Web-Based Announcement System for UTP : "ANNOUNCECLICK'ATEL"

by

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Dissertation submitted in partial fulfilment of the requirement for the Bachelor of Technology (Hons) (Information System)

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CERTIFICATION OF APPROVAL

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A project dissertation submitted to the Information System Programme Universiti Teknologi Petronas in partial fulfilment of the requirement for the BACHELOR OF TECHNOLOGY (Hons) (INFORMATION SYSTEM)

Approved by,

(Encik Faizal Ahmad Fadzil)

UNIVERSITI TEKNOLOGI PETRONAS TRONOH,PERAK JUNE 2004

CERTIFICATION OF ORIGINALITY

This is to certify that I am responsible for the work submitted in this project, that the original work is my own except as specified in the references and acknowledgements, and that original work contain herein have not to be undertaken or done by specified sources or person.

KIN Japan 1

NOR SHAHILA MOHD RADZI

ABSTRACT

Basically the main objective of this project called Web-based Announcement System is to automate the manual way of conveying announcements either academic or event updates in Universiti Teknologi PETRONAS (UTP) campus and provide an effective way of prompting students on the announcements. Furthermore, the proposed system will enable the lecturers, IT administrators, Webmaster to upload announcements and to prompt students via short messages (SMS) and student personal email. Another objective of this project is to provide a web-based announcement system that can encourage regular or frequent access by students and the announcements will be able to be delivered effectively.

Currently, students received most of the academic announcements such as current event updates, class cancellation or changes of test schedule **verbally**. In addition to that, if there is an important event to be held in UTP, the common medium of notification used is notice boards, posters or eLearning. Even though there is an eLearning available, still the announcements delivery management is not so effective due to the accessibility of the system application.

As far as the final year project is concern; the project will be focusing on the content management aspect that should be considered to develop an announcement system and how it can be accessible via SMS and e-mail which will provide a two-way communication between the sender and the recipient.

The methodology that will be used here is Waterfall model which include Project definition and planning, analysis and design, development, unit testing and testing, and implementation and rollout. The findings of this project will be, the students will be able to receive the announcement via SMS and can have a two-way communication with the lecturers. Besides the updates will also be given via SMS and it will provide an automatic answer.

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TABLE OF CONTENTS

Certifications		i-ii
ABSTRACT		iii
ACKNOWLED	GEMENTS	iv-v
CHAPTER 1 :	INTRODUCTION	
	1.1 Background of Study	1
	1.2 Problem statement	2-4
	1.3 Objective and Scope of study	4
CHAPTER 2:	LITERATURE REVIEW	
	Literature Review and Theory	5-7
CHAPTER 3:	METHODOLOGY	
	3.1 Procedure Identification	8-12
	3.2 Tools and Equipments	12
CHAPTER 4:	RESULT AND DISCUSSION	
	4.1 Results	13-14
	4.2 Findings	14-15
	4.3 Discussion	16-33
CHAPTER 5 :	CONCLUSION	
	5.1 Conclusion	34
,	5.2 Suggested Future Work For Expansion and	35-36
	Continuation	

REFERENCES APPENDICES

LIST OF FIGURES

- FIGURE 4.1: Perceptions Towards the Effectiveness of Announcement Delivery Management in UTP
- FIGURE 4.2: Level of Acceptance of Proposed Web-Based Announcement System
- FIGURE 4.3: Web-Based Announcement System (AnnounceClick'atel @UTP) Conceptual Diagram below illustrates the conceptual overview of the system and all entities contributing to its establishment
- FIGURE 4.4: Web-Based Announcement System Index Page
- FIGURE 4.5: Web-Based Announcement Systems-Student Login Page
- FIGURE 4.6: Web-Based Announcement Systems-Administrator Login Page
- FIGURE 4.7: Web-Based Announcement Systems Student Home Page
- FIGURE 4.8: Web-Based Announcement Systems -Administrator Home Page
- FIGURE 4.9: Web-Based Announcement Systems –Section Main Page (e.g.Administrator's eLearning main page)
- FIGURE 4.10: Web-Based Announcement Systems Announcement Clips Page
- FIGURE 4.11: Web-Based Announcement Systems Addresses List Page
- FIGURE 4.12: Web-Based Announcement Systems Upload Announcement via Email/Compose Email Page

FIGURE 4.13: Email clients and servers

FIGURE 4.14: Illustration of how messages are transferred from a web to SMS

LIST OF TABLES

TABLE 4.1: Perception towards the effectiveness of Announcement Delivery in UTP TABLE 4.2: Level of Acceptance of proposed Web-Based Announcement System for UTP

CHAPTER 1

1.0 INTRODUCTION

1.1 Background of Study

1.1.1 Basically the idea to develop this project so called a Web-Based Announcement System for UTP – "UTP AnnounceClick'atel" is because, there are situations where announcements have not being managed properly which lead to the ineffective of announcements or important messages delivery to students. Most of the announcements are conveyed to students verbally. For example, if there is any class cancellation, the message will be passed verbally from one student to another.

1.1.2 Furthermore, if there is any event update, or any important campus

updates, there will only be notices on the board or the announcement will be uploaded in UTP Websites which sometimes students may not be encouraged at all to browse the site. Another thing here, when there are any announcements or urgent memos on campus/hostel, Residential College Support Unit of UTP need to **send memos or put notices to alert students**. Even though notices have been put everywhere around the campus, but still the announcement are not within reach of students to take note. This is because the procedure of announcement delivery is not interactive enough to students.

1.2 Problem Statement

1.2.1 Problem Identification

1.2.1.1 Since the announcements are conveyed verbally to students, it will not be practical for the students and it may lead to announcements wrongly conveyed to the students or the students may not get the announcements at all.

1.2.1.2 Here, the author realizes that, notice boards and posters may

not be able to give detail information as it may be limited to space and location, which means only the students who come across the notice boards then they will get notices of any important dates, event updates or any general campus announcements in UTP. Besides, the author also realized that the announcement sometimes could not be delivered at all to the students and this may interrupt student and lecturer's activities.

1.2.1.3 Even though UTP has eLearning for the lecturers to upload announcements and UTP portal for the Webmaster to upload UTP general announcements, but still some students still do not successfully conveyed to them. This is due to, the students may not like the procedure where they need to enroll to get accessed to the particular course section, which is a redundant procedure to be undergone only to view announcements. Due to that students may not be able to receive the announcements conveyed by the lecturers or department administrators.

