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**WEB BASED APPLICATION FOR BOARDING HOUSE SERVICE IN EKASAKTI UNIVERSITY AREA**

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**Abstract**

*A boarding house is one of the accommodation service providers or temporary residences consisting of several rooms, each room has facilities that have been provided by the owner of the boarding house. Searching for student boarding houses takes quite a long time and costs more to find a boarding house that suits your needs. To find information on boarding houses, students usually visit boarding houses between houses, ask local people who are close to the campus, walk around the campus and read advertisements in the mass media.*

*The system development method used in making this final project uses the SDLC waterfall which consists of Planning, Analysis, Design and Implementation, with UML design tools consisting of Usecase Diagrams, Class Diagrams, Activity Diagrams and Sequence diagrams. In making this information system the author uses the PHP programming language, with MySQL database.*

*This research produces a boarding house service application that can make it easier for students to search for and rent boarding houses in the Ekasakti University area. By using this information system, it is hoped that students will be helped in searching for boarding houses, because there are boarding house locations connected to Google Maps in the information system and students can make rentals, without having to directly meet the owner to make transactions, as well as several other menus.*

*Web-based boarding house service application, which can solve the problem of difficulties for students in finding temporary housing such as boarding houses, using the SDLC development method, PHP programming language and MySQL database.*

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## **A. Introduction**

Information systems can bring about changes in society, especially for students, in terms of seeking information about temporary residences/boarding houses. A guesthouse is a place that provides temporary accommodation or residence services which consists of several rooms, where each room has facilities provided by the owner of the guesthouse (Soffan Maulana Akbar, 2022). Guest houses are rented for a specific period of time, according to agreement between the owner and the tenant at a predetermined price. Generally this is done for a period of 1 (one) year, however there are also those who only rent it for 1 (one) month, 3 (three) months and 6 (six) months.

To find information about boarding houses, students often use methods such as visiting boarding houses between boarding houses, asking local people near the campus, walking around campus, and reading advertisements in the media.

Boarding house rental transactions are carried out directly between the owner and the tenant through cash payments. When making transactions, there are usually boarding house owners who are not friendly to the boarding house residents, so the atmosphere in the boarding house becomes discordant and the tenants feel less comfortable living in it.

Guest house owners typically only use paper receipts to transact with tenants, which can cause problems such as loss or damage to paper receipts. Rental reports made by tenants are summarized in a book, so if the book is lost, it will be difficult for the landlord and tenant to see the history of transactions that have previously been made.

Based on the above problems, the author is interested in designing an information system with the title "Web-based Boarding Service Application in Ekasakti University Area".

The problem addressed in this writing is how to design a pension service application in the Ekasakti University area that can be implemented and useful to the community.

## **B. Research Methods**

Voutama (2021) stated that the systems development life cycle (SDLC) is the process of developing or changing a software system using models and methodologies in system development. These stages are explained below :

1. Planning  
Develop project management plans and other planning documents.
2. Requirements Analysis  
Analyze the needs of users of the software system (users) and develop user needs.
3. Design System  
At this stage, the analysis system has an idea of the system to be created. By transforming detailed requirements into complete requirements, the system design document focuses on how it can fulfill the required functions.
4. Implementation System  
Including preparation for implementation, deploying the software into the user's environment, and resolving issues identified in the integration and testing phases. At this stage the system is ready to work.

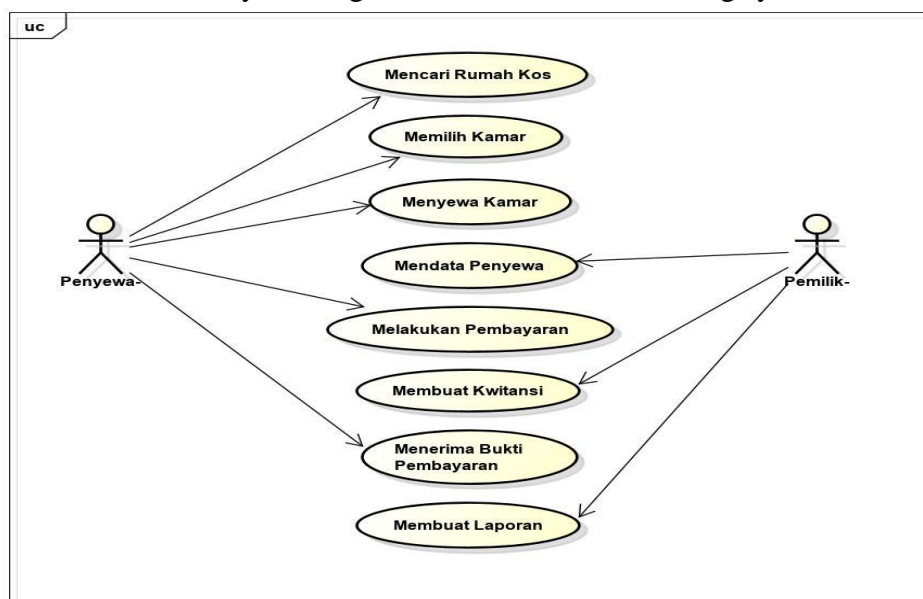
## System Analysis

The step used before designing a new system is to first look at the system that is currently running. This is done to know what the data processing system is like and the problems that are being faced so that we can know the weaknesses of a system that is being used. To obtain better and more satisfactory analysis results, it is necessary to conduct a feasibility study to find out what problems are occurring in the current system.

