

The Usage of Mobile Technology in Malaysian Real-Estate Sector

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Abstract

E-RentHouse are a mobile application that allow student to rent houses around UniSZA especially in Campus Besut efficiently. The system consists three main users which is students, admin and owners. The students in this system can search for the houses by selecting the criteria that they prefer such as the affordable price of the houses that he/she can afford to rent. The admin in this system can manage the system. The owners (landlord) can advertising their house inside the system by uploading some photos, address and price of their houses. The added values in the system is the user can have a live chat with the seller and user can give rating to the seller. The system will also find the best recommended house for student when the student enters the criteria that they want. The system implemented ahp method to solve multi-criteria decision making.

Keywords: Mobile Apps, Real-Estate, Malaysia, Mobile Application Development, AHP technique, UniSZA.

I.INTRODUCTION

Every student from University Sultan Zainal Abidin (UniSZA) will face difficulties especially students from campus Besut. UniSZA has a hostel provided to the students, but a limitation to the rooms and large numbers of students has caused many of the students does not get the hostel and thus the students need to find a rental house around UniSZA to stay [1].

Moreover because of the geographical area of the UniSZA campus Besut which is far away from the city. The student struggles to find a nearby house to rent. The student must ask from house to house to find a landlord thus will take so much time. The purpose of this system is to

help students to find the house easily. In this system, the students can find a house nearby UniSZA and choose the house at an affordable price [2]. This system implements the AHP technique to solve multi-criteria decision-making problems.

Nowadays, house rental is essential for every university student. At UniSZA campus Besut, the students that enter second and third years often do not get a hostel. Thus, every new semester, the students will face difficulties to find a rental house.

There are many houses around UniSZA campus Besut that can be rent, but the students have to find it by themselves and sometimes this can be very troublesome. Throughout the arising issues, the E-RentHouse mobile application is introduced as an alternative to solve the problem of UniSZA students.

II. TECHNOLOGY

In the 1970s, AHP was introduced by Thomas L. Saaty, this approach consists of creating a model that represents the workings of the human mind in determining the alternatives facing a complex problem of decision [3].

Basically, the application of AHP method are as follow:

Step 1: Define Alternatives

Step 2: Define the problem and criteria

Step 3: Establish Priority amongst Criteria Using Pairwise Comparison

Step 4: Check Consistency

Step 5: Get the Relative Weights

Selecting the house for rent requires a big decision making for a student. There are many criteria needs to be compare for the best result. These are the main criteria of this system which is Location, number of rooms, Price and type of house.

