# APPLICATION DESIGN TO IMPROVE THE QUALITY OF UNIVERSITAS NEGERI SURABAYA DORMITORY MANAGEMENT

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**Abstrak**

Universitas Negeri Surabaya (Unesa) has 3 dormitory buildings, 1 general dormitory building, and 1 PGSD dormitory building. The appropriateness of dormitory management at Unesa still can be improved from the service administration and finance aspect. To overcome the problem, this research will discuss about the update of Unesa dormitory management from manual to modern with utilize information and communication technology. The designed and developed applications namely the SIM ASRAMA EDUNESA, its purpose to increase quality of dormitory management. SIM ASRAMA EDUNESA is designed based on Android so makes it easier for user to access wherever and whenever. This study use descriptive qualitative approach. Subject research involved the dormitory residents. As for collecting data, research instruments used questionnaire and Focus Group Disscussion (FGD). Research results indicates: (1) SIM ASRAMA EDUNESA has been produced based android application, (2) SIM ASRAMA EDUNESA has several advantages, including the SIM ASRAMA Edunesa based on android application and database management system (DBMS), user can check room availability and facility conditions via online whenever and wherever, user can do online registration via applications, and can do online payment via various application payment. (3) Response from SIM ASRAMA EDUNESA user shows an average score of 3.84 with category worthy for applied with minor repairs. (4) The average percentage 77.29% shows that dormitory management improvements get positive response from dormitory residents with potency of dormitory management performance still can improved again.

**Keywords: SIM ASRAMA EDUNESA, Dormitory management**

## 1 INTRODUCTION

Dormitories are residence facility designated building for student from agency education. Naturally, dormitory building made for students to reach the campus easier. According to Mulyadi (2018), many student from various distant areas make the need of dormitories is increasing. Basically, good dormitory management will also support academic and non-academic activity of student. Besides giving adequate facilities, good dormitory support services are also a must noticed. Universitas Negeri Surabaya which located in Lidah Wetan has a dormitory consisting of from 3 main dormitory buildings, 1 general dormitory building , and 1 PGSD dormitory building which each of them has 5 floors.

Facts on the ground show that dormitory services at Unesa Lidah Wetan not yet satisfying. That matter can seen through dormitory management still use manual system. According to Sasongko and Diarto (2009); Saputra and Famukhit (2014), management with

manual systems often give rise to problem. One of the ineffectiveness dormitory management looks on how to collect data on dormitory residents. The officer registers prospective residents by transferring the data entered from the online form into the register book. That matter felt not enough efficient because if register book or link form is lost there is no recap other data that can double checked. When this problem happen then the officers will register dormitory residents manually by check one by one rooms in each dormitory building.

Besides residents data collection manually, the payments system of dormitory are also considered not efficient enough because payment usually done with two method ie with entrust payment to the dormitory administrator and direct payment via transfer to the Unesa account. That matter will give rise to ambiguous because the data doesn't recorded safely. If the dormitory residents pay via virtual account, there is no sender name. If the resident pay to the officer dormitory and not noted directly in accounting book, then it is prone causing problems. The case will give rise complaints and protests from dormitory residents to the dormitory manager.

Following up the problem above, Unesa launch and develop SIM ASRAMA EDUNESA based on information and communication technology. Universitas Negeri Surabaya also formed Unesa Dormitory Directorate with organization structure as following .



Figure 1 Unesa Dormitory Directorate

This method is possible solution to overcome manual management problems using SIM ASRAMA EDUNESA application. Based on exposure above, then formulation problem taken is as following : 1) How effectiveness of the SIM ASRAMA EDUNESA to increase the quality of the resident database management?; 2) How effectiveness of the SIM ASRAMA EDUNESA to increase quality management in the payment monitoring aspect?

This study is important because system management of Unesa dormitory is still operated manually resulting in inaccuracies of the residents dormitory database and administration payment database. Previous relevant study conducted by Aditya et al (2019) about design of information system WEB- based carried out at the South Kalimantan Student Dormitory in Malang. Research results show that system can achieve the user need.