The system analysis stage of an application is the initial stage in the design and is very important in the development of the application system, because it will subsequently be evaluated to what extent is the performance of the application system used, identification of existing problems, weaknesses and obstacles encountered, the expected needs and ultimately we will reach an analysis conclusion that determines whether an application system is suitable for use or not.

## Running System Analysis

The analysis of the current system aims to discover how the processes of operational activity occur and also to discover the problems and weaknesses existing in the system that is currently running. An overview of the running system is as follows :



**Figure 1. Running System**

## Weaknesses of the running system :

1. The boarding house search process continues to be carried out manually, directly accessing the area of the boarding house that you wish to rent.
2. The process of renting a guesthouse becomes complicated, because visitors must first meet with the guesthouse owner to inquire about the availability of empty rooms and make the rental.
3. Payment receipts are still on paper, so they have weaknesses such as lost paper and damaged paper.

## Proposed System Design

The goal of system design is to speed up decision making, details that are easy to understand so that errors do not occur in the execution of the system. System design is essentially not just about accelerating or optimizing operational activities but also includes standardization with results over time. and cost savings.

## Use Case Diagram of Proposed System

The main purpose of a use case diagram is to show what the actor function does in the system.

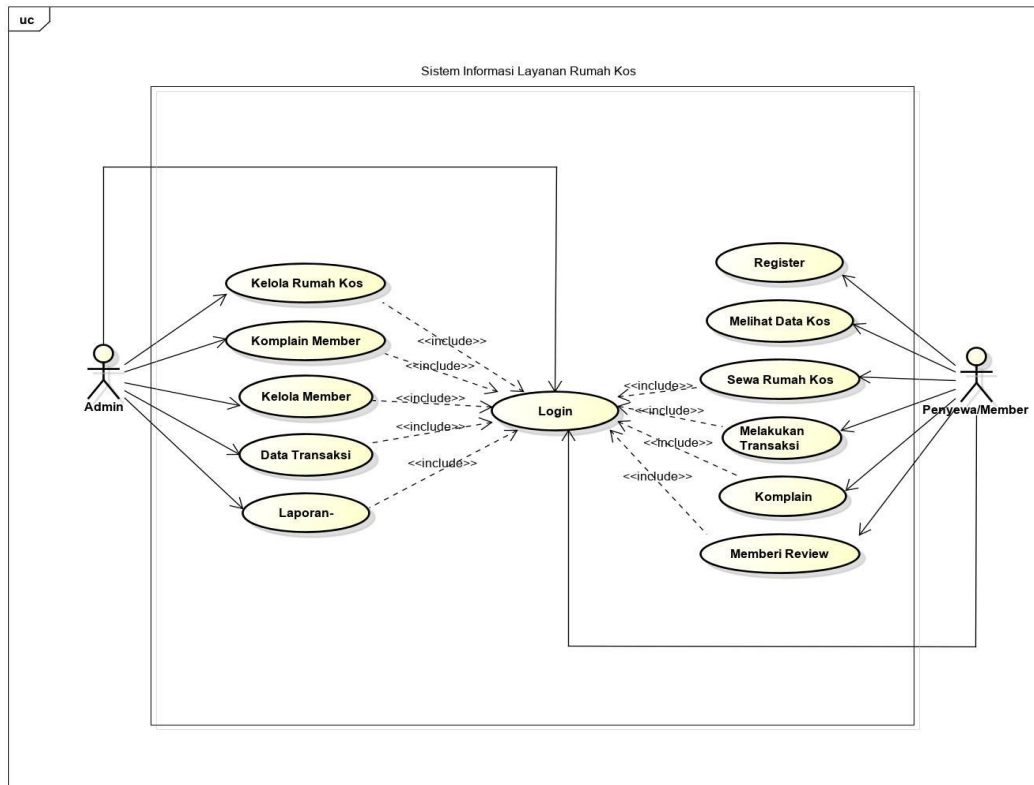


Figure 2. Proposed Use Case

## Class Diagram

Classes can be represented in an interface or vice versa, an implementation of an interface in the form of an abstract class that has no attributes and only has methods. Interfaces cannot be instantiated directly, but must first be implemented in a class. The relationship between classes consists of :

