



## **IMPLEMENTATION OF BILLING POS (POINT OF SALE) APPLICATION BASED ON ANDROID ON BOSS PLAYSTATION**

**Almi Surya Efriyan, Afrizal Martin, Rita Irvinai**

Information Systems Study Program, Bakti Nusantara Institute, Lampung

Digital Business Study Program, Bakti Nusantara Institute, Lampung

Jln. Wisma Rini No. 09 Pringsewu Lampung

E-mail : [almiandespen01@gmail.com](mailto:almiandespen01@gmail.com), [afrizalmartin.mti@gmail.com](mailto:afrizalmartin.mti@gmail.com),  
[irvianirita@gmail.com](mailto:irvianirita@gmail.com)

### **Article history:**

Received: September 8, 2023

Revised: Oktober 12, 2023

Accepted: Oktober 20, 2023

Corresponding authors

\*[fakhrulrozigisting@gmail.com](mailto:fakhrulrozigisting@gmail.com)

### **Keywords:**

Application System;

Billing;

Point of Sale;

Android;

Playstation.

### **Abstract**

BOSS Playstation is a Playstation game rental place in Pringsewu, BOSS Playstation has a transaction activity that involves customers and working employees, it is not uncommon for each party involved to have misunderstandings regarding transactions, both duration and rental fees. For this reason, the authors see the need for an application design that can handle these problems, in this case a billing application that can later manage schedules or activities related to leasing carried out by customers. With an Android-based application, it is hoped that later the application can be used freely by the operator on duty, the application can also function as a place for recording revenue and time earned on that day by the operator on duty. There are two applications that will be the result of this design, namely an application to monitor billing time and an application to manage all transactions needed in this business such as rental prices, duration, package names, to available food, as well as to monitor revenue earned by BOSS Playstation.



**This is an open access article under the CC-BY-SA license.**

## **I. INTRODUCTION**

Development of game technology has now progressed rapidly, expanding the online game type sector. Humans need space and a place to escape from the stress of work and activities throughout the day, one of which is playing games on the Playstation. According to (Cut Rosy Dyanti, 2017), Playstation games are a product of technological enhancements in the world of computerized games. This device has a CPU (central processor unit) in the form of 3-dimensional graphics which makes the games displayed on the screen look more real. This is evidenced by the incessant and uproarious Playstation rentals or rental places that have sprung up in our environment, and many people even buy Playstation devices to be played by themselves at home. (Cut, 2017)

According to (Adam, 2017), Playstation Rental is a PlayStation game rental shop. There are rentals that rent out their Playstations at the location only, and some allow you to bring home the Playstations that are rented. Playstation stalls are a business opportunity that can provide big profits, where small children to adults, especially men,

really like playing games. But of course, this requires capital that is no less large at the beginning. need to prepare a lot of economic things, tools, software and applications needed to manage business transactions in this business.

BOSS Playstation is a Playstation rental place that was founded in 2017 and founded by Mas Alfian. In terms of location, BOSS Playstation is very comfortable because each Playstation has the right distance to make customers move more freely. BOSS Playstation initially rented a place located next to SDN 5 Pringsewu Barat, but since 2021 it has moved to the side of Mas Alfian's private house which is located in the Gg. Tani, Pringsewu, Apart from the efficiency of distance and time, the place also belongs to Mas Alfian personally and can reduce the burden of renting a place. At the beginning of the establishment of this business, Mas Alfian as the owner of this rental business only had 2 LED TVs and 2 Playstation3. Over time, Now the Playstation Boss has 12 Playstation3 and 12 LED TVs. there are also 2 CCTVs that function to monitor customer activity and minimize missing items, BOSS Playstation also provides toilets for customers and there is also a place of worship on the 2nd floor of the house if customers want to pray. The vehicle parking area is also very wide to accommodate dozens of vehicles from customers.

