UNISEL Islamic Centre Application using Mobile

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Abstract: Currently, UIC Campus Bestari Jaya using ISMS Service to give information to users about event or activities via SMS. This caused Islamic Centre to make a payment based on how many people are receiving the SMS. Service ISMS has caused some problems where Islamic Centre requires user phone numbers to allow the sending of SMS being made and ISMS service costs are high because the price according to the number of SMS and MMS sent by the user. The purpose of UNISEL Islamic Centre (UIC) Campus Bestari Jaya organizes activities that allow students to take part of the activities provided by the Islamic Centre. UIC will notify all events that been conducted on the mosque so that each student gets the information and students can attend the program. Among the activities organized by the UIC include ceramah agama, courses, qiamullail, tazkirah, maulidur rasul and others. An online survey has been conducted among the students to identify the needs of having new tools in dissemination the information to the students. As a result, a mobile application has been developed for UIC to replace the existing practice. This application consists of three types of notifications which are event notification, quote notification and reminder notification.

Keywords: mobile application, mobile, mobile platform, mobile Islamic application

1. Introduction

University Selangor Islamic Center Campus Bestari Jaya in UNISEL regularly organizes activities that allow students to take part of the activities provided by the Islamic Center. Islamic Center will notify all events that been conducted on the mosque so that each student gets the information and students can attend the program. The activities that are always organized by the Islamic Center include ceramah agama, courses, qiamullail, tazkirah, maulidur rasul and others. Islamic Center wants to ensure that any information can be informed each of the students on UNISEL Campus Bestari Jaya.

Nowadays, in order to attract students to read, the latest technology with the combination of interface, design, text and image must be used. It can increase the interest of students in reading. University Selangor Islamic Center (UIC) mobile application is based on mobile platform, which will be replace the traditional way of sending information via SMS.

Currently, not every UNISEL student receive information about the activities organized by the Islamic Center. Not many students are participated in these activities implemented by the Islamic Center because they had not received any information from the Islamic Center. Students receive such information but forgot to attend the event. Information received by students through via SMS does not interest to students read the text message or

SMS is considered SPAM. Besides that, The Islamic Center will have to spend a high cost to deliver all the SMSes. Islamic Center has been using one of the ISMS service website that allows the Islamic Center to inform all its activities in the mosque by sending an SMS. To send information to students and staff, Islamic Center should have their number. For those who do not receive any SMS, it means the Islamic Center does not have their numbers. Islamic Center need put all the phone numbers in the ISMS and start forwarding SMS to all users. To use ISMS service, Islamic Center need to make a payment based on how many people are receiving the SMS. For example, every 1 SMS, Islamic Center must pay RM 0.10 and that means for 500 SMS Islamic Center have to pay RM 50.00.If Islamic Center want to send pictures via MMS, Islamic Center have to pay RM0.50 per one MMS.ISMS service costs are high because the price according to the number of SMS and MMS sent by the user. The Islamic Center need to get every student and staff phone numbers to make sure the SMS can be sent to them.

The Islamic Center will send the latest information and activities that will be implemented is through SMS. But not all students receive the SMS because The Islamic Center does not have all the telephone numbers of students .The Islamic Center may be able to requested telephone numbers of students from UNISEL and this can be done slowly but we should know each semester new students will enter UNISEL and to do this every semester is very complicated.

2. Background Study

The term "information" is used by differentiation of society, of experts in information technology, the use of communication media, the use of management information, to those involved in computer science and those not directly involved in any field. For example, communication scholars are concerned about the information-which is very much due to the type of plenty of in the media. Electrical engineers will harder to find ways to improve technology to increase the quantity and speed information to be sent by its importance for understanding and evaluating the information which enabled the experts in a particular field work and the problems they face, be able to make the right decisions and communicate effectively with each other. (Losee, 1997). From the definition above, this project is about how information and information management important to be implement.

These days, people are familiar with computer and computer application. Compare with mobile application and development these are new things and the technology grow rapidly. Mobile application consists of software that will run on mobile and will perform certain tasks. Mobile application has a variety of features which is social network, communication, calling and others. (Md. Rashedul Islam, 2010). Mobile application not only provides internet services, but provides a more interesting function such as GPS, QR-code scan. For people who use application, the application can be easily found and used in our daily lives. With the mobile application, it can provide to their users, which provides live a more productive and satisfying as they can access the information and services they want.