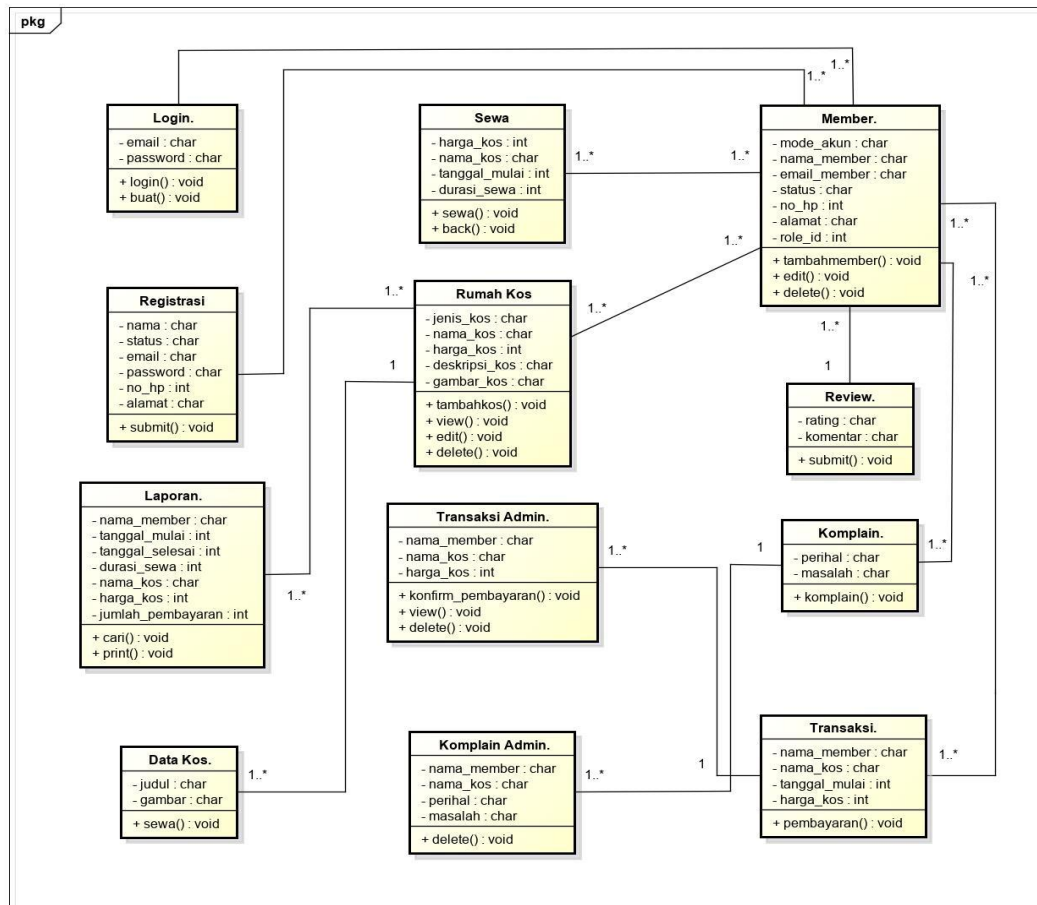


Figure 3. Proposed Class Diagram

**Sequence Diagram Admin**

This diagram is an illustration of a sequence diagram for Administrators performing activities on the system, which is described below :

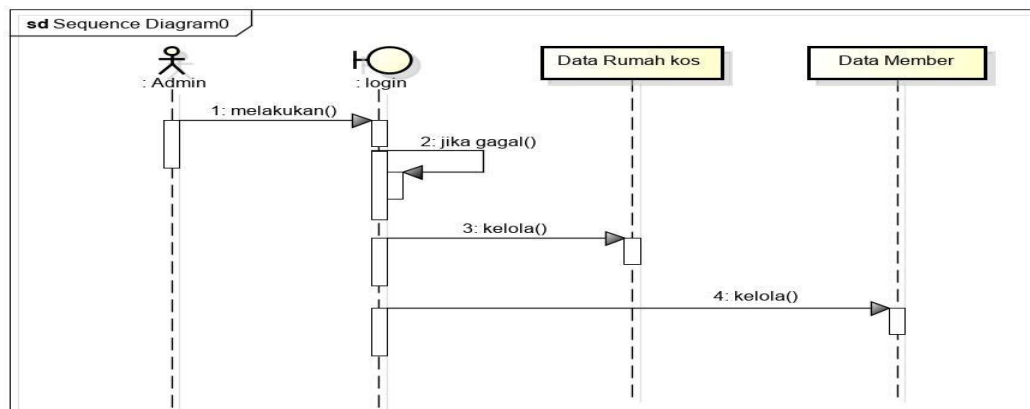


Figure 4. Proposed Admin Sequence Diagram

**Sequence Diagram Members**

This diagram is an illustration of a sequence diagram, for members to view pensions and carry out pension reserve transactions, described as :