Every day, this rental place is never deserted and even some customers are forced to queue to wait for billing from previous customers to run out. To increase the effectiveness of service rentals, Mas Alfian as the owner already has 2 employees. These two employees work on a shift system, morning and evening. The morning shift starts at 8 to 4 pm, then continues the afternoon shift until 10 pm. Mas Alfian said, this really helped lighten Mas Alfian's work, Mas Alfian only needed to prepare the rental place in the morning, and tidy it up when it was closed. However, Mas Alfian occasionally still monitors and helps with work, apart from "Passion", many of Mas Alfian's old friends are frequent customers and play Playstation.

Prior to the implementation of the Android-based Billing Point of Sale application, often both Mas Alfian and his employees experienced incorrect recording of rental expenses and ordering snacks, please note that the BOSS Playstation also provides food and drinks that customers can order. As a result of recording errors, it is not uncommon for debates or bickering to occur between the admin and the customer. This is certainly a problem that must be addressed by BOSS Playstation, because if a debate occurs it will certainly disturb the comfort and order for other customers who are renting a Playstation.

For this reason, Mas Alfian said that he needed something that could be effective in reducing errors in recording time, rent, and ordering food or drinks. Because of this, the author finally intends to help overcome this problem by creating an android application that can be used by Mas Alfian and his employees as a place to control his business. If you look at the problems that exist on BOSS Playstation, the cause is the lack of accuracy of the admins or operators on guard, so with that the author creates an application that can reduce transaction recording errors on BOSS Playstation. Later the application will function for admins in recording the rental process.

Result of the existence of an android-based Point of Sale billing application used by BOSS Playstation, the problem factors found can be overcome, because there are no more errors in recording transactions, and customers also cannot dispute transaction records because transactions are already computed. Based on Android, it means that the application uses a variety of additional tools that need to be prepared by the owner to support the application system, in this case a smartphone device that has an Android operating system. Mas Alfian as the owner has agreed and is enthusiastic about what the author conveys.

## **II. RESEARCH METHODOLOGY**

### **2.1. Data Collection**

In this research journal, the authors use two ways of developing methods that can solve problems. The method the author uses is by:

#### **3.1.1 Primary Data Sources**

1. Observation: is a method that is carried out by directly studying research material, namely BOSS Playstation Gg. Tani, Pringsewu by meeting the owner and also the employees, by monitoring the service process to customers, and also seeing what habits are carried out by customers and also employees so as to produce data that is appropriate and can be accounted for.
2. Interview: is a method that is carried out by holding a question and answer session directly to the owner and also employees regarding the transaction process that occurs at the BOSS Playstation, including what are the problems experienced by customers and also employees in the transaction process and services, Don't forget to also ask to customers what are the obstacles when transacting and leasing that are felt by customers. This method was carried out in order to produce data in accordance with the discussion in this study
3. Literature Study: Is a method of collecting data through references based on books and journals related to the problem to be solved (Mirzakon, Abdi & Purwoko, 2018)

## 2.2. Design Models

(Muhammad Muslihudin, 2016) The design model in this study utilizes the waterfall software process method when developing software. Object-based research is also used in every process of software development stages. (Muhamad Muslihudin, Fauzi, 2021) The flow of the research methodology was carried out sequentially from studies seeking literacy, analyzing research needs, designing designs and databases, implementing database designs, conducting tests on database designs, to drawing conclusions and suggestions. (Arfian & Kurniawan, 2021)

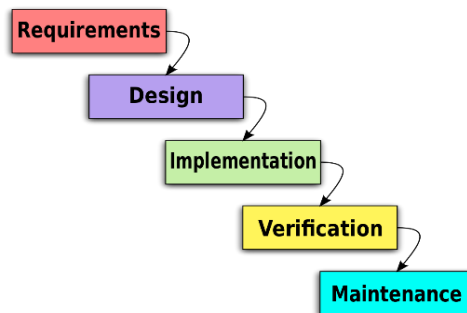


Figure 1. Waterfall Model Method

## 2.3. System Analysis

System analysis is a process of examining the components in a system as a whole with the aim of improving and developing the existing system by identifying and evaluating it. (Magdalena, Sundari, Nurkamilah, Ayu Amalia, & Muhammadiyah Tangerang, 2020)