Mobile application store is a service for mobile devices and it allows users to browse and download applications they want (Jaeki, Junghwan, Donald, Jeff, & Wynne , 2013).

2.1 IOS Development

IOS development requires a Mac laptop to enable running Mac Operating System. Among the issues raised when doing usability testing where iOS application which only can require specific hardware. To be more precise during testing, only hardware device from the family of Mac can be used. To build iOS application must use the Xcode IDE, which allows for debug, write code and interface design. IOS has a collection framework known as Cocoa Touch. (Mark & Michael , 2011)

2.2 Android development

Android can be constructed in various environment and operating system. Eclipse is the most popular IDE used to develop android (Shyam, B., Sandeep, S., & Karan, S., 013). To build the layout for android application should make use of XML language and view element . Eclipse also provides WYSIWYG editing in developing the layout and also provides XML to directly change the design layout by changing the XML code. (Mark & Michael , 2011)

Table 1 shows on comparison of iOS and Android aplication across multiple dimensions.

Table1:Comparison of iOS and Android across multiple dimensions
(Mark & Michael, 2011)

	iOS	Android
Minimum Development Operating System Requirements	Mac OS X 10.6	Windows XP Linux Mac OS X 10.5.8
Development Device	$99 iPhone 3G $199 iPod Touch $199 iPhone 4 $499 iPad	$399 Dev Phone 2 (v1.6) $529 Nexus One (v2.2)
IDE	Xcode	Eclipse 3.5
GUI Creation	Objective-C	Java (Dalvik) Scripting (SL4A) LogoBlocks
Reference Website	http://developer. apple.com/iphone	http://developer. android.com/

3. Method

The method used to conducted this research is mix method which is quantitative and qualitative. Interview and survey or questionnaire are distributed to the student.

3.1 Interview

An interview has been conducted in order to collect related information for the development of this project. Before that, the interview questions has been prepared so that the interview can go smoothly. The interview session was conducted with one of the staff in UNISEL Islamic Center.

3.2 Questionnaire

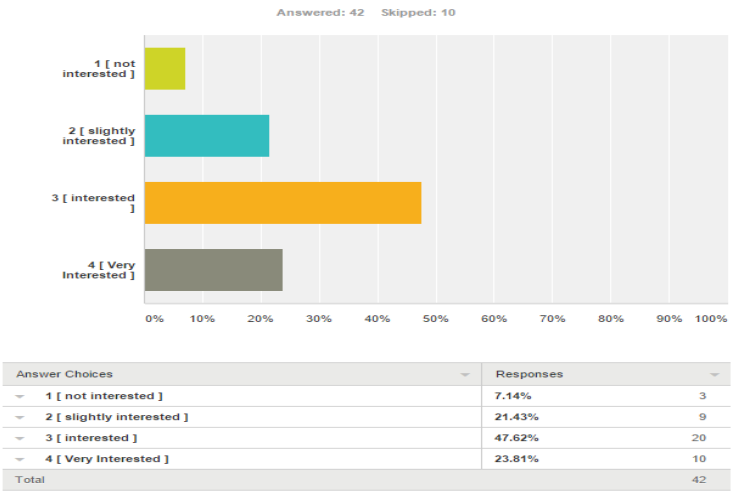
The questionnaire is used to get information and data from the students. Data needed to identify what type of information needed to be insert in the mobile apps. An online survey is developed using google document to distribute among the respodents.

