

Development Of Mobile Applications For Healthcare Consultation

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ABSTRACT

This paper discusses mobile applications developed as communication and consultation mediums between doctors and patients. E-Consul has several features including a patient registration feature with a time limit to consult a physician, meaning that there is an expiry date on the account being used. For patients, they do not need to see a doctor in practice, but directly consulted bias when want to discuss related treatments. For doctors with this application the patient can not afford the time and distance to consult a doctor.

Key words : Mobile Application, Healthcare, Consultation

1. Introduction

Research on the development of information technology (IT) which is currently widely used as a supporter or problem solver in various fields. No exception to the health world. The health world we often encounter some problems that can be solved with support from the IT field, for example, in recording patient medical data, hospital information systems, financial management system and even now developing as a medium of communication between people who work in the field of health and not a health person, for example a patient.

This paper discusses mobile applications developed as communication and consultation mediums between doctors and patients. The preferred physician to be the object of this study is a doctor who has a patient with the intensity or frequency of high consultation, one of which is a specialist beauty.

A specialist skin and beauty doctor has many patients with treatment in each patient is different. Treatment provided also sometimes in accordance with the desired results of patients, of course, the doctor must see from the side of the patient's health. Does the patient have allergies or similar constraints that require intensive treatment or consultation with the doctor.

The obstacle that arises from the pattern of consulting this beauty specialist is that it

takes a lot of time to see a doctor. Not always who wants to be consulted is a very urgent or emergency, there are some things more on the need for advice from doctors. So the need for services that can give the best service from a doctor to his patient.

This research tries to provide a solution, which is an electronic consultation media based on mobile applications that can make it easier for physicians to give their best service to patients for some things related to beauty treatment requested by patients. The e-consul application has several features including a patient registration feature with a time limit to consult a doctor, meaning that there is an expiry date on the account being used. The length of time given to the patient depends on the payment that has been agreed with the doctor. So that these consulting services can be commercialized or also can not be commercialized.

2. Research Method

2.1 Entity Relation Diagram (ERD)

Here is a figure 1 entity diagram in the e-consul



Figure 1. Entity Relation Diagram (ERD)

Can be seen from the design of ERD e-consul application will have 2 main relationships namely detail subscriptions and conversations.

The detailed subscription in question is the use of accounts that have a grace period of use. The account will be used by the patient to consult a physician within a predetermined time period. The consultation media offered on this app is a conversation feature. Various things can be asked, discussed, shared and directed between doctors and patients with not records for medical treatment that must be handled directly by the doctor.

e-consul can also record the patient's medical record data so that it can be the doctor's consideration to provide direction or answers to patients in consultation.

Minor consultations that can be consulted from the patient to the doctor is the use of cream, the impact of the use of cream or perceived medicine patients, the availability of cream, handling other emergency mild.

2.2 Relationship Database

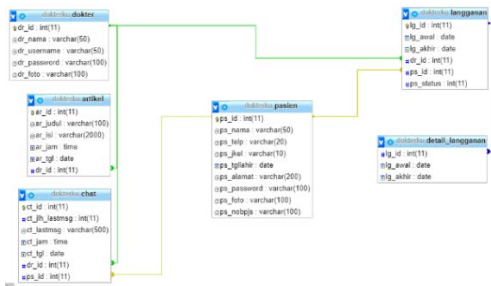


Figure 2. Relationship Database

2.3 E Consul Application

E-consul built has several key features and some additional features. Key features include subscription features and

conversation or chat features. While the additional features are articles and other features completeness for a similar application messenger.

There are 2 user accounts contained in the e-consul application, the user doctor and user patient. For the user doctor can access the conversation and extension of time for the patient while the patient can access the conversation as well as other additional features. Here is a feature overview of the consul e application.

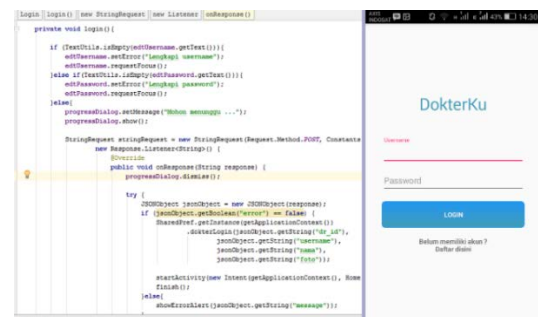


Figure 4. Login View

All users can enter the e-consul application via the login feature. In the login feature there is also a link to the registration of new patients.