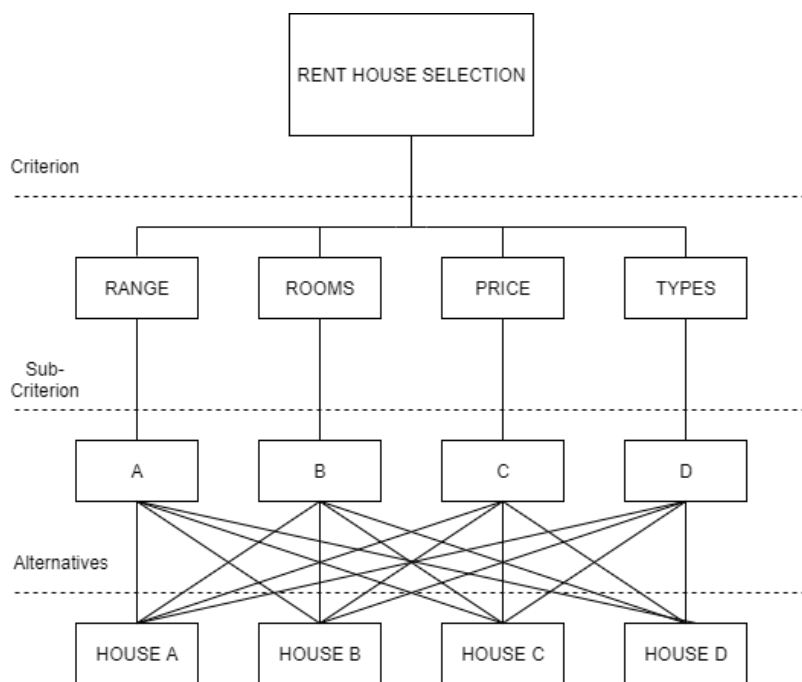


Figure 1: Selection Method

TABLE 1. Shows A Review On Related Method

Previous Work	Subject	Method	Remark
Ioan Aşchilean, Gheorghe Badea, Ioan Giurca, George Sebastian Naghiu, Florin George Iloaie (2016), [4]	Choosing the optimal technology to rehabilitate the pipes in water distribution systems using the AHP method	AHP	This study recommends using the Slipline method for the rehabilitation of water distribution pipes in Cluj-Napoca, Romania.
Lavinia Socaciua, Oana Giurgiua, Daniel Banyai, Mihaela Simiona (2015), [5]	PCM selection using AHP method to maintain thermal comfort of the vehicle occupants.	AHP	This research paper is limited to determine the weight of ten commercial PCMs considering only the technical specification of each PCM, but this study can be reiterated by adding other criteria.
Yan Lu, Hongwen Xu, Yuexiang Wang, Yang Yang (2017), [6]	Evaluation of water environmental carrying capacity of city in Huaihe River Basin based on the AHP method: A case in Huai'an City	AHP	The present study therefore aimed to determine the weight index, and evaluate the water environmental carrying capacity in Huai'an City in Huaihe River Basin by using AHP keeping in view the complex, integrated and comprehensive and hierarchal nature of evaluation.

III.EXISTING SYSTEMS

In the real estate sector, the number of students plays an important role in ensuring the recovery of the real estate market in the school season. It also contributes to the assessment of market movements in real estate rents [7]. The students' evaluation of these properties and the rental property service, especially in the scope and location of their studies, is considered an advertisement for potential students in the coming years. Technology plays an important role in this in terms of developing websites or mobile applications. Below are some of the most famous websites that work in this domain in Malaysia.

i.Mudah.my

Mudah.my is an online marketplace to buy and sell a variety of products and services in Malaysia. The site features ads under various categories: vehicles; leisure, sports, and hobbies; jobs and services; electronics; properties; travel; business-to-business; home and personal items; and others, See Figure 2 [8].

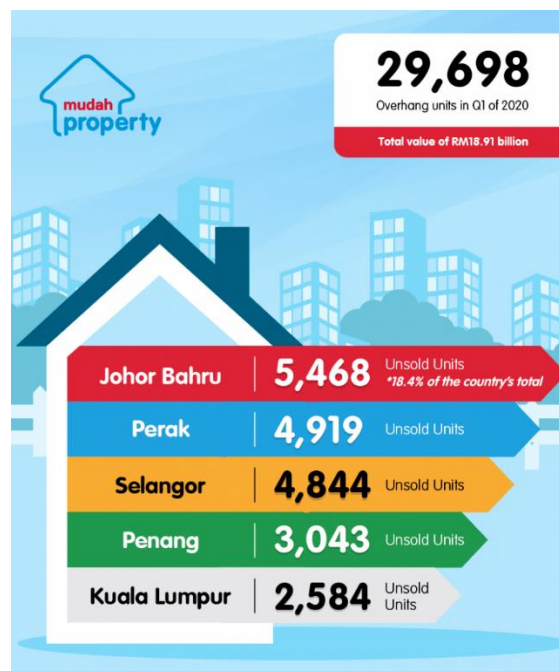


Figure 2: Mudah Available Property by state

Features and Method:

- Have live chat
- No online payment(deposit)
- Various category
- Entire Malaysia
- Available in website and Mobile App. versions, see Figure 3 [9].