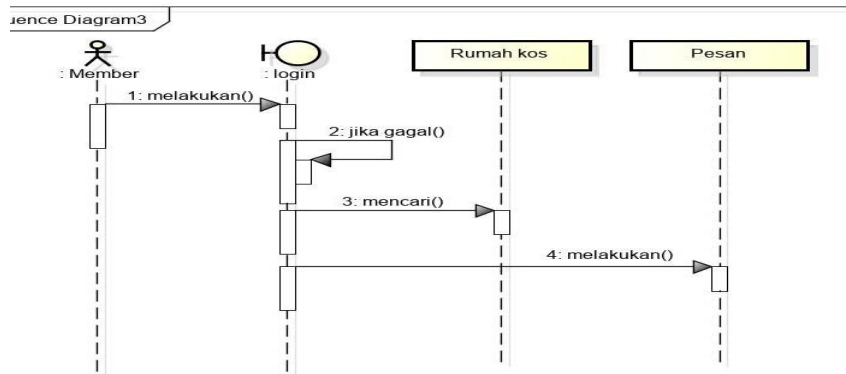


Figure 5. Member Sequence Diagram

**Visitor Sequence Diagram**

This diagram is an illustration of a sequence diagram, for visitors to view the guesthouse and register, in order to carry out transactions which are described as :

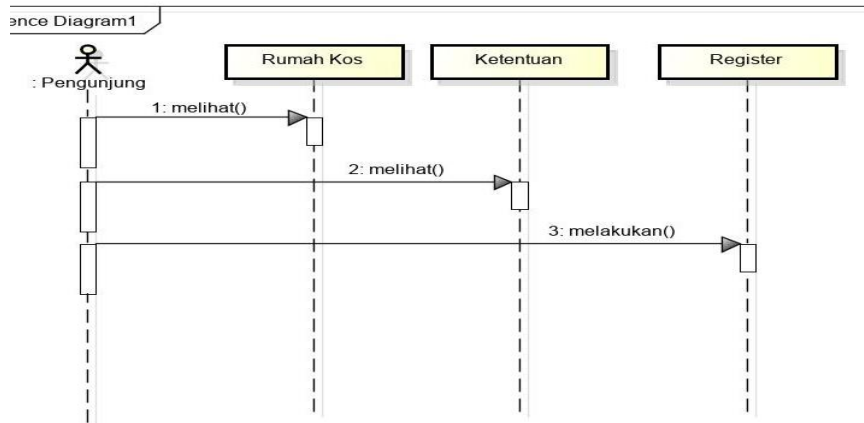


Figure 6. Visitor Sequence Diagram

**Admin Activity Diagram**

This diagram is an illustration of an activity diagram for administrators in designing a boarding house website in the Ekasakti University area, which is described as :

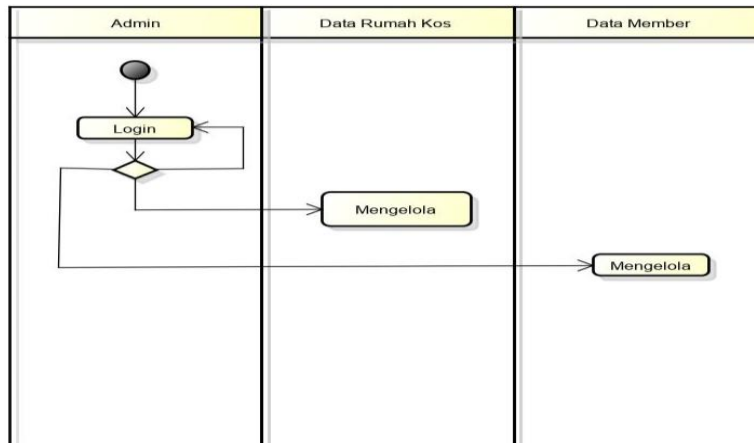


Figure 7. Admin Activity Diagram

### Member Activity Diagram

This diagram is an illustration of the member activity diagram in designing the website of a boarding house in the Ekasakti University area. Which is described as :