1.2.2 Significant of the Project

1.2.2.1 The web based announcement system will enable the lecturers, administrators, or webmasters to upload any announcement or urgent updates or information into the system and it will prompt students via personal email or short messages (SMS). As a result, the announcement

will be effectively conveyed to students and the activities will be more manageable since students will be notified both ways.

- 1.2.2.2 The system will also be effective, as it will notify announcement to the right person who is supposed to get the announcement. For example Advance Database students will specifically receive the Advance Database announcement or PETRONAS scholars will specifically receive any announcement for PETRONAS scholarship.
- 1.2.2.3 Furthermore, the system will enable students and lecturers to conduct two way communication since the system will lead to a more convenience way of communicating between to parties without requiring both parties to be at the same location.
- 1.2.2.4 Besides, the system will provide a one-stop announcement center and a mobile application so that student will be able to receive announcements or updates, anywhere and anytime.

1.3 Objective and Scope of Study

- 1.3.1 The main objective of this project is to build an accessible webbased announcement system for students, which may provide one-stop announcement center such as academic announcements, event updates, urgent announcements and so on. The most important thing here, the announcements that have been uploaded or posted in the system will prompt students via personal email or short messages (SMS), this uses the same platform, mail server. If before, the students need to go only to the available notice boards to update themselves but now they can just get accessed to their email from their room or they will be automatically prompted via SMS.
- 1.3.2. The scope of study will be focusing on how can we manage the announcement content and how can we integrate the required elements so that it can be accessible via personal email and SMS. So here, the research area will be specifically on the content management of a web-based announcement system that will be able to notify users via email and SMS and how the system can integrate all the elements needed.

1.4 Relevancy of the Project

1.4.1 It is no doubt that a new system for managing announcements and enabling announcements to be sent via email and short messages (SMS) to students is needed in specifically in Universiti Teknologi PETRONAS (UTP) and generally in Malaysian Universities. The old and conventional announcement delivery system is really outdated and not efficient enough to manage and maintain the effectiveness of announcement delivery in campus. This, Web-Based Announcement System would help to increase the efficiency of uploading and managing announcement conveyed either by lecturers, academic staff, UTP Webmaster or any administrator permitted to the system to students via email and SMS.

CHAPTER 2

2.0 LITERATURE REVIEW

2.1 Email – Less Interrupt Effect and Contribute Higher Productivity

Cutter Business Technology Council Fellows, Tom DeMarco and Tim Lister in their book, "Peopleware: Productive Projects and Teams," have described the high impact of phone calls in engineering environments: developers routinely receive 15 telephone calls a day, which can make the whole day non-productive [6]. The findings of the email analysis show that, on average, about 60 seconds is spent per email excluding recovery time, and a total of two minutes is spent if the recovery time is assumed for each email message. This compares well with the interruption reported for telephone calls, [6]. Clearly email has less of an interrupt effect than the telephone although it is still significant.

2.2 Bi-Directional Communication

The Short Message Service (SMS) is a service provided by all United Kingdom (UK) cellular phones networks; it allows the bi-directional communication of short alphanumerical messages (up to 160 chars before fragmentation) from any cellular phone in the world or any other cellular phone [1]. This shows that through SMS, the two-way communication can be conducted between sender and recipient.

2.3 Better Telecommunication with Short Message Services (SMS)

Interestingly, SMS (short-message services) has done much better than WAP, at least in Europe and Asia. SMS enables mobile phone users to exchange short messages and similar services were popular in Japan until it was replaced by Internet mail on mobile phones. Now many Europeans and Asians are downloading screen savers and ringing

tones with SMS, applications that many Europeans believed their young people would never do [2]. Here it is proven that SMS provide a better telecommunication service which will enable user to an automatic notifications or messages. Besides, the SMS application seem to be common among the mobile phone users especially the youngsters, so it encourages the user acceptance towards the proposed system.

2.4 SMS – High Impact Communication Medium

Companies are beginning to recognize the potential of SMS (Short Message Service) text messages, as a low cost, high impact communication medium, that can be received by almost all mobile phone users. Several companies are adopting highly innovative m-commerce strategies using SMS text messaging. 15 billion SMS messages (Cyber atlas 2001a) were sent over GSM (Global System for Mobile Communications) wireless networks during December 2000 [3]. Here we can see that the SMS application has been used widely among mobile phone users. With this SMS application people realize that, they can communicate on wireless basis anywhere and anytime. Furthermore it provides a very effective message delivery, which is short (to the point) and quick.

2.5 SMS – Ability to Promote Egalitarian Participation Within Organization.

Further support for SMS as an effective tool is provided by its ability to promote egalitarian participation within an organization. **Chalupa and Harris (1998)** argue that technological advancement has caused restructuring in organizations due to the blurring of boundaries that support collaboration and information sharing between various levels. They suggest that hierarchy is becoming less significant when communicating between management and non-management employees and that consequently, organizations should provide employees with several media channels for distributing and gathering information. **Marin and Minsky (1999)** suggest that has less centralized leadership and allows for more egalitarian participation. Therefore, as SMS may not provide the richest channel of communication by traditional definitions, it may be useful in overcoming hierarchical communication barriers in an organization, and could assist in preventing feelings of unease when dealing with a high-status person within an

organization (Higa et al., Alectus Personnel, 2000) [5]. Here we can see that besides making the announcement notification easily transferred to students, it also has the ability to promote egalitarian participation within an organization.

2.6 SMS – Services Enabling the Exchange of Messages Between Mobile Users

Mobile messaging encompasses a number of technologies and services enabling the exchange of messages between mo-bile users. In the early days of mobile digital telephony, the Short Message Service was introduced in the market with

GSM networks and rapidly became one of the most revenue-generating services for mobile network operators. The service allows the transfer of short text messages between mobile users [4]. It is proven here that SMS application is the most effective way of alerting users on important messages such as campus announcements.

2.7 The Success of SMS

The success of SMS appears to be making it harder for WAP or a successor of WAP to succeed in Europe. SMS decreases the chances that European service provider will be interested in focusing mobile Internet services on ringing tones, screen savers, and mail since such a focus would cannibalize their existing SMS businesses. Instead, they and their key partners, particularly the infrastructure vendors , are attempting to add multi-media capabilities to SMS with so-called MMS (multimedia messaging services) while continuing to focus their mobile Internet strategies on existing business customers. Evidence of this can be found at any mobile Internet conference where the vast majority of the presentations focus on new technologies as opposed to actual users and applications [2]. According to this paragraph, we can see that there are increasing number mobile phone users as well as Malaysian users. Due to this, reason, the proposed system Web-Based Announcement System will be effective for both UTP users, administrators (lecturers and employees who has access) and students.