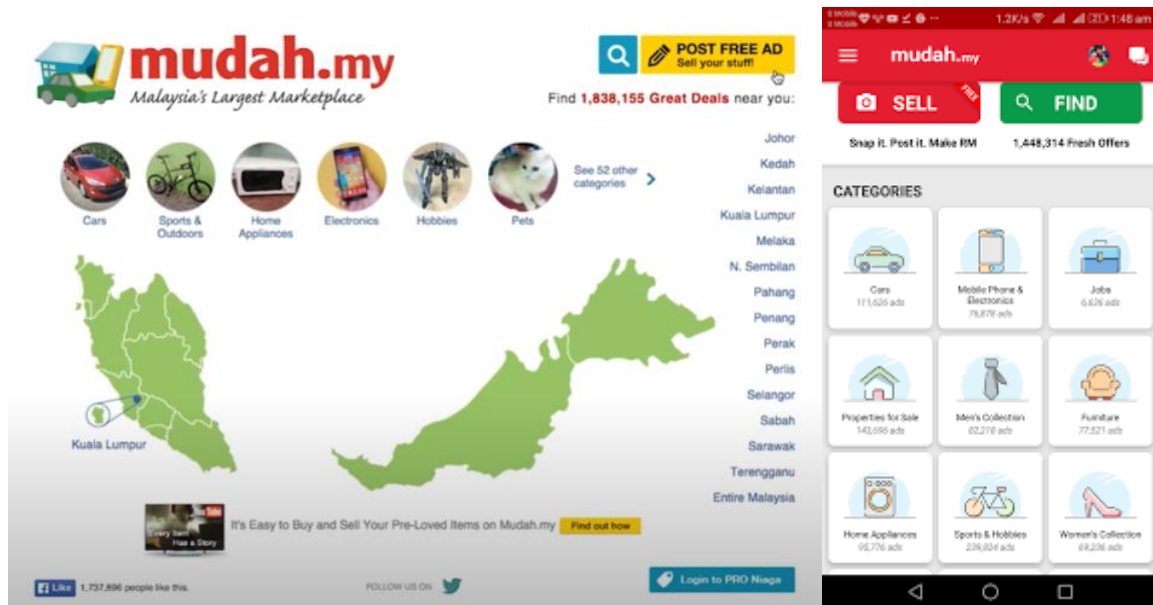


Figure 3: Mudah website and Mobile App. Main Page

ii.iBilik

Malaysia's Largest Rental Database, 1 website for rooms, homestays, and short term rentals with over 100,000 listings posted online all across Malaysia, Kuala Lumpur, Ampang, Bangsar, Cheras, Setapak, Kota Damansara, Petaling Jaya, Subang Jaya, and Penang [10].

Features and Method:

- Does not have live chat
- No online payment (deposit)
- Rent house
- Entire Malaysia, Singapore, Brunei, Indonesia and Philippines
- Available in website and Mobile App. versions, see Figure 4 [11].

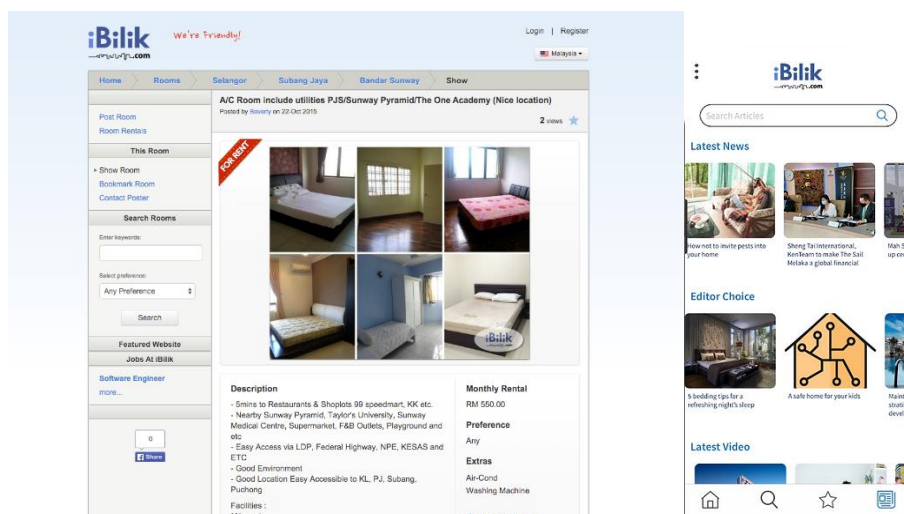


Figure 4: iBilik website and Mobile App. Main Page

iii.Land.Plus

Land is the latest real estate search engine for Malaysia and Singapore. Our goal is to expand across Asia to become the No.1 real estate search engine in the world. Our advanced search technology is powered by state-of-the-art artificial intelligence and machine learning algorithms [12].