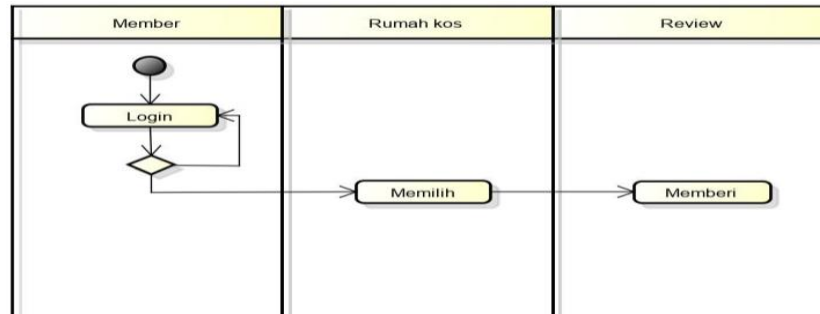


Figure 8. Member Activity Diagram

### Visitor Activity Diagram

This diagram is an illustration of an activity diagram for visitors on the website design of a boarding house in the Ekasakti University area. Which is described as :

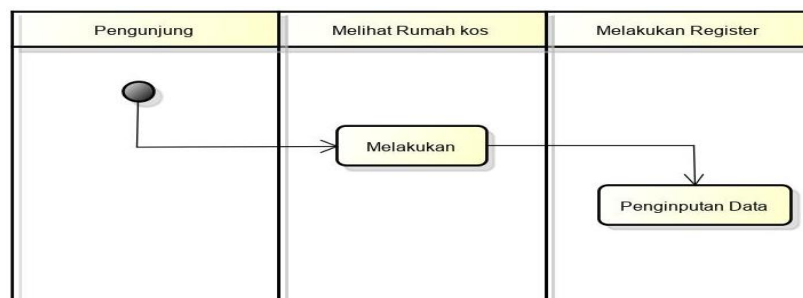


Figure 9. Visitor Activity Diagram

### Entity Relationship Diagram

Entity relationship diagram (ERD) is a diagram that describes data requirements and relationships between entities in a database. ERD uses symbols or objects that are composed of three components, namely entities, attributes and relationships, and each symbol has a relationship with each other.

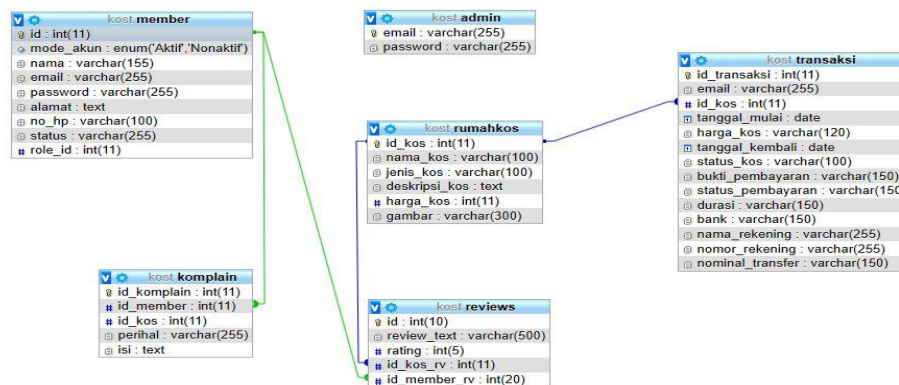


Figure 10. Proposed Entity Relationship Diagram for UNES Area Boarding Houses

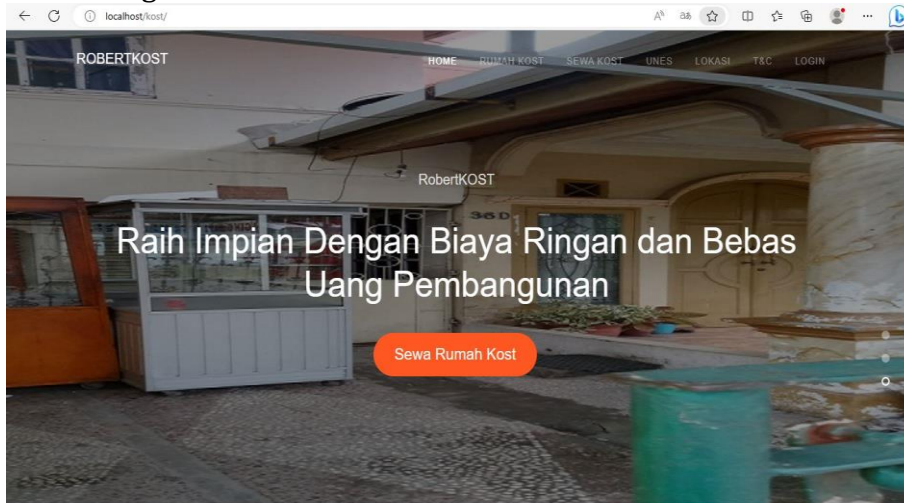
## Results and Discussion

### Implementation

The design of the information system of the boarding service in the Ekasakti University area was developed using the PHP programming language, using a MySQL database. In its implementation, the design of this information system aims to make it easier for students to search for pensions, which can be accessed through each student's mobile phone or laptop.