### Current System Analysis

The transaction system on the BOSS Playstation still uses conventional business processes where customers come to the operator and then ask for the empty playstation inventory. If the rental has ended, the customer can approach the operator to pay, the operator will record the transaction in the BOSS Playstation record book, and will later report it to the owner.

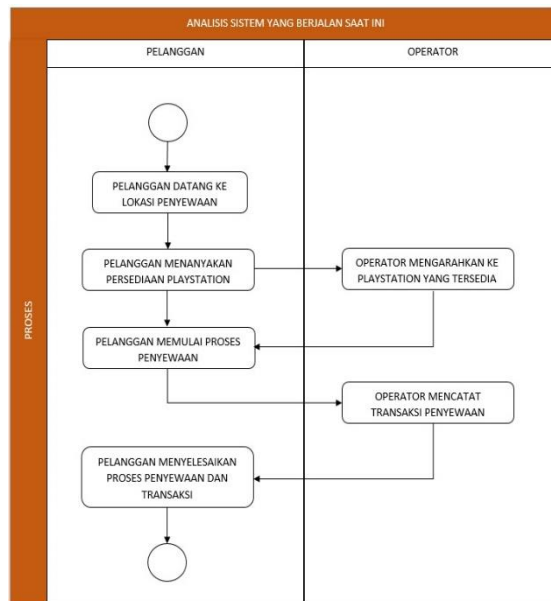


Figure 2. Analysis of the running system

### Analysis of the Proposed System

Leasing on BOSS Playstation wants an application system for managing transaction data in business and has an efficient data storage and clear transaction recording and facilitates the process of inputting rental data carried out by each operator.

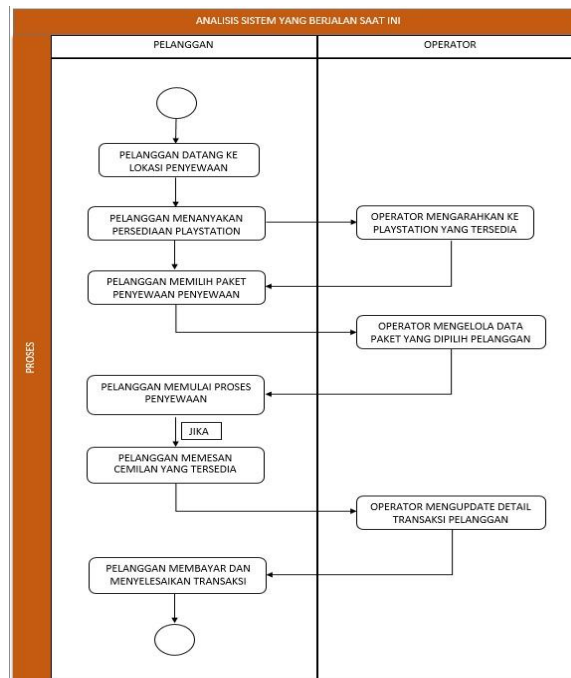


Figure 3. Analysis of the proposed system

## III. DISCUSSION

### 3.1. Database Design

A database or database is a component contained in a web system that can influence the design of existing web and Android applications. (Setiyowati & Siswanti, 2021)

### Use Case Diagrams

Use Case Diagrams are used to display graphs or descriptions of the relationship between the user and the system and are one of the UML types. And the result is

displaying a simple schematic of the system to make users of the system aware of the information functions used (Rismanto, 2019) The following is an overview or schematic of the admin use case and the user use case in this Android application system.