CHAPTER 3

3.0 METHODOLOGY/PROJECT WORK

3.1 Procedure Identification

The project approach used towards developing a Web –Based Announcement System (UTP AnnouceClick'atel) is based on the project development schedule prepared by the Final Year Project (FYP) Committee.

Here Waterfall model is used as the development methodology and guidelines, which include the following major tasks such as *Project Definition and Planning, Analysis and Design, Development, Unit Testing and Testing and Implementation and Rollout.* Waterfall model is a linear system development lifecycle. The rationale behind of adopting this model in developing the project is because it a well structured model, easy to follow and it is very suitable for this project, specifically in term of the project scope and project time factors.

3.1.1 Project Definition and Planning

At this stage, the project proposal was initiated and supervisor

approvals and advisory were obtained to proceed to the next stage. Firstly the project definition was clearly stated that the project is a **Web-Based Announcement System and** so called **'UTP AnnounceClick'atel.** Also for this stage, the project work plan has been finalized and preliminary report has also been submitted to respective Supervisor: En Faizal

Ahmad Fadzil. Furthermore, the problem statements need to be clearly defined in directing a very clear objective of developing this particular project. In conducting the project definition and planning stage it involved activities such as understanding the problem and opportunity, defining scope and constraints, perform fact finding, estimate the project significant, estimate the development time duration and putting the facts collected for the project development into guidelines and project documentations. The definition of each activity conducted is as follows: -

i. Understanding the Problem and Opportunity

In conducting this activity, the author needs to clearly understand the problem that want to be solved. Here all the problems were listed and defined. Then the problems were analyzed and all the possible requirements, solutions and tool required were defined.

ii. Defining Scope and Constraints

The scope and constraints also were defined in project definition and planning stage. The scope of the project was advisable to be small and precise as it should be more focused and clearly defined. Like for the author's situation, the scope of the project is the content management of the web-based announcement system, which the system is enabled for an email and SMS notification through a mail server. While, the constraints of the project were also defined in terms of the resources, procedures and time.

iii. Perform Fact Finding

In this activity, fact finding was performed by the author through an interview with UTP webmaster, discussions with supervisors, browsing the UTP web portal and UTP eLearning, searching resources from the library and observations of the regular operations done. In this case doing research on how the announcements are conveyed currently.

iv. Estimate the Project Significant

The project significant were also stated as it will give an overview on how the particular project can solve the problem defined and how it can improve the manual system to an effective automated system.

v. Estimate development time duration

Furthermore, the project Gantt chart has already being produced for the project. This is where the time duration was specified for each tasks performed in the project development. Here the author has made sure all the possible activities were included in the project development process with a specific duration of development time. See **APPENDIX 1-1**.

3.1.2 System Analysis and Design

3.1.2.1 Define User Requirements

While, at this stage the user requirements were captured and several researches were done such as the proposed system content, database involved, system input requirements, system interface design and how to develop a system that is accessible via Email and SMS. Besides there were some interviews and questionnaires directing to survey conducted to be able to do some fact-findings as to start the development process. This was to ensure that the system was developed according to user requirements that have been specified.

3.1.2.2 Project Analysis and Design

At this stage, a system flow chart and a conceptual design have been produced to provide an overview of the system flow, which indicates the flow of the main function in Web-Based Announcement System, which project how the system should work. Besides, the author has also produced a data flow diagram for this system (Refer to APPENDIX 3). These diagrams will be checkpoints during the development process. Furthermore, the author prepared a data flow diagram to show the complete structure of the system data flow. Besides the author was required to do some study on how the current announcement system is being operated in UTP, so that the author may be able to see how it can be integrated accordingly. Questionnaires that have been prepared are distributed and interviews are conducted in order to gain related and appropriate information for this project so that it can show how this particular system can improve the announcement delivery in UTP. Furthermore, the knowledge on how Email and Web-to-SMS application should work in general and how can it be applied to web-based announcement system should be finalized, to ensure that the system will be able to run according to requirements specified.

3.1.2.3 Physical Design

During the design phase the system storyboards were also prepared to provide a design overview before shifting to the development stage. The physical design will provide an outlook of the system besides providing system navigation pointers for the system developer (Please refer to **APPENDIX 2-1**)

3.1.3 System Development

At this stage, it involved developing the interface of the system and writing the programming codes to make the system functioning accordingly. The database will also be integrated into the system during this stage. The database need to be finalized before setting up the query. Furthermore, the configuration and the setting up of the mail server for the Email features and SMS application were also done at this stage.

The development involved designing the interface of the announcement system and it has been completely designed, as it should provide the overview of the whole system application should work.

Furthermore during the development stage, the database design was prepared in order to have overview architecture of the entities, attributes and the database structure. Here My, PHP MyAdmin is used as a database platform for Web-Based Announcement System. In order for the author to master MySQL, the author have referred to some books that may guide me in using MySQL and tutorial pages from the Internet.

3.1.3 System Unit Testing and Testing

During the unit testing stage, once each single unit of the project has been developed, the particular unit will be tested accordingly. The testing involved pilot users (few students and administrator (pilot user)). After every unit has been developed, then the testing will be conducted to the overall system. In this session questionnaires were provided as to collect the feedbacks data from the pilot users. From here, the author generated the information gathered into results and discussions.

The purpose of testing process is to find out if the system is performing according to the user's expectation. Thus the factors of performance, cost, reliability, availability, compatibility, modularity, technology, ergonomics, and support should be used to evaluate the system. The system will be finalized and implemented.

Then the system rollout will be done for end users to apply and use the system. Of course, observations need to be done on the user acceptance aspect which here the author was interested to know what their feedbacks towards the new system implementation are.