4. Results

After receiving the uestionnaire data, we find out that the respondents are 50% from male and 50% female students from difference category of age. Thirty two (32) user who answered the questionnaire were aged from 18 to 23. Sixteen (16) user who answered the questionnaire were aged from 24 to 29. Five (5) user who answered the questionnaire are age from 30 and above. Twenty six (26) people with percentage of 50% obtained degree qualification, Fourteen (14) people with 26%Diploma qualification and leven (11) people with 21% SPM/STPM qualification. Twenty seven (27) people from the Faculty of Education and Social Sciences has been helpful in answering the questionnaires, nineteen (19) people from the Faculty of Computer Science and Information Technology (FCSIT) has been helpful in answering the questionnaires and six (6) people are from other Faculty. Twenty (20) respondent often involved in the activities carried out by the UNISEL Islamic Center and twenty eight (28) respondent seldom participate in any kind of activities that carried out by UNISEL Islamic Center. However four (4) respondents did not answer this question. Twenty eight (28) people were aware about the event organized by the Islamic Center and twenty (20) people not aware about the event organized by the Islamic Center. However four (4) respondent did not answer this question. Forty (40) people have received information through Facebook. Thirty (30) people are receive information through poster. Twenty one (21) people have received information through WhatsApp. Eight (8) people have received information through WeChat, email and SMS. However four (4) respondent did not answer this question.

Forty (40) respondent were been in a situation where wanted to attend an activity held by the mosque but forget about it. Eight (8) respondent were remember and attend an activity held by the mosque. However four (4) respondent did not answer this question.

Seventeen (17) respondent receive information about upcoming event that organized by Islamic Center 1 week before the event start. Thirteen (13) respondent receive information about upcoming event that organized by Islamic Center 3 day before the event start. Nine (9) respondent receive information about upcoming event that organized by Islamic Center 2 week before the event and nine (9) respondent receive information about upcoming event that organized by Islamic Center 1 day before the event. However four (4) respondent did not answer this question. Eighteen (18) respondent suggested that when doing information presentation, it should combine with text and image. Sixteen (16) respondent suggested that when doing information presentation, it should combine with text and animation. However ten (10) respondent did not answer this question. Thirty seven (37) respondent are using android operating system on their mobile device and five (5) respondent are using iOS operating system on the mobile device. However ten (10) respondent did not answer this question. Nineteen (19) respondent prefer receive information through social network. Sixteen (16) respondent prefer receive information through social network. Four (4) respondent prefer receive information through SMS and three (3) respondent prefer receive information through email. However ten (10) respondent did not answer this question.



Answer Choices	Responses	
1 [not interested]	7.14%	3
2 [slightly interested]	21.43%	9
3 [interested]	47.62%	20
4 [Very Interested]	23.81%	10
Total		42

Fig 1: Total Respondent Agree using the application

From the analysis chart in Fig. 1 above, twenty (20) respondent interested in using this application after it have been developed. Ten (10) respondent very interested in using this application after it have been developed. Nine (9) respondent slightly interested in using this application and three (3) respondent not interested in using this application after it have been developed. However ten (10) respondent did not answer this question.

5. Proposed Mobile Appplication for UNISEL Islamic Center (UIC)

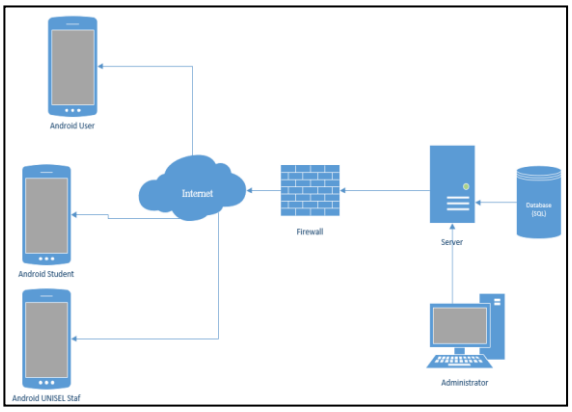


Fig 2 : Proposed Mobile Application UNISEL Islami Center (UIC)

Fig 2 above illustrate a proposed of UIC where is shown client as party using mobile device interact with the server and database which storing information on all activities in Islamic center.

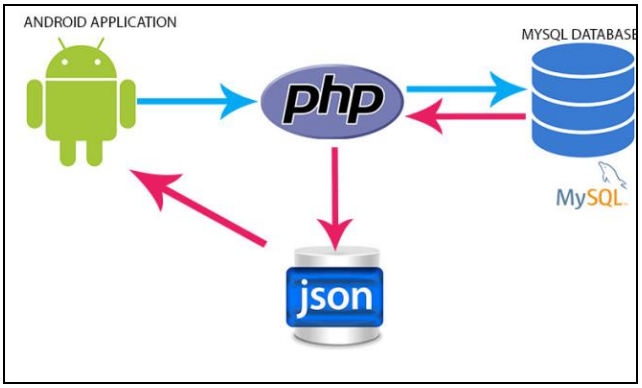


Fig 3: ANDROID application with php and MySQL

In Fig 3 above, the flow of information is can be summaried as below:

1. Php will fetch data from MySql database if applicable.
2. From Php . it will convert data to JSON language
3. JSON will pass back the information to the application.
4. As a result, user will get the data display in their mobile device.