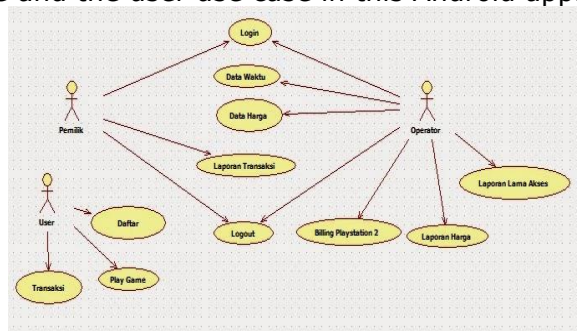


Figure 4. Use Case Diagram

In the Use Case Diagram above, the one who has an important role in the transaction process is the operator, and the owner only monitors the records, then the customer registers to rent, play the Playstation, when finished, will make a payment.

### Entity Relationship Diagram

Entity Relationship Diagram is a diagram that displays the relationships of a database whose entities are connected to each other starting from objects to their attributes. ERD is often used to identify the needs of existing entities in the system so that they can have qualified capabilities and according to what the user wants. (Sulthon, 2022) The following below is an overview of the Entity Relationship Diagram that exists on the website application system that the author developed.

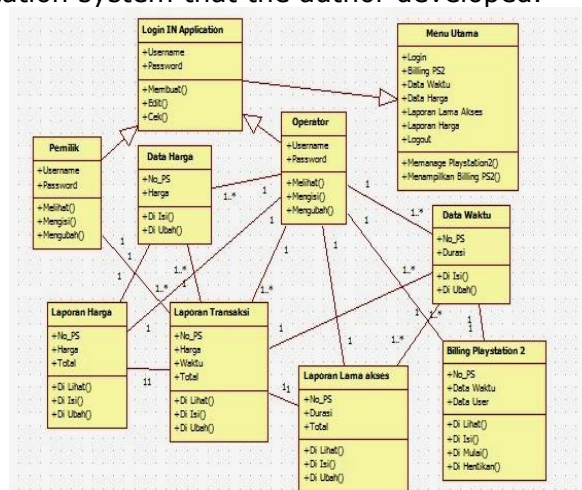


Figure 6. Entity Relationship Diagram

### 3.2. Implementation

From the database design above, it can be implemented into an application system which consists of two applications, namely the Admin Application and the Operator Application as follows:

#### Admin Application Main Page

The main page of this admin application only displays a logo image and the admin can manage the same database as the database of the operator application, besides that advanced features are available in the three line elements available in the upper left corner.

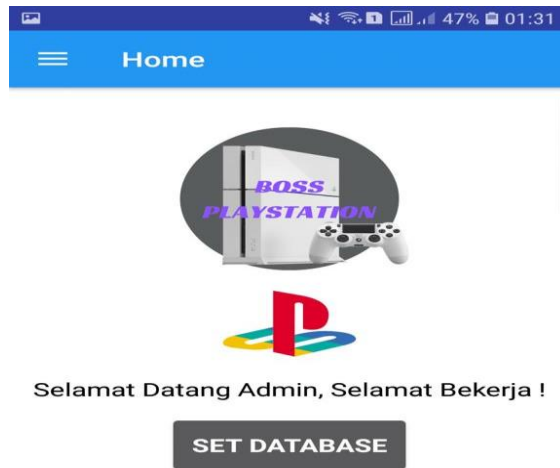


Figure 7. Appearance of the Apk Admin Main Page

### Admin Application Features Page

This page will show the features available in the application which can only be accessed by the admin to manage all matters relating to rental transactions in this business.