Features and Method:

- Does not have live chat
- No online payment (deposit)
- Sell or rent house
- Entire Malaysia and Singapore
- Available in website and Mobile App. versions, see Figure 5 [13].

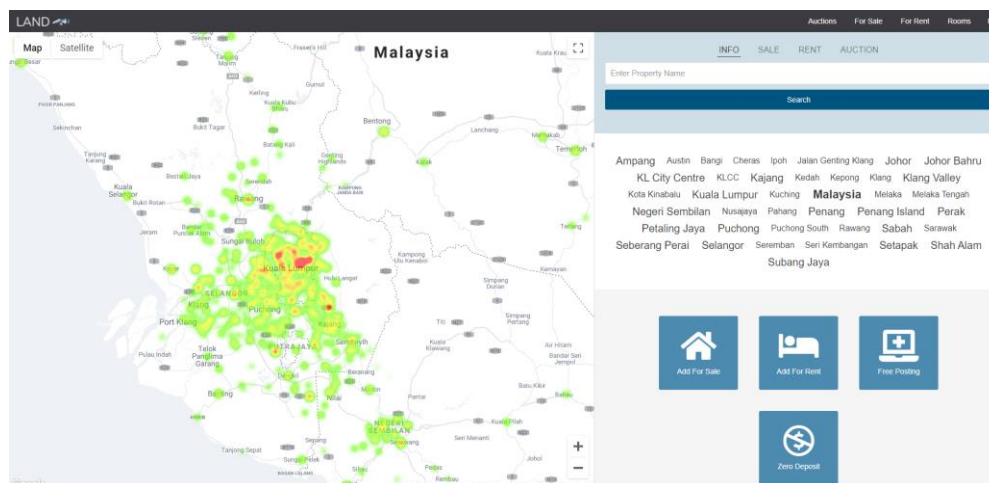


Figure 5: Dashboard of UniMAP Geo-Location Based Attendance and Analytical System

IV.E-RENTHOUSE MOBILE APPLICATION FEATURES

The E-RENTHOUSE mobile application has been specifically developed to search for housing close to campus for students of UniSZA. It has a simple and useful interface. Then again, the workers side includes the near worker, neighbourhood dataset, and remote workers. The client side will talk to the worker via a Wi-Fi connection. Figure 5 illustrates the conceptual framework of the E-RENTHOUSE application. It shows how the interaction between the student and the property owner near the campus and the student occurs. In this system, the student will fill in the data of the property that is suitable for him and that he wants to search for while the system will automatically discover the nearby property based on the student's choices. Then the application searches for the matching data in the database whose data was collected by real estate owners. For the purpose of recording and data analysis, all data and information will be stored in the database. The application is designed to be flexible, easy to use, portable and supports dynamic information.

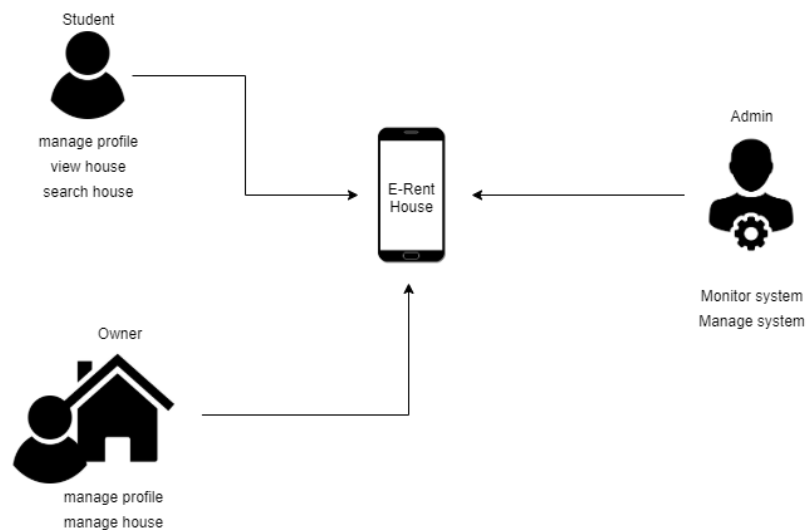


Figure 5: Framework for E-RENTHOUSE

Figure 6.0 shows the homepage of the system where student and owner can register and login into the system.