Study about design of application is interesting for researched because the need to update dormitory management system from manual to modern based on application of information and communication technology. That matter will make dormitory management becomes more simple and easy and reduces the management problems.

## 2 LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Student dormitory is buildings built and financed by the University. building This used for student accommodation (Ministry of Finance , 2004). Various form dormitory facilities for sure diverse start from size building, shape, and number its capacity. Every dormitory will managed and owned system management separately. System Information Management (SIM) is a method that will developed as means provision information . System information used for support taking decisions and supervision in an organization (Laudon, 2017). Database Management System is database system that can interact with user, other application, and databases for analyzing data (Dewi, 2021).

Next is table study previous ones that have been done about planning application .
Table Study Previous

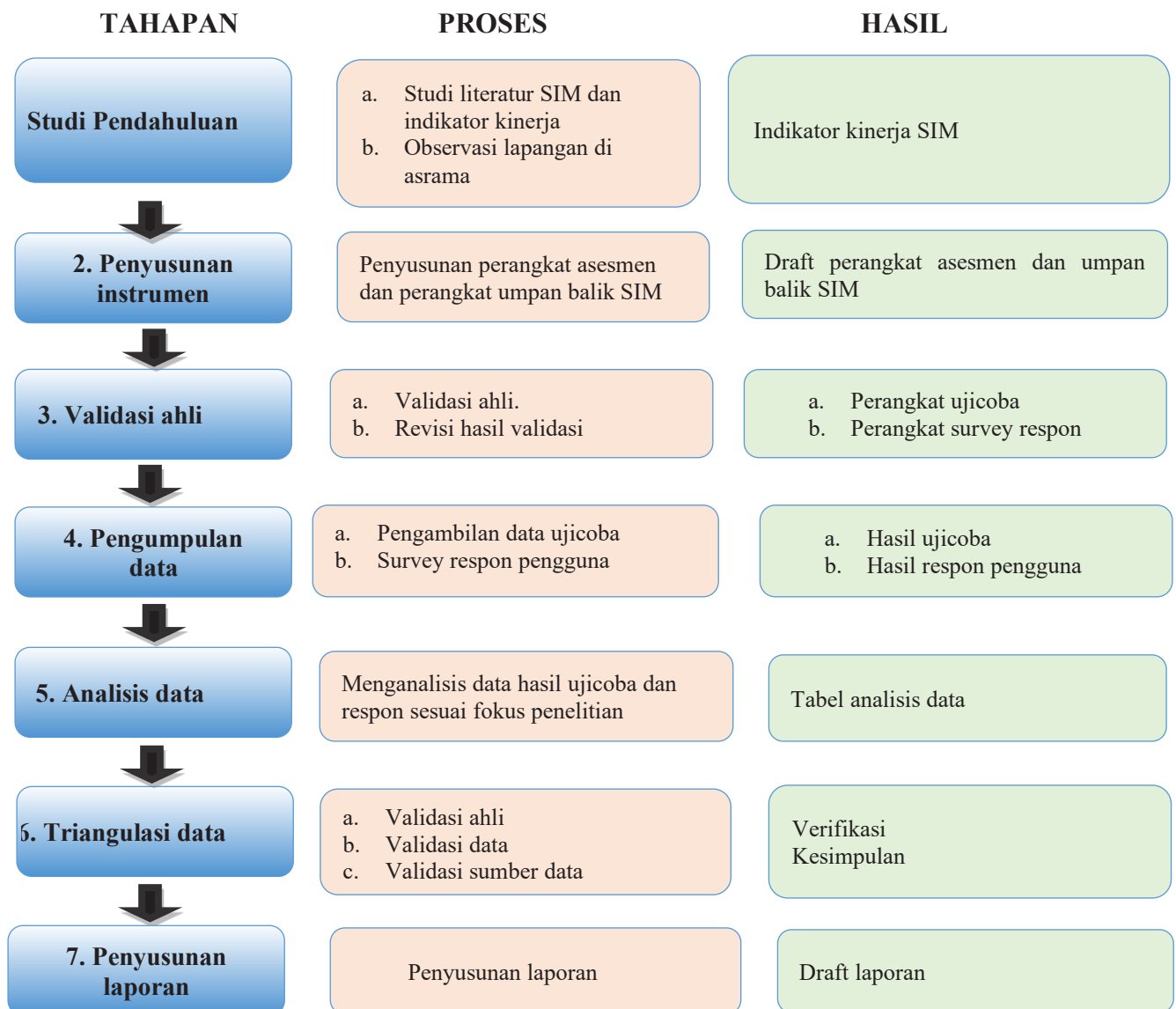| Year | Title | Researcher | Subject | Method | Media | Findings |
|------|-------|-----------|---------|--------|-------|----------|
| 2018 | Perancangan Sistem Informasi Manajemen Asrama pada Yayasan Citra Bina Insan Mandiri | Gerlan A. Manu | Yayasan Citra Bina Insan Mandiri | Total Architecture Synthesis (TAS) | PHP | SIM Hostel created with Frameworks Codeigniter , using Network Local Area Networks |
| 2019 | Sistem Informasi Administrasi di Asrama Mahasiswa Gunung Tajam | Gerenli Tradikda & Mia Fitriawati | Asrama Mahasiswa Gunung Tajam | Descriptive prototype | PHP, MySQL, Prototype | SIM helps registration process candidate residents , dues process monthly , the process of |