3.2 Tools and Equipments

3.2.1 Hardware

- I The hardware that need to be used are either personal computer (PC), which includes monitor, keyboards, mouse, or notebook.
- II APACHE Server setup in the PC

3.2.2 Software

- I Macromedia Dreamweaver MX,
- II PHP Triad software
- III JavaScript.
- IV SMTP Mail Server /Web Hosting

CHAPTER 4

4.0 RESULTS AND DISCUSSIONS

4.1 **Results**

4.1.1. Based on the surveys conducted among 50 students in Universiti Teknologi PETRONAS (UTP), the author observed that most of the respondents have react to negative or average feedback towards the effectiveness of announcement delivery in UTP. 38% of the respondents indicate that the announcement delivery management in UTP is average in service. The second highest percentage denotes by the respondents who thinks that the announcement delivery management in UTP is below average that is 22% follows by 16% of the respondents perceived the delivery is bad. 14% of the respondents think that the announcement delivery management in UTP is good and the remaining, which is the lowest 10%, perceived the delivery, is excellent. Please refer to TABLE 4.1 for the results on the perception of respondents, students in UTP towards the effectiveness of announcement delivery management in UTP. Since the author is developing a research project called a Web-Based Announcement System for UTP, the author needs to investigate the feedback from respondent towards the effectiveness of announcement delivery management in UTP. The result of this survey can be evaluated and influence the respondents acceptance towards this research project.

		PERCEPTIC	ON TOWAR	RDS EFFE	CTIVENESS	S OF
		ANNOU	INCEMEN'	ſ DELIVI	ERY IN UTP	
	Bad	Below Average	Average	Good	Excellent	Total
Respondents	8	11	19	7	5	50

Figure 4.1 Perception towards the effectiveness of Announcement Delivery in UTP

4.1.2. With the statistic of 76% from the total respondents, the respondent feels that the announcement delivery management in UTP is in the category of average, below average and bad service. Therefore the web-based announcement system, which is the author's research project will be applicable here to apply an effective announcement delivery management.

4.1.3 Based on the surveys concerning the level of acceptance of the proposed Web-Based Announcement System. There are 30%) of the total respondents feel the proposed system is a good application to be implemented by UTP. This is followed by 28% of the total respondents think that the proposed system is average and 18 % of the respondents have excellent remarks on the proposed system. While, the remaining 24% of the participants think it is a bad proposal. Please refer to TABLE 4.2 for the results on the level of acceptance of the proposed Web-Based Announcement System that is accessible via Email and SMS.

	Level	of Acceptance	ce of propos	ed Web-Ba	sed Announ	cement
			System	for UTP		
	Bad	Below Average	Average	Good	Excellent	Total
Respondents	4	8	14	15	9	50

4.2 Findings

4.21 From the survey, the author indicates that the majority of the respondents are satisfied and pleased with Web-Based Announcement System that is accessible via Email and SMS. This can be proven using FIGURE 4.1 below. Based on FIGURE 4.1, the author analyzed that more than half of the respondents have categorized the announcement delivery service in UTP under average, below average and bad. Due to that here come, the proposed system is acceptable to the respondents, as they prefer a system that will provide them a better announcement delivery service.



FIGURE 4.1 Perceptions Towards the Effectiveness of Announcement Delivery Management in UTP

4.22 Based on FIGURE 4.2 below majority of the respondents perceived that the proposed Web-Based Announcement System would give a good impact to the flow of daily activities and announcement delivery in UTP. This means that the students and lecturers are expecting to have a better announcement delivery service in UTP.





4.3 Discussions

4.3.1 The Web-Based Announcement System (The content management)

Web-Based Announcement System for UTP, which is called AnnounceClick'atel, is a system to manage announcements that are conveyed to students in UTP. Besides managing the announcements, the system is able to send announcements via email and SMS through a mail server provided which will provide a better way of conveying announcements as compared to the traditional method of conveying announcements.

AnnounceClick'atel contains a flexible mechanism for an effective management of all aspects of the system application and its associating issues. For the purpose of the project, the system is developed based on the learning environment and technological resources in Universiti Teknologi PETRONAS (UTP)



FIGURE 4.3 – Web-Based Announcement System (AnnounceClick'atel @UTP) Conceptual Diagram below illustrates the conceptual overview of the system and all entities contributing to its establishment.

In order to understand the system requirements, user requirement analysis was initially completed among a group of target users. As per the system, the target users are:

- Administrator (e.g. UTP Webmaster, Academic Central Services (ACS) personnel)
- Lecturers
- Students

The UTP Webmaster, the hostel administrator and some of the lecturers have been interviewed, as to define their needs towards the system. The findings for this analysis phase have been evaluated and justified accordingly as against their feasibility, value, priorities, project time frame and technological availability.

The Web-Based Announcement System for UTP comprises of three main components; which are as follows:

- System Input (Student Data/Announcement)
- Announcement Management mechanism
- Sending Email mechanism
- Sending SMS mechanism

The results, findings and issues of each component are further discussed in the next subsections.

4.3.1.1 System Input

Basically user can enter any required data directly into the Web-Based Announcement System manually but it is more efficient to import it from existing system. Hence, this system is interfacing with SAP Campus Management System (CMS), UTP employee database (Lecturers) to fulfill system input requirements.

4.3.1.1.1 SAP Campus Management System (CMS)

Campus Management System (CMS) is a student, course and other educationalrelated management system, which is currently being implemented by UTP and handled by IT & Media Services of UTP.

SAP Campus Management System is designed to address the distinct requirements of the university life, such as student registration, student voluminous information and eLearning. Its capabilities include student application processing, comprehensive functions for academic curriculum development, and eLearning.

The Campus Management System is tied to the university's currently embarked SAP administrative systems and thus, electronically manages all aspects of student life from admissions to graduation. This puts accurate student information at the center of a powerful technology environment across the campus.

With this scenario, the integration between the Campus Management System (CMS) and proposed Web-Based Announcement System made easy, practical and convincing. Furthermore, CMS does enable quick and easy access to student files, including administrative and academic records, allowing the more informed information updates.

As per the Web-Based Announcement System for UTP requirements, would provide the course and student standard information for the Web-Based Announcement System database. For both student and course database, the back-end is using Oracle with SAP front-end. Note that not all the information in these two tables is needed. Only selectively important classes fields are to be pulled to the proposed system, Web-Based Announcement System for UTP.

The required inputs from the Campus Management System are as follows:-

- 1. Student Details
 - Student ID
 - Student Name
 - Intake
 - Year of Study
 - Program
 - Enrolled Courses
 - Sponsorship
 - Phone Number (Data is required to be computed in the system developed)

19

- Email Address (Data is required to be computed in the system developed)
- 2. Course Details
 - Course Code
 - Course Description

These data are needed since the system will segregate all the announcements that will be uploaded to the category specified. For example announcement regarding sponsorship, the students with PETRONAS sponsorship will get specifically announcements on PETRONAS sponsorship or any other related matters.