### Interface Implementation

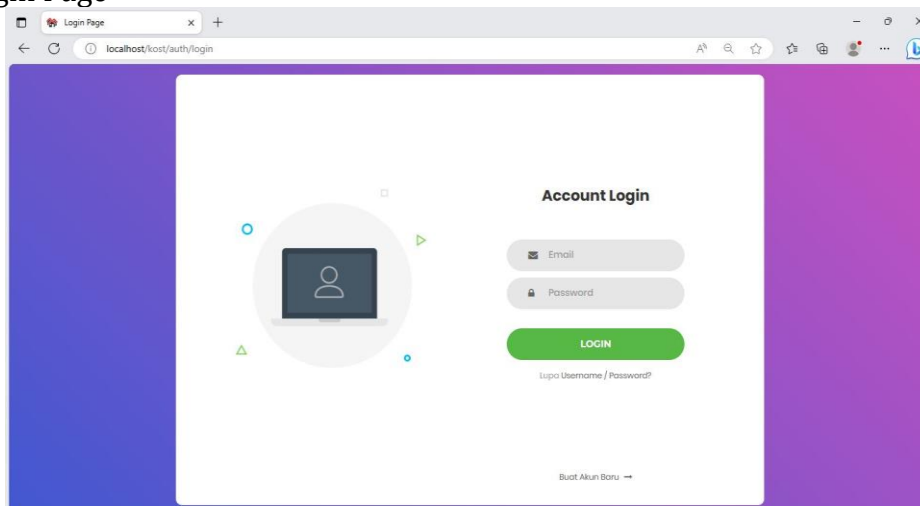
#### 1. Dashboard Page



**Figure 11. Dashboard Page**

On this page, visitors can view available dashboard pages such as home, pension details, pension location, UNES registration booklet information, location, terms and conditions and login.

#### 2. Login Page

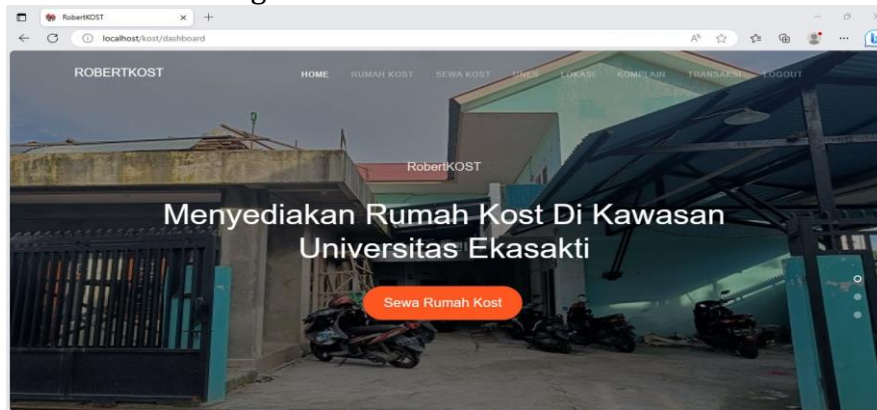


**Figure 12. Login Page**

On this page, visitors can log in to rent a guest house. If they do not have an account, visitors can click the words "Create new account" to create an account.



### 3. Member Dashboard Page



**Figure 13. Member Dashboard Page**

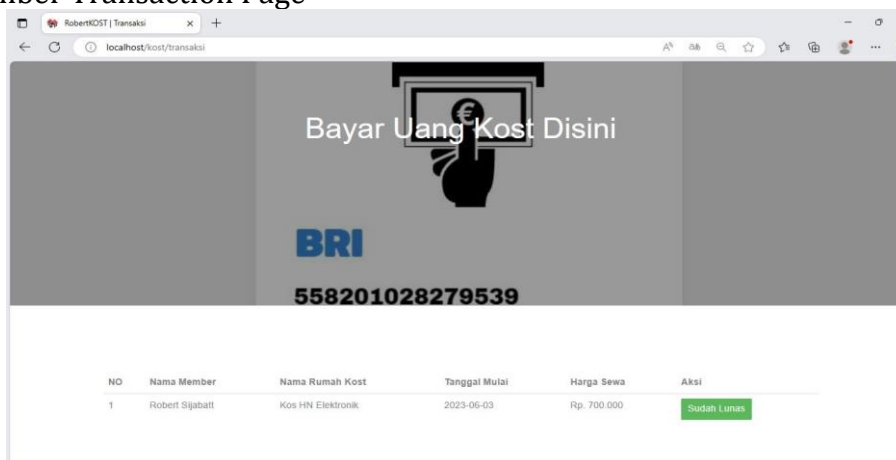
On this page, members can see various menus on the dashboard after logging in, such as home, pension information, pension location, complaints, transactions, and logout.