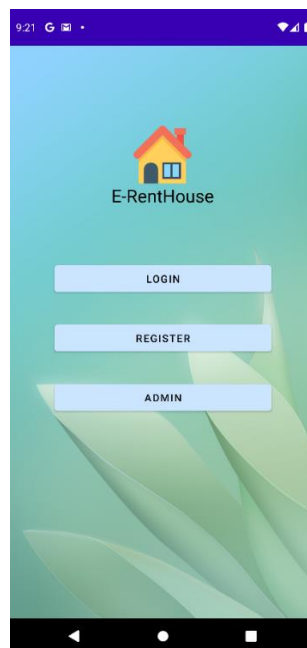


Figure 6: The main page for E-RENTHOUSE

In Figure 7 shows the login form for owner. The owner should fill the form and click login to login. The owner homepage after login into the system. The name of the owner is displayed on top the page. The owner can navigate through the menu such as home, add house, view and update profile and view and update house and log out. Also the owner fill-up the property details and owner can update the information as well.

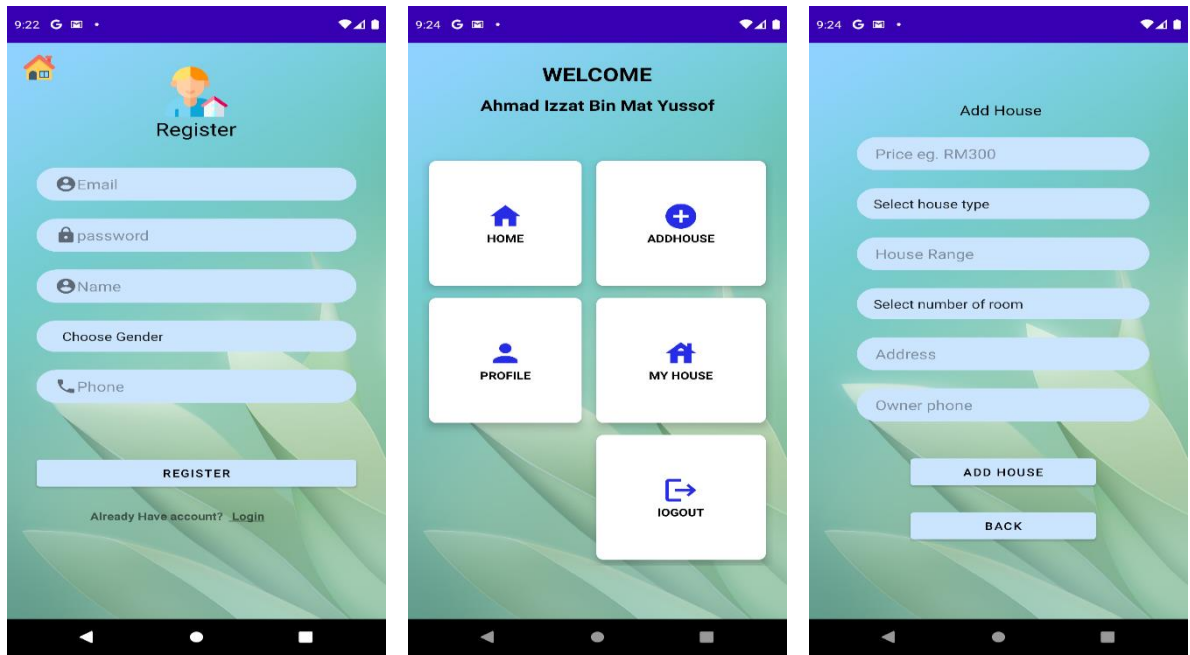


Figure 7: Examples of the Property’s Owner Interfaces

The student should register first by filling-up the form to be able to login after that to use the application features. The student homepage after login into the system shows the name of the student on top the page. The student can navigate through the menu such as home, search house, view and update profile or log out. The student can search for the suitable property according to certain criteria of the house that needed, see Figure 8.