4.3.1.1.2 UTP Employee Database

Basically the employee database is also in SAP. The employee data especially lecturers and UTP Web Master as they are going to use this system to upload announcement. The lecturer's details needed are as follows

- 1. Lecturer Details
 - Employee ID
 - Employee Name
 - Employee Position
 - Employee Department
 - Courses Taught
- 2. Administrator Details
 - Employee ID
 - Employee Name
 - Employee Position
 - Employee Department

4.3.2 The Announcement Management mechanism

One of the major entities of the system is its announcement management mechanism where here the extraction of the raw data and presentation of announcement details.

4.3.2.1 System Back-End (Database)

The heart of this announcement management mechanism is the database itself. Among those, the database serve to keep the student details, course information, department details, announcement details uploaded and other required details. It is designed for efficient retrieval by the system for the announcement report generation. Note that, the announcement that is being uploaded through email will be kept in email announcement table specifically while for announcement that have been uploaded through SMS will be kept in different table. Here, PHP MyAdmin, MySQL database is used as a data repository. It is identified as the most reliable, flexible and efficient for Web-Based Announcement System for UTP project.

4.3.2.2 System Front-End

The user interface does play a significant role in the system as per user ease-of – use of the system functions as well as for the security purposes. It was designed according to user requirements and according to the flow of the system navigation. Departments will categorize announcements, which is easier to be managed. Each department will have its own templates to upload via email or SMS and its own clips.

4.3.2.2.1 Index Page

Users launch the Web-Based Announcement System from their workstation. An index page will appear. Please refer to FIGURE 4.2.



FIGURE 4.4 Web-Based Announcement System - Index Page

The purpose of the screen is to provide navigation and specific link for student and administrator. The pages may be the same for students and administrators but there will be some elements that the administrators can view while students cannot. Lecturers are also considered as administrator in this Web-Based Announcement System.

4.3.2.2.2 System Login Page

The purpose of the screen is to provide a permitted connection to the system and database data. Basically the administrator will get a privilege to edit, update and delete the database data, which is the back-end of the system while students will only be able to access to the front-end of the system.

LOG IN HERE : Pl	ease	enter your Student ID and Password t
USERNAME	:	
PASSWORD	:	FORGOT YOUR PASSV
		LOGIN

FIGURE 4.5 Web-Based Announcement Systems-Student Login Page

er your Employee ID and Password	lease ente	G IN HERE : F	L
	:	USERNAME	
FORGOT YOUR PASSWO	:	PASSWORD	
LOGIN			

FIGURE 4.6 Web-Based Announcement Systems-Administrator Login Page

Besides, the logon function is important for security purposes. It is to ensure only the authorized users are able to use the system. The identified authorized users are the lecturers, tutors, UTP Web Master, selected administrator from each department (Note that they will have administrator's access to the system). In this Web-Based Announcement System, there will be two different main home pages which one for the student access and the other one is for the administrator access. These pages will give users the access to the system functionality. Please refer to. Users need to select the section, which represent the departments in UTP. The available sections are as follows:

- eLearning
- UTP (Universiti Teknologi PETRONAS)
- ACS (Academic Central Services)
- FIN (Finance)
- HEP(Student Services(Hal Ehwal Pelajar))
- RC(Resource Center)
- RCSU(Residential College Support Unit)



FIGURE 4.7 Web-Based Announcement Systems - Student Home Page



Figure 4.8 Web-Based Announcement Systems -Administrator Home Page

Each selection the users made, the users then will be directed to the respective section's main page. The interface for each of the main page is all using the same standard designs. There will only be different in terms of the user's view, which for students they will have different view as compared to administrator's view.

4.3.2.2.4 Section Main Page

Basically in the Section Main Page (e.g. eLearning main page) there are to functional buttons where the first button is the ANNOUNCEMENT CLIPS and the other one is ADDRESSES button. For administrator the ANNOUNCEMENT CLIPS button will direct the user to the announcement clips page where administrator can view uploaded announcements for specific category (e.g. eLearning announcements) and administrator can upload announcements in this page. Administrator can choose to upload the announcements via email or SMS.



Figure 4.9 Web-Based Announcement Systems – Section Main Page (e.g.Administrator's eLearning main page)

4.3.2.2.5 Announcement Clips Page

In the announcement clips page, the administrator can view the uploaded announcements, and upload announcement via email or SMS at the same page. While for students they can view announcement clips and they can only compose a reply email to the administrator or their respective lecturers. The announcements will be presented in tables and it will show the date announcements uploaded, subject of the announcements and posted by.

		⁻
eLearning U	<u>TP ACS FINANCE RESOURCE CENTRE HEP RCSU </u>	
UPLOAD		
arning Upk	baded Clips	
View :	All Unread	
14/04/04	Hand in Your FYP Documention	shahira@
04/04/04	Check out your Scholarship!	shahira@

Figure 4.10 Web-Based Announcement Systems - Announcement Clips Page

à

4.3.2.2.6 Addresses List Page

Once the user clicks the addresses button, they will then be redirected to the addresses list page. For administrator, the addresses list page will show student addresses, which from there they can view, students' email addresses and students' hand phone number. The email addresses and phone numbers are kept into the database once the administrator register the student's email addresses and the phone numbers into the system (Web-Based Announcement System for UTP). Besides there is also a search function where students' addresses can be listed by student year, student courses, student programme or student sponsorship.

Search Contacts	ALL			i i i i ditannan		-
View by Year : [Edit]	OK					
Year5 🗸 Go				A C PAMI SDORSED		
View by Courses: [Edit]	1725	KAREN LEE CHOY YIN		norsha82@yahoo.com	þ	0123641669@sms.maxis.net
eBusiness v Go	1745	ERNA FARIZAN BI HAMDAN	D	bully_monster@hotmail.com	D	8126165982@sms.maxls.net
View by Sponsorship : [Edit]	1764	SITI MASTURA BT MAT SALLEH	D	lan_sha@yahoo.com.		0123641669@sms.maxis.net
PETRONAS Y	1810	MARDIANA BT MOHAMAD RADZI		lan_sha@yahoo.com.		0199142001@sms.celcom.com
	1889	RAZLINA BT MOHAMED		ease_angel@yahoo.com.		0129811205@sms.maxis.net
	1928	HANUN FARHA BT	۵	norsha92@yahoo.com		0123641669@sms.maxis.net

Figure 4.11 Web-Based Announcement Systems – Addresses List Page

4.3.2.2.7 Create New Announcement Page via Email/SMS

As per system requirement, the Web-Based Announcement System for UTP will be able to send announcements via email or SMS. In this page, administrator can compose the announcement and then send it to respective student email addresses or hand phone number that are kept in the addresses list. The announcements will be processed by mail server configured and will then passed to the recipients. In 4.3.3 section, there will be further explanations and discussions on mails server.