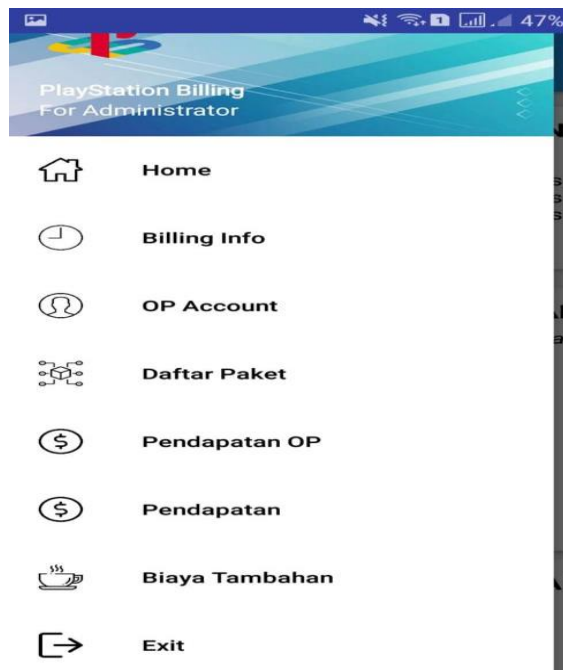


Figure 8. Display of the Admin Application feature page

### Playstation Supplies Information Page

This page serves to provide information related to existing Playstation supplies, if a Playstation is already rented, the color on the billing will be green, and if it is still available, the meal will be red.

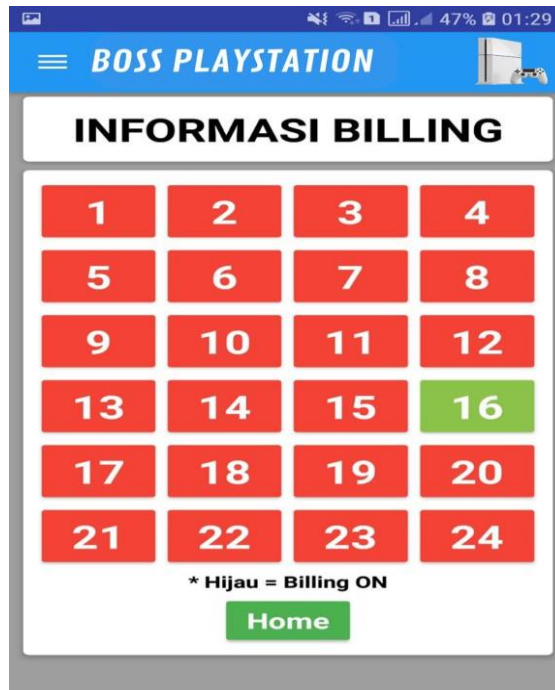


Figure 9. Display of the Playstation Supplies Information Page

### Operator Account List Page

This page serves to provide details about available operator accounts, the admin can add or remove operators who can access the operator application on this page.



Figure 10. Display of Operator Account List Page

### Billing Page on the Operator Application

This page will display the billing available on the BOSS Playstation, the operator will manage and find out the details of the rental made by the customer, there is an alarm feature that can be activated in the application when there are only five minutes of billing time left to remind the operator.

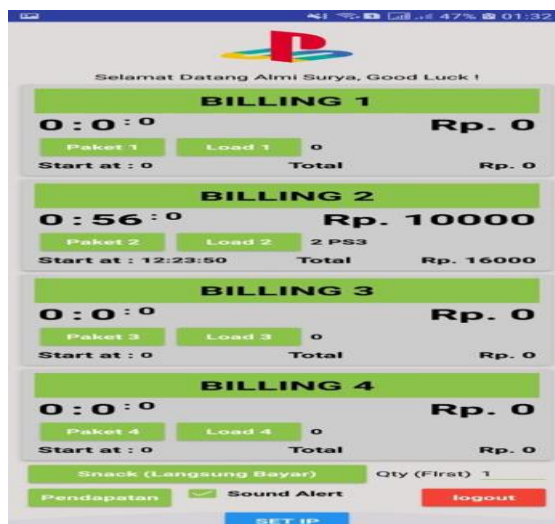


Figure 11. Display of the Main Billing Page on the Operator Application

### Revenue Page on Operator Application

This page functions for the operator to check transaction revenue that has occurred at that time, there are two parts, namely the billing or leasing revenue section, and income from the sale of other needs from customers.



