Through Low Impact Development (LID) Towards Green-Tourism," 2014, Accessed: Jan. 06, 2018. [Online]. Available: <https://www.neliti.com/id/publications/171484/urban-tourism-development-through-low-impact-development-lid-towards-green-touri>.
- [8] S. T. Patricia Pahlevi Noviadri, "Apartment Planning Concept in Settlement Area of Sleman District, D.I. Yogyakarta (Case Study: H Residence Plemburan Hinggil Apartment)," *Procedia - Soc. Behav. Sci.*, vol. 227, no. November 2015, pp. 270–277, 2016, doi: 10.1016/j.sbspro.2016.06.071.
- [9] M. Alaa, A. A. Zaidan, B. B. Zaidan, M. Talal, and M. L. M. Kiah, "A review of smart home applications based on Internet of Things," *Journal of Network and Computer Applications*, vol. 97, no. Supplement C, pp. 48–65, Nov. 2017, doi: 10.1016/j.jnca.2017.08.017.
- [10] F. D. Manik and M. Rahdriawan, "HOMESTAY SEBAGAI USAHA PENGEMBANGAN DESA WISATA KANDRI," *Tek. Perenc. Wil. Kota*, vol. 3, no. 4, pp. 1060–1071, 2014, [Online]. Available: <https://www.neliti.com/id/publications/213878/homestay-sebagai-usaha-pengembangan-desa-wisata-kandri>.
- [11] N. W. (Nugroho) Murti and K. (Kristina) Sisilia, "Analisis Profil Konsumen untuk Pembuatan Aplikasi Indekos dengan Pendekatan Desain Proposisi Nilai," *Performance*, vol. 9, no. 2, pp. 70–84, 2019.
- [12] A. Kurniawan, "Analisis pengaruh lokasi dan fasilitas terhadap keputusan mahasiswa memilih tempat indekos dengan harga sewa indekos sebagai variabel moderasi," *J. Ekon. dan Kewirausahaan*, vol. 15, no. 2, p. 79092, 2015.
- [13] N. S. H, *Pemrograman Aplikasi Mobile Smartphone dan Tablet PC Berbasis Android*, Edisi Revi. Bandung: Informatika, 2012.
- [14] Lukmanul Hakim, *Proyek Website Super Wow Dengan PHP & jQuery Title*. Yogyakarta: Lokomedia, 2014.
- [15] O. Fedora, "Instalasi Apache Web Server, MySQL Database, dan PHP pada Sistem Operasi Fedora Core 5," pp. 23–35.
- [16] R. . Pressman, *Software Engineering : a practitioner's approach*. New York: McGraw-Hil, 2010.