### 4. Member Boarding House Rental Page

**Figure 14. Member Boarding House Rental Page**

On the rental page of this menu, the user can rent the pension they have selected by entering the start date and duration of the rental of the pension.

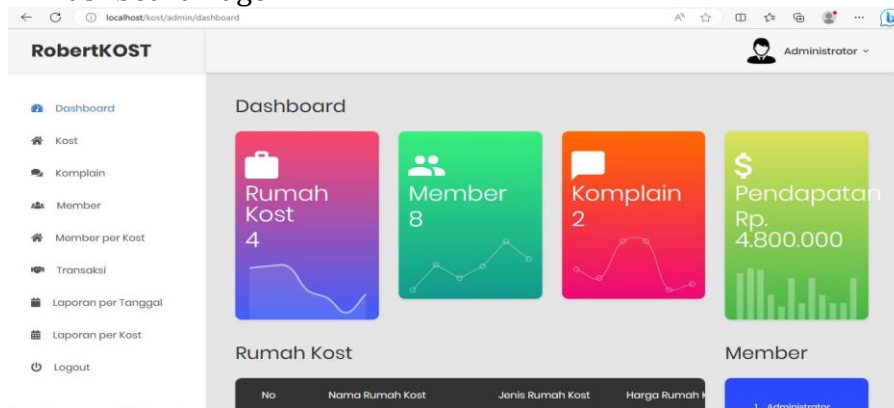
### 5. Member Transaction Page



**Figure 15. Member Transaction Page**

This menu is used to carry out payment transactions for the pension that has been selected and then upload the payment receipt that has been sent.

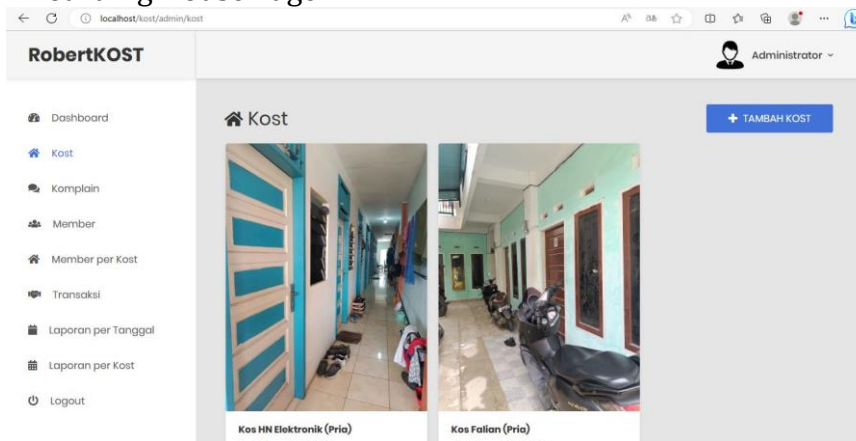
6. Admin Dashboard Page



**Figure 16. Admin Dashboard Page**

On this page, the administrator can see the menu on the dashboard, after the administrator logs in.

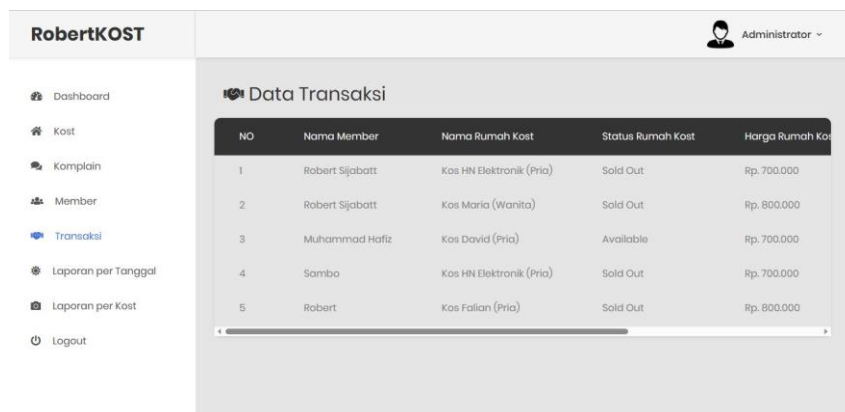
7. Admin Boarding House Page



**Figure 17. Admin Boarding House Page**

On this page, the administrator can manage pension data, such as adding pension data or updating existing pension data.

8. Admin Transaction Page



**Figure 18. Admin Transaction Page**

On this page, the administrator can see a list of transactions made by previous members and the administrator can confirm the payments that have been made.

### C. Conclusion

The conclusion obtained from the results of this writing is that the design of this pension service application can overcome the problem of students' difficulties in finding temporary accommodation such as pensions, and can help owners manage tax reports. about renting pensions. The system development method for this writing uses the system development life cycle (SDLC) method with the PHP programming language and the MySQL database.