| Year | Title | Author | Object | Method | Collection technique | Results |
|---|---|---|---|---|---|---|
| | | | | | | extending the stay , the process of leaving the dormitory, and making report . |
| 2020 | Implementasi Sistem Informasi Manajemen (SIM) Dalam Pengelolaan Haji Di Kementerian Agama Kota Makassar | Syallu & Andi Abdul Hamzah | Pengelolaan Haji Di Kementerian Agama | Qualitative Descriptive | Observation , Interview , and documentation | SIM assessed effective start from registration and organized database storage neat , fast processing document passport , visa, as well as publishing Document Administration , process payment deposit start-up and costs repayment online and real time, preparation pramanifest and Flying groups ( Kloter ) more easy and fast in accordance with incoming data , health monitoring _ Hajj pilgrims and On Time Flight performance (OTP). taking place optimally _ |
| 2021 | Penerapan Framework Model-View-Controller | Sihombing, E. D. C., & Wahab, S. R. | GKI | Prototype | Model View Controler Framework | SIM to be tool help in manage congregation |

| Year | Title | Author | Object | Method | Tools | Result |
|---|---|---|---|---|---|---|
| | (MVC) Pada Sistem Informasi Manajemen Data Jemaat Berbasis Web (Studi Kasus GKI Maranatha Kampung Harapan) | | | | | data and produce Congregation data information is accurate , up to date ( latest ), safe and available for user . |
| 2022 | Sistem Informasi Pengarsipan Surat Berbasis Web: Studi Kasus Asrama Mahasiswa Islam Sunan Giri | Adam Panca Putra Pinaria, Dina Al-fatihah Nur Fauziah, dan Hana Huwaida | Asrama Mahasiswa Islam Sunan Giri | Prototype | Modeling (Unified Modeling Language) with MySQL database | SIM makes it easy boarding residents for knowing and convey letter the letter he received , provided service easy archiving _ viewed and controlled , structuring mail data arranged neat and time consuming _ more short , make files letter safe and secure as well as can accessed When just |

Table above show that there is a number of study previous research about planning of information system. The difference with this study is a target that focuses on the purposeful use of the SIM ASRAMA EDUNESA for ensure quality service especially on service dormitory management.