	Home eLearning UIP ACS FINANCE RESOURCE CENTRE HEP RCSU LOGOUT
SEND	
Announcemen	Details (19) a state of the state
Date	1-6-2004 11:18:13
To:	norsha82@yahoo.com
Cc:	Bcc:
Subject:	Testing Announcement FYP Briefing
Department:	Academic Central Services 🗸
Course:	not applicable 💌
From:	asri@petronas.com.my
Announcemen	Body
Short Announcement:	FYP Briefing
Announcement	FYP Briefing- Please be informed V For SMS (160 characters only)
SEND	

Figure 4.12 Web-Based Announcement Systems – Create New Announcement via Email/SMS

4.3.2.2.8 Create New Announcements via SMS

In this page, the administrator can also send announcements via SMS. First the user needs to compose the announcement then the announcement then can be sent through mail server. In order to have this function the author need to consider the maximum number of characters that can be written.

4.3.3 Mail Server, Email and Web-to SMS application (Networking)

Internet has the electronic mail whereas fixed telephony has the answering machine. Similarly mobile network operators have long provided various messaging services to their subscribers. With the 2nd generation networks such as GSM, the introduction of digital communications allowed the development of the Short Message Service (SMS).

4.3.3.1Email Application Features

Email enables users to send text messages and attach files from word processors, spreadsheets, or graphics programs. Most email packages allow us to do the same things we do with regular paper mail. Email has several major advantages over regular mail. First, it is fast: delivery of an email message typically takes seconds or minutes, depending on the distance to the receiver. A second major benefit is cost. Email is cheaper because it costs virtually nothing to transmit the message over the network, compared to the cost of a stamp or courier charge. Email is also cheaper in terms of the time invested in preparing the message.

Several standards have been developed to ensure compatibility between different email software packages. Any software package that conforms to a certain standard can send messages that are formatted using its rules. Any other package that understands the standard can then relay the message to its correct destination. However, if an email package receives a mail message in a different format, it may be unable to process it correctly. Three commonly used standards are SMTP, X.400, and CMC. All three-email standards work in the same basic fashion. Figure shows how an email message can travel over a wide area network such as the Internet.



FIGURE 4.13 Email clients and servers

Each client computer in the local area network runs an application layer software package called a user agent. Eudora, Lotus cc: mail, and Microsoft Mail are all email software packages. The user writes the email message using one of these user agents, which formats the message in two parts.

- The *header*, which lists source and destination email addresses (possibly in text form (e.g. "Pat Smith")) as well as the address itself (e.g. <u>psmith@somewhere.com</u>), date, subject, and so on.
- The body, which is the message itself.

The user agent sends the message (header and body) to a mail server that runs a special application layer software package called a *message transfer agent*. These agents read the envelope and then send the message through the network (possibly through dozens of message transfer agents) until the message at the receiver's mail server. The message transfer agent on this server then stores the message in the receiver's mailbox on the server.

When the receiver next accesses his or her email, the user agent on the receiver's client computer contacts the message transfer agent on the mail server and asks for the contents of the user's mailbox. The message transfer agent sends the email message to the client computer, which the reads with the user

agent. The Simple Mail Transfer Protocol (SMTP) is one of the most commonly used email standards, simply because it is the email

standard used on the Internet. SMTP defines how message transfer agents operate and how they format messages sent to the other message transfer agents. As the name suggests, SMTP is a simple standard that permits only the transfer of text messages; no non-text files such as graphics or word-processing documents are permitted. Several standards for non-text files have been developed that can operate together with SMTP, such as *Multipurpose Internet Mail Extension (MIME)*, uuencode, and binhex.

The SMTP standard covers message transmission between message transfer agents (i.e., mail server to mail server). A different standard called Post Office Protocol (POP) defines how user agents operate and how messages to and from mail transfer agents are formatted. POP is gradually being replaced by a newer standard called Internet Mail Access Protocol (IMAP). Although they are several important technical differences between POP and IMAP, the most noticeable difference is that before a user can read a mail message with a POP user agent; the email message must be copied to the client computer's hard disk and deleted from the mail server. With IMAP, email messages can remain stored on the mail server after they are read. IMAP therefore offers considerable benefits to users who read their email from many different computers (e.g., home, office, and computer labs) because they no longer need to worry about having old email messages scattered across several client computers; all email is stored on the server until it is deleted. Two other commonly used email standards are X.400 and CMC. Both formats are different from SMTP, POP, and IMAP, so they cannot be used interchangeably. However they are similar enough that it is straightforward to write gateway application software that can translate between the different standards.

For this Web-based Announcement System, the Email features are used to send announcements uploaded into the system. Therefore student will be notified with the latest announcement via email, which will be preferable as compared to a verbal announcement or opening UTP sites. By having this email function in the application, administrators will be able to put attachments and the announcement can be longer in words as compared to uploading announcement via SMS. Besides, the announcements can be directed to specific person or specific group. Furthermore the author needs to consider how to send announcement to a group of people at once where this will. For example an advance database lecturer should be able to send the announcement of class cancellation to all the advance database students at once.

4.3.3.2 Web-to-SMS - Short Message Service (SMS) Features

Please enter	Compose and send SMS [2] Please enter SMS numbers in format: country code+area code+number.								
Omit any lead Multiple addre	addresses should be separated by commas								
To: 4470345622	1, 46703233832.16	048392322							
Just vant great - v just pres message.	ed to say to ish you could s reply on yo Love, m	everybody. The vacation is be here. Write me back, ur mobile and type a	-2: Type a message						
	≠14.autorianitationesia.eu	· · · · · · · · · · · · · · · · · · ·	3. cc yourself (optiona						
الحميم معاد		baurkovációrena							
When conding th	is message use	compression aptions:							
Delete preposition:	s: []								
Delete spaces:									
Abbreviate:									
4. Send		Send message							
5. Messages processed a	ate nd sent								

FIGURE 4.14 Illustration of how messages are transferred from a web to SMS

Basically, What is SMS? Like all messaging services, SMS is characterized by the fact that the network keeps messages temporarily until messages are retrieved by the recipients (store and forward paradigm). Mobile messaging is based upon a series of evolutionary steps. One of the first messaging to have been provided by mobile communication network is SMS.