Figure 12. View of the Revenue Page on the Operator Application

## IV. CONCLUSION

The author can conclude that the research and design of this android application is expected to be able to improve the quality of selling services, and also solve the problems experienced by BOSS Playstation in the future, and can be a place to streamline the services and transactions offered by Boss Playstation. But the authors see that there is still much to be developed from this android application, both in terms of security and the capabilities of the application, of course in the future the authors will continue to improve and add to the capabilities that can be achieved from this android application. It is the author's hope that this application can be the starting point for businesses that will be developed by BOSS Playstation in the future, and maybe it can operate online to add ordering features for customers before coming to the location. Then, the admin team from the BOSS Playstation must also be given training in the use and operation of this application system, so that there are no errors desired by the

authors and also the owners of the BOSS Playstation. The owner must also perform maintenance on the tools used so that the application system can run smoothly.

This Android application is still in its early stages and of course in the future there will be improvements ranging from features to the design of the application itself. This android application also needs maintenance that must be understood by each party involved in managing this application system. The author also provides instructions and guides for the owner and operator, the author also advised each party both the owner and the operator to be able to provide suggestions and deficiencies of the application if they are not satisfied with the features available in this android application, later the author will review statements from each-party as evaluation material and provide action for improvement in the application. Further suggestions for operators to always maintain the management of this Android application so that it functions properly at all times, and make sure it is always on

## REFERENCES

- Adam. (2017). 5 Hal ini Hanya Diketahui oleh Anak Rental PS Saja.
- Arfian, I. T., & Kurniawan, T. A. (2021). Pengembangan Sistem B2B E-Commerce berbasis layanan dengan menggunakan MERN Stack ( Studi Kasus : Recaka Parfum Surabaya ). *Jurnal Pengembangan Teknologi Informasi Dan Ilmu Komputer*, 5(9), 3764–3772.
- Cut, R. D. (2017). PENGARUH GAME PLAYSTATION TERHADAP PRESTASI BELAJAR SISWA KELAS V SD NEGERI 69 BANDA ACEH Cut Rosi Dyanti, Intan Safiah, Rosma Elly. *Pengaruh Game Playstation Terhadap Prestasi Belajar Siswa Kelas V Sd Negeri 69 Banda Aceh*, 2(1), 139–149.
- Magdalena, I., Sundari, T., Nurkamilah, S., Ayu Amalia, D., & Muhammadiyah Tangerang, U. (2020). Analisis Bahan Ajar. *Jurnal Pendidikan Dan Ilmu Sosial*, 2(2), 311–326.
- Mirzakon, Abdi & Purwoko, B. (2018). Library Research of the Basic Theory and Practice of Expressive Writing Counseling. *Universitas Negeri Surabaya*, 3(1), 3.
- Muhamad Muslihudin, Fauzi, S. A. (2021). *Metode Desain & Analisis Sistem Informasi Membangun Aplikasi Dengan UML Dan Model Terstruktur*. Yogyakarta: Andi Offset.
- Muhammad Muslihudin, O. (2016). *Analisis Dan Perancangan Sistem Informasi Menggunakan Model Terstruktur Dan UML*. Yog: Andi Offset.
- Rismanto, R. (2019). Analisa dan Desain Berorientasi Objek Use Case Diagram. *POLITEKNIK NEGERI MALAM*, 1(1), 1–19.
- Setiyowati, & Siswanti, S. (2021). *PERANCANGAN BASIS DATA & PENGENALAN SQL SERVER MANAGEMENT STUDIO*. Universitas Dian Nuswantoro Semarang.
- Sulthon, A. (2022). Pengertian Entity Relationship Diagram [ERD]: Simbol, Entitas, Atribut.