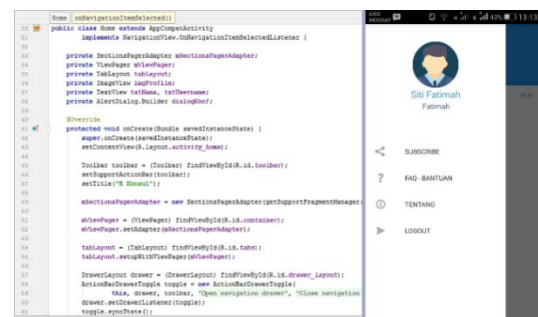


Figure 5. Home

In Figure 5 we can see some complementary features such as the subscribed subscriptions to show list of registered patients, FAQs to provide assistance to users regarding application access, about and logout

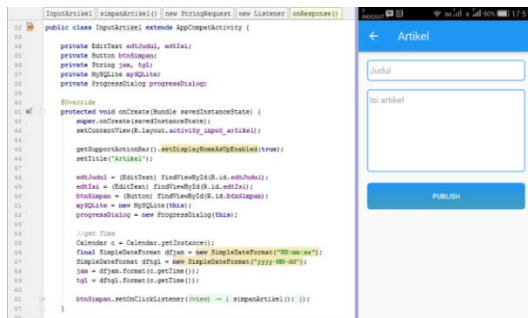


Figure 6. Input Artikel

There is an article menu that the content physician biases to provide information to patients who follow it. The information includes articles on skin health, handling for skin and other information.

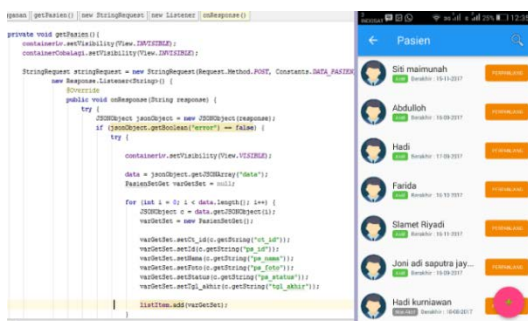


Figure 7. Contact List

From the subscribe feature in Figure 5 then this is the user's contact list display (the patient). In the Contact List feature of the patient there is an extension feature to bias update patient accounts.

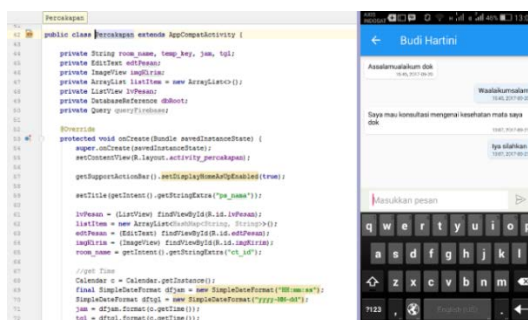


Figure 7. Conversation

Figure 7 shows the conversation feature, this is where communication or consultation process by doctors and patients occurs. The conversation feature has the same functionality standard as other messenger apps. Like sharing attachments and so forth.

E-consul has been tested using black box method to several beauty specialists and

some of their patients. There are conclusions that lead to the positive things they give when testing the use of this E-consul application. Doctors and patients are very helpful with this application. For patients, they do not need to see a doctor in practice, but directly consulted bias when want to discuss related treatments. For doctors with this application the patient can not afford the time and distance to consult him or her. However, it still needs an in-depth research related to application development of consul.

3. Conclusion.

Conclusions of this study, E-consul can provide quality improvement of consultation services from doctors to patients, especially skin / beauty specialists. The development of mobile-based applications for e-consul applications greatly facilitates patients and doctors as most of them are smartphone users

Bibliographies

- [1] Duwadi, EakPrasad :Digital Health and Doctor-Patient Communication in Nepal, Journal of Healthcare Communications, 2016, Vol. 1 No. 4: 26
- [2] Giveon S, Yaphe J, Hekselman I, Mahamid S, Hermoni D: The e-patient: a survey of Israeli primary care physicians' responses to patients' use of online information during the consultation. Isr Med Assoc J 2009, 11 (9):537–541. 24.
- [3] HIT (2016) How digital health is opening up communication between doctors & patients.
- [4] Hsu J, Huang J, Kinsman J, Fireman B, Miller R, et al. (2005) Use of e-Health services between 1999 and 2002: a growing digital divide. JAMIA 12: 164-171
- [5]Neter E, Brainin E: eHealth literacy: extending the digital divide to the realm of health information. J Med Internet Res 2012, 14(1):e19

- [6] Weiner, Jonathan P :Doctor-patient communication in the e-health era, Israel Journal of Health Policy Research 2012, 1:33