## 3 RESEARCH METHODS

Approach of descriptive qualitative used as design study. Purposive sampling was used to take sample with objective limiting the focus research on relevant respondents with topic of research (Fraenkel & Wallen, 2008). Data is collected through form filling, form questionnaire, and FGD. As for characteristics study qualitative are 1) natural; 2) data is a nature descriptive; 3) data analysis with inductive; and 4) meaning is very important (Bogdan & Biklen, 2007). Research flow as following.

| TAHAPAN | PROSES | HASIL |
|---|---|---|
| **Studi Pendahuluan** | a. Studi literatur SIM dan indikator kinerja<br>b. Observasi lapangan di asrama | Indikator kinerja SIM |
| **2. Penyusunan instrumen** | Penyusunan perangkat asesmen dan perangkat umpan balik SIM | Draft perangkat asesmen dan umpan balik SIM |
| **3. Validasi ahli** | a. Validasi ahli.<br>b. Revisi hasil validasi | a. Perangkat ujicoba<br>b. Perangkat survey respon |
| **4. Pengumpulan data** | a. Pengambilan data ujicoba<br>b. Survey respon pengguna | a. Hasil ujicoba<br>b. Hasil respon pengguna |
| **5. Analisis data** | Menganalisis data hasil ujicoba dan respon sesuai fokus penelitian | Tabel analisis data |
| **6. Triangulasi data** | a. Validasi ahli<br>b. Validasi data<br>c. Validasi sumber data | Verifikasi<br>Kesimpulan |
| **7. Penyusunan laporan** | Penyusunan laporan | Draft laporan |

Picture of Research Flow Diagram

Subject study is dormitory residents. Research data taken in period time May to November 2023. Instruments study in the form of collected data through form activity

dormitory routines, FGDs for dormitory residents, and forms questionnaire. Form containing question choices and open questions. As for indicators targeted achievements in this study is as following : 1) feasibility application of a Dormitory SIM based on evaluation dormitory manager (minimum average rating 3); 2) feasibility application of a Dormitory SIM based on evaluation dormitory users (minimum average rating 3); 3) satisfaction post boarding users Minimum 75% Edunesa Dormitory SIM usage.

## 4 RESULTS AND DISCUSSION

### Use Case Models

Following is description interaction user system with boarding system.
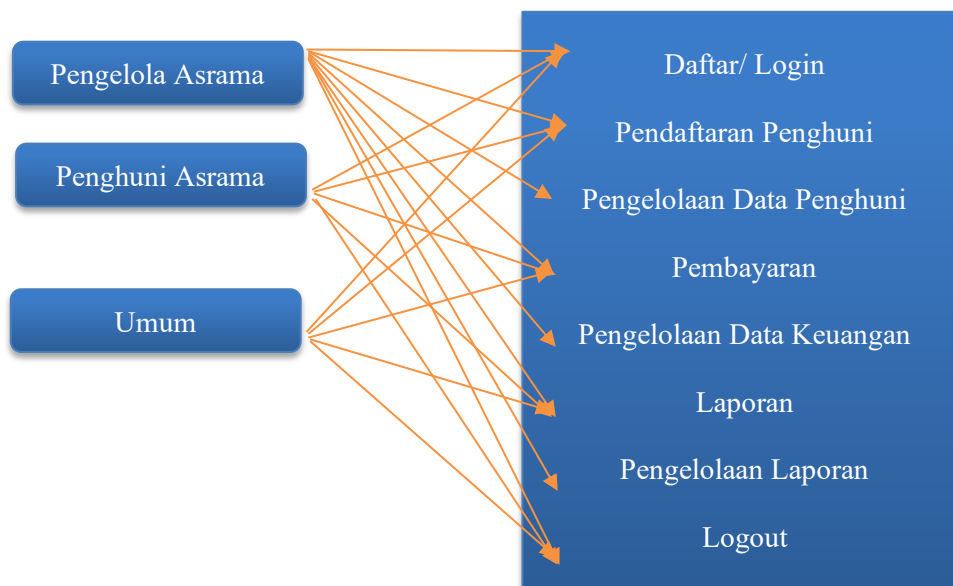