When you compose an SMS to someone from a web, normally one of the first steps you will take is selecting the intended recipients of the SMS by completing the 'To:' and 'Cc:' fields. This can be achieved by either typing in the recipient's name, **mobile number** or e-mail address or by selecting them from your address book. These fields are used to identify which mobile users you want the SMS message to be sent to. As the specific number is typed, it will erect the number to direct to a respective domain name server.

Furthermore in composing SMS from web, characters are also one of the factors that should be considered here. The standard maximum characters are 160 characters per message. If the characters typed are over limit, it will truncate to another message, which means it will be sent as the next message. Due to that, the announcements uploaded need to be brief and precise in words. Once you have finished composing your SMS and click 'Send' the list of intended recipients is checked for problems.(Note: You can run this check before clicking 'Send' by clicking the 'Check' button on the SMS composition window.)It will be sent through a mail server.

4.4 Constraints

4.4.1 The constraints are such as the system does not have a real connection with the mail server, there are no privilege access specified and no password policy management

CHAPTER 5

5.0 CONCLUSION

5.1 Conclusion: Relevancy to the Objectives

Given the work frame and project results as per date, the Web-Based Announcement System for UTP has been completed within the time and hence, theoretically and conceptually, successfully meets the project objectives. Technically, it has constraints such as mail server connections and procedures to have a domain name server.

The significant of the project is, the students will be able to receive announcements directly from the lecturers or UTP web master via Email and SMS application. With the implementation of the proposed system, it would increase the effectiveness and reliability of announcement delivery process, as compared to the current conventional process. The announcement display and reporting mechanism, which will be sent via Email and SMS to students, provide standard announcement display and reporting format for the university as a whole, as for easy announcement delivery management.

Web-Based Announcement System for UTP highlights the significant solution to manage announcements effectively either academic or campus announcement, to provide important updates to specific groups of students, and to provide the effective notification solution, as it should alert the students as end users.

As the research and findings suggest, the system would affect the university learning and campus environment as it contributes to an effective management of announcement delivery, which will smoothen the flow of activities in UTP. Besides ensuring that the students are always updated with new activities and academic updates in UTP.

5.2 Suggested Future Work For Expansion and Continuation

The Web-Based Announcement System for UTP is of much flexibility; the functionality and features can be maximized to address other future academic-related needs. Based on time, capabilities and technological constraint posses, the accomplishment of the system as to date are more to the basic and address only the most significant features. The recommendations for future project works are as follows:

5.2.1 Real Connection to the Mail Server (SMTP Server)

The Web-Based Announcement System would function more effectively with a real connection to the SMTP server. Due to that this particular system should act likely like other web-based email service where the user can actually send announcement via email and SMS. The system should be made accessible online and the students should have their own account in this proposed system.

5.2.2 Privilege Access

As to practice to produce a system with a good database security, the Web-Based Announcement System for UTP should improve on the privilege access to the authorized users. For example administrator should get all the possible privileges since he/she will be managing the system's database, while for lecturers they can only update, add or delete data only in their respective access.

5.2.3 **Bi-Directional Communication**

The system also can be expanded to have a bi-directional communication between the announcement administrators/lecturer and student where after receiving the announcements student, may reply them at real time and ask related questions regarding the announcement sent.

REFERENCES

- [1] (1) [ISU2000] Department of Computer Science, Iowa State University http://www.cs.iastate.edu/jva/jva-archive.shtml, 2000
 - (2) [Sinara99] Sinara Consultants, *Event Alert System*, http://www.sinara.com/products/eas/eas.shtml
- [2] (1) <u>http://www.wapforum.org/new/index.htm</u>
 - (2) For example, see "Japanese and European Mobile: Not So Different,"
 Matthew Nordan, Forrester Brief, Amsterdam, Netherlands, November 12, 2001.
- [3] (1) Cyberatlas (2001a) "SMS Continues to Take Messaging World by Storm", available at, <u>http://cyberatlas.Internet.com/markets/wireless/article</u>.
 - (2) Alectus Personnel (2000) Press Release, available at <u>http://www.alectus.com.au/press/australia/september2000b.asp/</u>.
- [4] (1) Gwenael Le Bodic, Alcatel Business Systems "Mobile Messaging : SMS, EMS and MMS", available at, <u>http://tlcweb.np.edu.sg/mel/</u>
- [5] (1) Galushkin, I. (2003). Text Messages: A potentially rich medium in distributed organizations. *PRism 1 (1)*. available at: http://www.praxis.bond.edu.au/prism
- [6] (1) DeMarco T., and Lister T. 1999. *Peopleware. Productive Projects and Teams 2nd Ed.* New York: Dorset House Publishing Company, available at :<u>http://homepage.ntlworld.com/</u>
- [7] (1) Gay, G., Lentini, M., & Sturgill, A. (1996). Effect of media richness on group process variables: Implications for telecommuting. Telecommuting Conference 1996. misTC96/papers/sturgill

- [8] (1) B.Shelly, gary, J.Cashman, Thomas & J.Rosenblatt, harry, 2001, System
 Analysis and Design. (4th Edition), Massachusetts, Course Technology.
- [9] Campus Management System (CMS), date access : September 20, 2003; date last updated : September 1, 2001; http://www.sap.com.company/press/factsheets
- [10] (1) Luke Willing, Laura Thomson, 2001, PHP and MySQL Web Development,SAMS, Web Development, Programming
- [11] (1)Martin Webb, Michel Plungjan, Keith Drakard, 2001, Instant Javascript, McGrawHill

APPENDICES

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APPENDIX 1-1 Project Gantt Chart

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Thu 11/27/03	Fri 11/28/03	Fri 2/6/04	Fri 2/6/04	Tue 2/10/04	Tue 2/10/04	Mon 2/23/04	Thu 2/12/04	Mon 2/16/04	Mon 2/23/04	Thu 4/8/04	Tue 3/16/04	Thu 4/8/04	Wed 4/21/04	Wed 4/14/04	Wed 4/21/04	Fri 6/4/04	Wed 1/28/04	Fri 2/20/04	Fri 6/4/04	Fri 6/4/04		
Wed 11/26/03	Fri 11/28/03	Mon 1/26/04	Mon 1/26/04	Fri 2/6/04	Fri 2/6/04	Tue 2/10/04	Tue 2/10/04	Thu 2/12/04	Mon 2/16/04	Tue 2/24/04	Tue 2/24/04	Tue 3/16/04	Thu 4/8/04	Thu 4/8/04	Wed 4/14/04	Mon 1/26/04	Wed 1/28/04	Mon 2/16/04	Tue 6/1/04	Mon 1/26/04	stone 🔶	stone
2 days	1 day?	10 days	10 days	3 days	3 days	10 days	3 days	3 days	6 days	33 days	16 days	18 days	10 days	5 days	6 days	95 days?	1 day?	5 days	4 days	95 days	Miles	Miles
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APPENDIX 2-1 Story Board



