6. Discussion

UNISEL Islamic Center (UIC) applications is a system that been developed for UNISEL Islamic Center. The system basically will replaced current method sharing information to user. Previously, the user need to used other serviced to share information and need to pay for every sharing information to user via SMS. With this system, Islamic Center

does not need to pay any kind of service to share information to user. User need to download this application first before can receive information from Islamic Center. Future enhancement will be adding new features to existing application.

The solution presented by this research is useful enough to notify the user with various notifications. The notifications consists of event notification, quote notification and reminder notification. Event notification focuses on the main event such as pre-marriage courses, ceramah agama, funeral management courses and others. Quote notification focus on beautiful Islamic quote in life. Notifications will be sent to those who have downloaded this application. With the new tool developed, it hoped that a huge participation among the Muslim students. In future, we hope to enhanced the existing features to announced more muslim activities.

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8. References

Chen, S. J., & Chen, S. M. (2007). Fuzzy risk analysis based on the ranking of generalized trapezoidal fuzzy numbers. *Applied Intelligence, 26*(1), 1-11.

Chua, D. (2014, April 25). New wave of choreographers. *New Straits Times*, p.7.

Gomez, M.M., Sierra, J.M.C., Jabaloyes, J., & Zarozo, Manuel. (2010). A multivariate method for analyzing and improving the use of student evaluation of teaching questionnaires: A case study. *Quality Quantitative*. doi: 10.1007/s11135-010-9345-5.

Gunkel, M. (2008). Guidelines for academic writing. http://www.im.ovgu.de/im_media/downloads/examinations/academic_paperwriting_MG.pdf. Accessed 20 Feb 2014.

Jaeki, S., Junghwan, K., Donald, R. J., Jeff, B., & Wynne , W. C. (2013). Application discoverability and user satisfaction in mobile application stores: An environmental psychology perspective . *Decision Support Systems* , 37-51.

Kahraman, C., Cevi, S., Ates, N. Y., & Gulbay, M. (2007). Fuzzy multi-crieria evaluation of industrial robotic systems. *Computer & Industrial Engineering*, 52, 414-433 (2007). doi: 10.1016/j.cie.2007.01.005.

Losee, R. M. (1997). A Discipline Independent . *J. of the American Society for Information Science* , 48 (3) , 254-269.

Mark, H. G., & Michael , P. R. (2011). Smart Smartphone Development: iOS versus Android. *SIGCSE '11 Proceedings of the 42nd ACM technical symposium on Computer science education*, 607-612.

Md. Rashedul Islam, M. R. (2010). Mobile Application and Its Global Impact. *International Journal of Engineering & Technology* , 72-78.

P. Arun, R. Lokeshvarma, P. Krishnakumar, & S. Sivakumar. (2015). ANDROID BASED TRAFFIC UPDATES . *Engineering and Technology*, 161-164.

P., A., R., L., P., K., & S., S. (2015). ANDROID BASED TRAFFIC UPDATES . *Engineering and Technology*, 161-164.

Ramli, N., & Mohamad, D. (2010). On the Jaccard index with degree of optimism in ranking fuzzy numbers. In E. Hullermeier, R. Kruse, & F. Hoffman (Eds.), *Information processing and management of uncertainty in knowledge-based system application* (pp. 383-391). New York: Springer.

Rosen, K.H. (1988). *Discrete mathematics and its applications*. New York: Random House, Inc.

Sheizaf , R., & Daphne, R. R. (2005). Information sharing online: a research challenge. *Knowledge and Learning*, 62-67.

Shyam, B., Sandeep, S., & Karan, S. (2013). Review On Google Android a Mobile Platform. *IOSR Journal of Computer Engineering*, 21-25.