Figure 5.1 Use Case Diagram

Explanation picture about modeling UseCase above _ is as following ; 1) Dormitory manager ( manager, person in charge, admin) has right access to register/login, registration residents, management of resident data ( add , edit, delete , view ), payments ( add , edit, delete , view ), management of dormitory financial data ( add , edit, delete , view ), reports ( view ), management report ( add , edit, delete , view ), and log out; 2) hostel residents have right access to register/login, registration residents ( add , edit, delete , view ), payments ( add , edit, delete , view ), reports ( view ), and logout; 3) general public own right access to register/login, registration residents ( add , edit, delete , view ), payments ( add , edit, delete , view ), reports ( view ), and logout.

Following is EDUNESA Dormitory SIM interface display

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1) SIM ASRAMA EDUNESA based Android application and database management system (DBMS) .



Figure 5.7 EDUNESA ASRAMA SIM Interface

2) User can check availability rooms and conditions facility room online whenever and wherever.
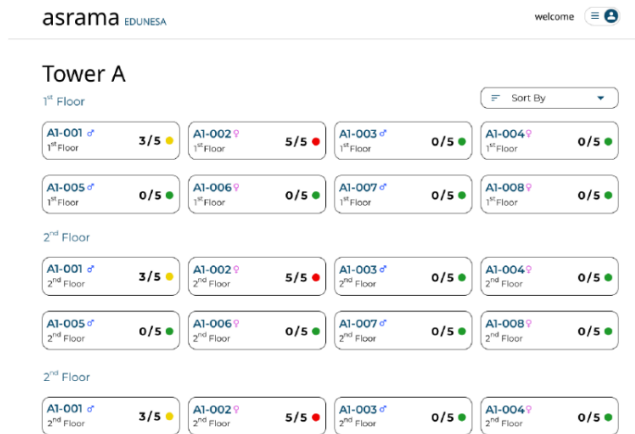


Figure 5.8 Report Interface Space Availability 1

Figure 5.9 Space Availability Interface 2

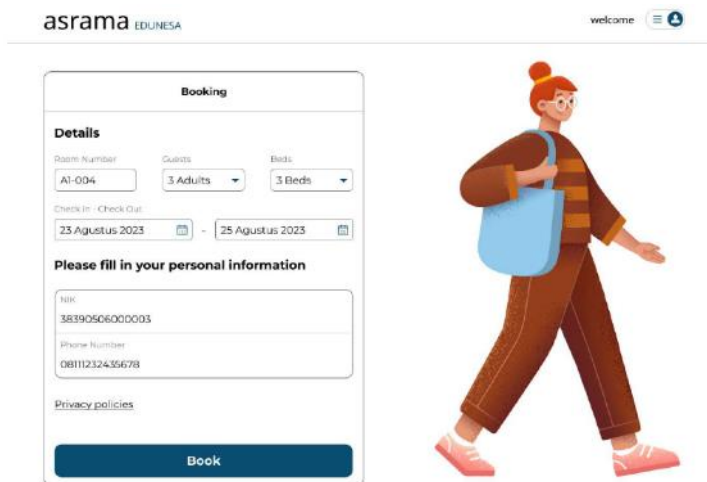3) User can do registration online via application.