	BANNER
ND BUTTON	AVE BUTTON CANCEL BUTTON
Date	Texi Field
То	Text Field
Department	Text Field
Subject	Text Field
Short Announcement	Text Field
Announcement	Text Field





APPENDIX 3-1 System Flow Chart APPENDIX 3-2 Context Diagram APPENDIX 3-3 Diagram 0 APPENDIX 3-4 Diagram 1 APPENDIX 3-5 Diagram 2 APPENDIX 3-6 Diagram 3 APPENDIX 3-7 Database Structure

System Flow Chart



APPENDIX 3-1 Web Based Announcement Systems -System Flow Chart

Context Diagram



APPENDIX 3-2 Web-Based Announcement System-Context Diagram

. 1



Diagram 0

APPENDIX 3-3 Web-Based Announcement System- Diagram 0

Diagram 1



APPENDIX 3-4 Web-Based Announcement System-Diagram 1

Diagram 2



APPENDIX 3-5 Web-Based Announcement System-Diagram 2





APPENDIX 3-6 Web-Based Announcement System-Diagram 3

 r_{i}

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No	Table Name	Column Name	РК	FK	Reference
1	student	stu ID	*		Table
	Student	stu nassword			
		stu passworu			
····		stu programma			
·····		stu_programme			
·		<u>stu</u> miake			
· ·		year			
		stu_sponsorsnip			· · · · · · · · · · · · · · · · · · ·
		stu_eman			
	·	stu_mobileno			
		pop_port			
2	lecturer	emp_ID	*		·····
		emp password			
		dept ID			·····
		emp name			
		emp programme			- 11
		emp email	-		
					- <u>a-</u>
3	admin	emp ID	*		
		emp password			
··		dent ID	-		······
		emp name			
		emp_name	++		
		emp_position			
				•	
4	course	course_code	*		
		course-desc			
		course_type			
5	registered course	stu ID	*		student
		course code		*	
		sem taken			course
6	course taught	emp ID	*		lecturer
		course code			course
·····		semester			course
7	announce emeil		**		
1	announce ennan	dont ID			1
		aept_ID		*	dept
		to			
		<u> </u>			
		bcc			
		subject		1	

APPENDIX 3-7

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s_announce		
announcement		

APPENDIX 3-7 Database Structure

APPENDIX 4-1 Index Page APPENDIX 4-2 Administrator - Home Page APPENDIX 4-3 eLearning Page (Department Page) APPENDIX 4-4 Uploaded Announcement Page APPENDIX 4-5 Address List Page APPENDIX 4-6 Creating New Announcement Page APPENDIX 4-7 Example of Announcement Received via Email APPENDIX 4-8 Logout Page



Appendix 4-2 Administrator - Home Page



Appendix 4-4 Uploaded Announcement Page

admin_address = Microsoft internet brg The Edt Vern Favorites = Icob 4-Back 4-Back 6 6 1 <	lorer (Gelfa) (fyp/edmi sarch Wel	orites (3)History Laddress.php	Steriger) I - E - P L - Bookmanks () My Yabool - 197 Ya	vodi «	200 Financa (+ 0-3 Mai) -	عالية (المعالية) (المعالية) (المعالية) (المعالية)
Be Alert! N	VIIII	ANNOU!	VCE) finan	CLICK'ATEL@UTP ce resource centre hep	<u>RC</u>		
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View by Year : [Edit]	ÖK						
Year 5 📡 🤇 Go			801 i. 740	MAIL CODUESD			
View by Courses: [Edit]	1725	CHOY YIN ERNA	Г	norsha82@yahoa.com		0123641669@s	ms.maxis.net.my
eBusiness 🔄 Ⴓ	1745	FARIZAN BT HAMDAN	Γ.	bully_monster@hotmail.com		0126165992@s	ms.maxis.net.my
View by Sponsorship : [Edit]	1764	<u>BT MAT</u> SALLEM	Г	lan_sha@yahoo.com,	Г	0123641669@s	ms.maxis.net.my
PETRONAS S	1010	MARDIANA BT MOHAMAD RADZI	F	lan_sha@yahoo.com.		0199142001@sn	ns.celcom.com.my
	1889	RAZLINA BT MOHAMED	E	ease_angel@yahoo.com.	F	0129811205@s	ms.maxis.net.my
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Appendix 4-6 Creating New Announcement Page



Appendix 4-8 Logout Page

Questionnaire for Final Year Project- Web-Based Announcement System

•		Date	
	(E.g. JAN 2000)		
ree			

rse

ionnaire/Survey on Perceptions on the Effectiveness of Announcement Delivery in UTP A: Announcement Delivery in UTP

ase Circle Out the selection refer to the scale below:

1	2	3	4			5		
xcellent)	(Good)	(Average) (Below Ave					(Bad)	
w do you rate	1	2	3	4	5			
w do you rate nouncement	e the effectiveness of delivery?	eLearning as a medi	um of	1		3	4	5
w do rate ani all announce ple/person)	nouncement delivery f ments conveyed man	for any subject matte aged to be received	r in UTP? (e.g. by the target	1	2	3	4	5
w do you rate the effectiveness of UTP portal as another medium of nouncement delivery in UTP?					2	3	4	5
w do you rate the normal way of conveying announcements such as sters and conveying announcement verbally in UTP? (Successfully eived or there are some students get missed out?)					2	3	4	5
w often you browse Internet?					2	3	4	5

ase Circle Out the selection refer to the scale below: (Level of Acceptance for a proposed system)

	Agree		ł	Disagree		
general, do you think announcements need to be managed in a better y to ensure the effectiveness of announcement delivery?	1 2		3	4	5	
w much do you agree that the good announcement delivery nagement can smoothen the activities held in UTP?	1	2	3	4	5	
you really think that UTP needs an announcement system that can scifically notify specific users/students where message conveyed and sffective time?	1	2	3	4	5	

Questionnaire for Final Year Project- Web-Based Announcement System

	YES	NC
you have an email account?		
you have a handphone?		
you open your mailbox regularly (Email)?		
you think a good announcement system needed for UTP students?		
ive you ever missed class/test due to ineffective announcement delivery?		
ive you ever missed out in an important agenda of UTP due to late announcement?		