Mobile-Based Notification System for University's Events

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UNIVERSITI UTARA MALAYSIA

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Mobile-Based Notification System for University's Events

A thesis submitted to the Graduate School in partial fulfillment of the requirements for the degree Master of Science (Information Technology)

Universiti Utara Malaysia

By

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Abstract

Mobile phone plays a very important role in people life today; its functionality has been extended from voice communication only devices to internet surfing and data transfer. UUM as a higher education institute, hold and organize numerous events throughout the academic year and it relies on email communications for notifying its staff. Using the email notification to announce the staff for the function is suffering from two main problems which are: First, some of the staff do not check his/her email periodically, so they may miss read the notification email about the function and therefore they will not attend the function. Second, sometimes internet service is not available or staffs are at some place where they can not access internet which will lead also to make them unaware about the function or the notification about that function. This study has successfully designed and developed a notification system in order to be used by UUM to send the notifications direct to the staff mobile phones via SMS and thus helps in make sure that the notification is delivered to all interested staff. Successfully implementing this notification system in UUM will provide the university a reliable and convenient inter communication channel.
Dedication

I dedicate this humble work to my father and mother; the spring of loyalty, affection, and dedication. They raised me on the principles of virtue, to my dear brothers and sisters; who spared no effort helping me during my school years.

I dedicate this work also for my uncle Ahmad, my grandfather and my grandmother souls.

I am also expressing my great thankful to all my colleagues and friends at UUM, especially from the Applied Science, College of Arts and Sciences for their help and support, with whom I shared pleasant times. My thanks and gratitude goes to Dr. Mouafq Al-Zoubi “My Uncle”, Mohammad Al-Zoubi”Abo Issa”, Dr. Salem Al-Zoubi, Rezek Al-Zoubi “Abo Jabeer”, Ahamd, Ashraf, Ra’fat, Murad, Sattam, Faris, Housam, Ziad, Malik Al-Zoubi, Wissam, Malik Jawarneh, Ibragim, and all my family members for their encouragement and support all the period of my studying, and to my AL-ZOUBI family.
Acknowledgement

Praise be to ALLAH for helping me to accomplish this humble study. Also, my thanks to ALLAH who has seen me through to this level in my academic achievement. I would like to seize this opportunity to extend my gratitude to ASSOC.PROF.DR.WAN ROZAINI BT SHEIK OSMAN for kindly supervising this study, her priceless instruction and valuable directions had great role in the accomplishment of this report, my evaluator Mr. ROSMADI B BAKAR for his suggestions and help, and Dr. HASLINA BINTI MOHD for her suggestions.

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<tr>
<td>ADO</td>
<td>ActiveX Data Objects</td>
</tr>
<tr>
<td>BD_ADDR</td>
<td>Bluetooth device address</td>
</tr>
<tr>
<td>CAS</td>
<td>College of Arts and Sciences</td>
</tr>
<tr>
<td>CLR</td>
<td>Common Language Runtime</td>
</tr>
<tr>
<td>EMTEL</td>
<td>Emergency Management Telecommunication</td>
</tr>
<tr>
<td>ENS</td>
<td>Event Notification System</td>
</tr>
<tr>
<td>GPRS</td>
<td>General Packet Radio Service</td>
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<tr>
<td>GSM</td>
<td>Global System for Mobile communications</td>
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<tr>
<td>HTTP</td>
<td>Hyper Text Transfer Protocol</td>
</tr>
<tr>
<td>JSP</td>
<td>Java Server Pages</td>
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<tr>
<td>LAN</td>
<td>Local Area Network</td>
</tr>
<tr>
<td>MCMC</td>
<td>Malaysian Communications and Multimedia Commission</td>
</tr>
<tr>
<td>MDA</td>
<td>Model-Driven Architecture</td>
</tr>
<tr>
<td>MSISDN</td>
<td>Mobile Subscriber Integrated Service Digital Network</td>
</tr>
<tr>
<td>ODBC</td>
<td>Open Database Connectivity</td>
</tr>
<tr>
<td>OLE DB</td>
<td>Object Linking and Embedding for Databases</td>
</tr>
<tr>
<td>PC</td>
<td>Personal Computer</td>
</tr>
<tr>
<td>PDA</td>
<td>Personal Digital Assistant</td>
</tr>
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<td>PG</td>
<td>Postgraduate Group</td>
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<tr>
<td>PPG</td>
<td>Push Proxy Gateway</td>
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<tr>
<td>RAM</td>
<td>Random Access Memory</td>
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<tr>
<td>SD</td>
<td>Secure Digital</td>
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<tr>
<td>Acronym</td>
<td>Description</td>
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<tr>
<td>SI</td>
<td>Service Indication</td>
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<tr>
<td>SMPP</td>
<td>Short Message Peer to Peer</td>
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<tr>
<td>SMS</td>
<td>Short Message Service</td>
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<tr>
<td>SMSC</td>
<td>Short Messaging Service Center</td>
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<tr>
<td>SMTP</td>
<td>Simple Mail Transfer Protocol</td>
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<tr>
<td>SOAP</td>
<td>Simple Object Access Protocol</td>
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<tr>
<td>SSL</td>
<td>Secure Sockets Layer</td>
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<tr>
<td>TCP/IP</td>
<td>Transmission Control Protocol/Internet Protocol</td>
</tr>
<tr>
<td>TV</td>
<td>Television</td>
</tr>
<tr>
<td>UA</td>
<td>University Administration</td>
</tr>
<tr>
<td>UMTS</td>
<td>Universal Mobile Telephony Service</td>
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<td>UML</td>
<td>Unified Modeling Language</td>
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<td>UUM</td>
<td>University Utara Malaysia</td>
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<tr>
<td>VML</td>
<td>Voice Markup Language</td>
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<tr>
<td>W3C</td>
<td>World Wide Web Consortium</td>
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<tr>
<td>WAP</td>
<td>Wireless Application Protocol</td>
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<td>WAN</td>
<td>Wide Area Networks</td>
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<td>WLAN</td>
<td>Wireless Local Area Network</td>
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<td>WS</td>
<td>Web Services</td>
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<td>XML</td>
<td>Extensible Markup Language</td>
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CHAPTER 1

INTRODUCTION

1.1. Background

The mobile devices and the emergence of wireless technologies have become today an important element of society. Firms adopted mobile devices and wireless technologies to support and improve their business’ performances. Today even small mobile devices can access the internet. Therewith, mobility issues have become an important technical and economic research interests.

Mobile phone has reformed our life, from the means we communicate to the means we conduct business, the mobility of mobile phone make it easier for user to make a call from almost anywhere and anytime. The Malaysian Communications and Multimedia Commission reported that in 2005, there are 16.551 millions mobile phone subscribers in Malaysia from its 26.13 millions populations compared to only 2.150 million mobile phone subscribers in 1998 with 22.18 millions populations, that is on average 63.3 mobile phone subscribers for every 100 inhabitants for the year 2005 (Mcmc.gov, 2008).
The contents of the thesis is for internal user only
6.0 References


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