Figure 5.10 Service Interface Booking

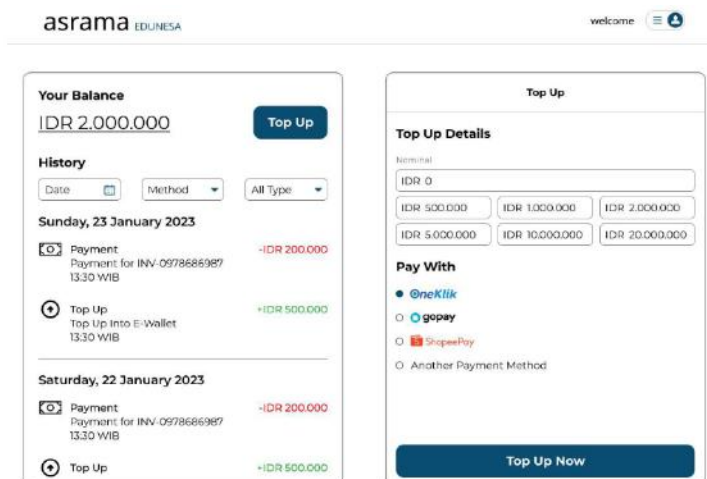4) User can do online payment via various application payment.



Figure 5.11 Service Interface Payment

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**Effectiveness User**

Following is table containing user response to SIM ASRAMA EDUNESA based on results questionnaire that has been spread .

Table 5.1 Response EDUNESA ASRAMA SIM users

| No. | Question | Response (average score scale likert ) | Percentage Response |
|---|---|---|---|
| 1 | I choose live in the upper dormitory desire I Alone . | 4.54 | 90.79% |
| 2 | During This I feel comfortable live in a hostel. | 4.18 | 83.68% |
| 3 | I follow activities in the hostel. | 3.55 | 71.05% |
| 4 | boarding system creates I more comfortable as residents . | 4.08 | 81.58% |
| 5 | boarding system creates I more easy do payment . | 3.83 | 76.58% |
| 6 | boarding system creates I more easy monitor history payment . | 3.59 | 71.84% |
| 7 | boarding system creates I more easy monitor availability room . | 3.28 | 65.53% |
| Average | | 3.84 | 77.29% |

Amount sample = 76 students dormitory residents

Category evaluation :

Score 1 – 1.99 : No worthy applied

Score 2 – 2, 99 : Worthy applied with major repair

Score 3 – 3.99 : Worthy applied with minor repairs

Score 4 – 4.99 : Worthy applied with repair incidental

Score 5 : Very decent applied

Based on results questionnaire above show response EDUNESA ASRAMA SIM users as following .

1) 90.79% of students occupy the dormitory with will Alone .

2) 83.68% of students feel comfortable stay in the hostel for This .

3) Only 71.05% of students are active follow activities in the hostel.

4) Since applied system new , only around 81.58% of students felt more comfortable live in a hostel.

5) Only 76.58% of students felt it more easy do hostel payment .

6) Only 71.84% of students felt it more easy monitor history hostel payment .

7) Even only 65.53% of students the dormitory resident stated more easy monitor availability room since enforced system new .

Based on results questionnaire to sample The dormitory residents are 76 students out of a total of 805 dormitory residents , can concluded that :

1) 90.79% of residents have initiative Alone For occupy the Unesa dormitory , meanwhile the rest occupying the Unesa dormitory on desire family , invitation friends , or Because must adapt with the existing expenditure budget .

2) Almost around 83.68% of students felt comfortable living in a hostel since old system . Interesting only 81.58% of students felt comfortable with system new . the data show exists decline level comfort student since its implementation system new . This matter comparable with amount findings problem payment like arrears payment nor problem validity of resident data with found it a number of residents dark .

3) Average score evaluation shows 3.84 in category worthy applied with minor repairs .

4) average percentage shows 77.29% that repair hostel management get positive response _ from dormitory residents with potency performance hostel management still Can improved Again .

## 5 CONCLUSIONS

Based on explanation above can concluded as following , 1) have generated application Android based in the form of SIM ASRAMA EDUNESA; 2) The advantages of the SIM ASRAMA EDUNESA include: based android application and database management system (DBMS), availability rooms and conditions facility can checked online, registration can done online via applications, and payments can done through various application payment; 3) response of user application has show an average score of 3.84 with category worthy with minor repairs; 4) the average percentage is 77.29% which shows that dormitory management improvements get positive response from dormitory residents with potency of dormitory management performance still can improved again.

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