Suggestions that the author can propose to pension owners are related to the proposed program, the need for advertising efforts or website promotion among residents.

### D. Reference

- [1] Ardiansyah, Dian. 2019. "Rancang Bangun Sistem Informasi Penjualan Perlengkapan Tidur (Sippat) Berbasis Web Pada Fortun Barokah Karawang." *Jurnal Inkofar* 1(1): 68–79.
- [2] Aswin, Muhamamd, Dedi Setiawan, Badrul Anwar, and Guntur Syahputra. 2020. "Perancangan Jam Digital Dan Sistem Bel Otomatis Pada Sekolah Dengan Teknik Counter Berbasis Mikrokontroler." *J-SISKO TECH (Jurnal Teknologi Sistem Informasi dan Sistem Komputer TGD)* 3(2): 65.
- [3] Devianto, Yudo, and Saruni Dwiasnati. 2018. "Aplikasi Pengambilan Keputusan Indeks Kepuasan Masyarakat Dengan Metode Perbandingan Eksponensial (MPE) Pada Unit Pelayanan Masyarakat Dengan Alat Microcontroller Sebagai Alat Bantu Survey." *Jurnal Ilmiah FIFO* 10(1): 13.
- [4] Fatmasari, Fatmasari, and Siti Sauda. 2020. "Pemodelan Unified Modeling Language Sistem Informasi Enterprise Resource Planning." *Jurnal Media Informatika Budidarma* 4(2): 429.
- [5] Haq, A Laya. 2023. "Sistem Antrian Pemesanan Pada Aplikasi Penjualan Berbasis Web Untuk Pedagang Kaki Lima." 9(2): 781–88.
- [6] Hidayatulloh, Kholik, M. Komarudin MZ, and Asih Sutanti. 2020. "Perancangan Aplikasi Pengolahan Data Dana Sehat Pada Rumah Sakit Umum Muhammadiyah Metro." *Jurnal Mahasiswa Ilmu Komputer* 1(1): 18–22.
- [7] Novianto, Mohammad Akmaluddin, and Sirojul Munir. 2022. "Jurnal Informatika Terpadu." *Jurnal Informatika Terpadu* 8(2): 47–61. <https://journal.nurulfikri.ac.id/index.php/JIT>.
- [8] Nuris, Nuzuliarini et al. 2020. "Implementasi Sistem Informasi Penyewaan Studio Musik Rental Studio 14." *Jurnal Rekayasa Informasi* 9(2): 93–100. <https://ejournal.istn.ac.id/index.php/rekayasainformasi/article/view/813>.
- [9] Sahidu, Heriyanto, Eko Purwanto, and Kata Kunci. 2022. "SISTEM INFORMASI MANAJEMEN KOS BERBASIS WEB PADA KOS BALI." *Jurnal Ilmiah Sistem Manajemen Informatika & Komputerisasi Akuntansi* 5(1).
- [10] Sallaby, Achmad Fikri, and Indra Kanedi. 2020. "Perancangan Sistem Informasi Jadwal Dokter Menggunakan Framework Codeigniter." *Jurnal Media Infotama* 16(1): 48–53.
- [11] Siahaan, S. 2019. "Penerapan Algoritma Sequitur Pada Kompresi Record Database Pada Database." *JURIKOM (Jurnal Riset Komputer)* 6(5): 511–16. <https://www.ejurnal.stmik->

- [budidarma.ac.id/index.php/jurikom/article/view/1644](http://budidarma.ac.id/index.php/jurikom/article/view/1644).
- [12] Siregar, Victor Marudut Mulia, and Nancy Florida Siagian. 2021. "Sistem Informasi Front Office Untuk Peningkatan Pelayanan Pelanggan Dalam Reservasi Kamar Hotel." *Jurnal Teknik Informasi dan Komputer (Tekinkom)* 4(1): 77-82.
- [13] Soffan Maulana Akbar, Indra Gita Anugrah. 2022. "Kost; SPK; SAW; Gresik; Alternatif." *Sistem Pendukung Keputusan Pemilihan Tempat Kos Untuk Mahasiswa Di Gresik Dengan Metode Saw (Simple Additive Weighting)* 7(2).
- [14] Umar, Rusydi, Abdul Hadi, Panggah Widiandana, and Fahmi Anwar. 2019. "Perancangan Database Point of Sales Apotek Dengan Menerapkan Model Data Relasional." *Query: Journal of Information Systems* 5341(October): 33-41.
- [15]. Elvina, Elvina, Nuerani Dahri, and Harry Setya Hadi. "PERANCANGAN SISTEM INFORMASI ARSIP DIGITAL BERBASIS WEB PADA KEJAKSAAN NEGERI PADANG." *Jurnal Manajemen Teknologi Informatika* 1.3 (2023): 125-133.