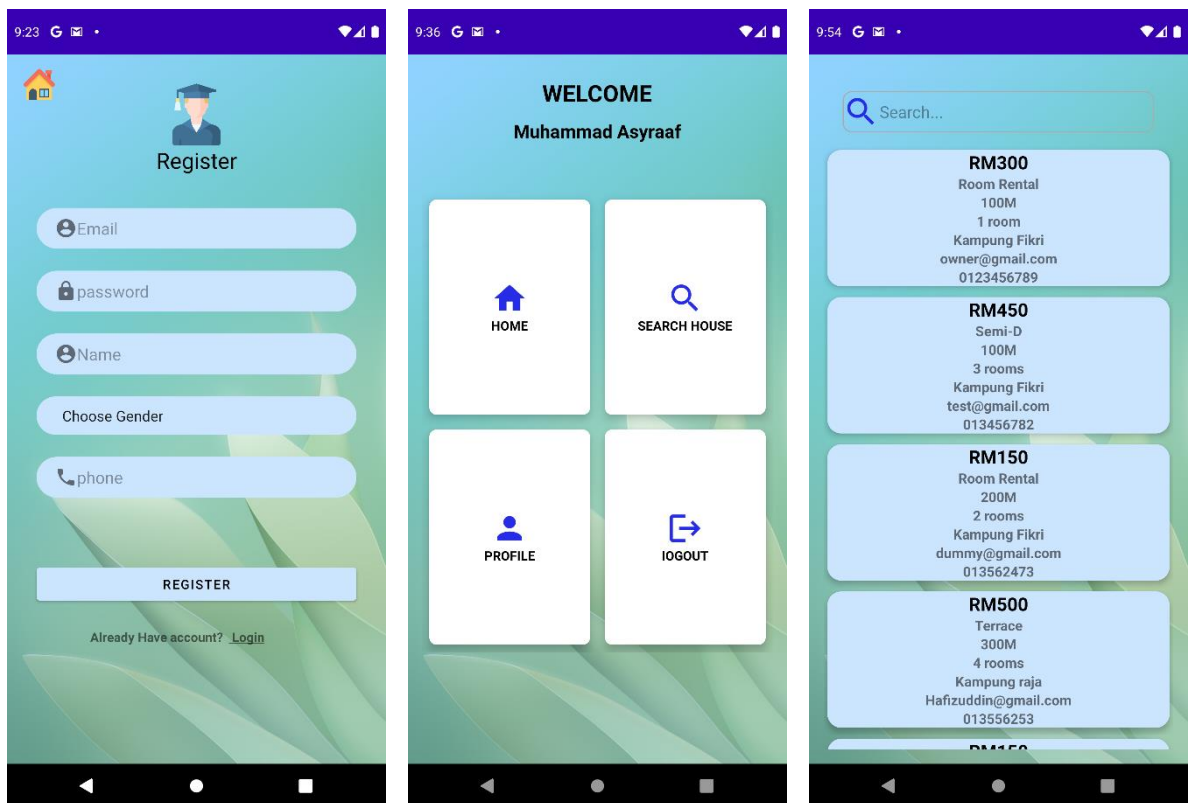


Figure 8: The student view for E-RENTHOUSE

V.CONCLUSION

This study presents the development and dissemination of the E-RENTHOUSE application to help students of the University of UniSZA, Terengganu State, Malaysia, in finding suitable housing close to the university campus in Bessut city. The application helps in making it more efficient and secure to find what suits them using mobile applications and most importantly, to prevent some landlords from exploiting students by raising prices for example. The E-RENTHOUSE app provides information through its elegant and easy-to-use GUI. For future work, this study will integrate information and link to the rating system.

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