SPECIAL PROJECT TITLE:

DEVELOPMENT OF AN SMS BASED EXAMINATION RESULT CHECKING SYSTEM

ABSTRACT

This project presents a way to bring information to students by leveraging the availability of phones (with SMS capability), especially cell phones. It reviews the use of mobile phones for delivering examination results via Short Messaging Service (SMS) in a university, where student who have written examinations and anxious to see their results need to get their grades in a convenient and accessible way, whether in the comfort of their homes, on the road or while at their field practical training stations.

Mobile phone seems to be an asset most individuals' posses, and take almost everywhere with them, it is therefore a highly effective means of bringing information to them faster, easily and on the move. An SMS based examination result querying system enables students to request for their grades, and the system deliver the grades to their phones. This means that they can access their grades even in the remotest locations where internet facility might be unavailable, preventing them from accessing the school's website.

This study shows the implementation of such system and considers the security issues associated. The system enforces security with the use of secret information (password).

1. INTRODUCTION

Computers with the power of the internet have thrived in aiding communication among people. The telephone system, which is the main communication system that was invented several years ago, had undergone a great improvement, so much that today we have fixed wireless phones, mobile phones and the likes. With the rapid development of mobile phones come several services like the Short Messaging Service (SMS), Multimedia Messaging Service (MMS) and others, which are readily available and add to the usefulness of mobile phones. SMS in particular is widely used in communication, and more recently has been leveraged to provide several services like airline ticketing, banking services and several others. SMS is a mobile technology that allows for sending and receiving text or even binary messages to and from a mobile phone.

The relative ease of use of SMS makes it possible for a user to learn how to send SMS easily. Schofield and Kubin (2002) argued that small devices could potentially provide better interface for finding information than through page browsing and other means. More than 5 million SMS are exchanged each day in Tanzania (TCRA, 2010), and the subscribers sent 460 million messages between January and March 2010. These findings reveal that the use of SMS is wide spread in Tanzania.

The major advantage of SMS is its cost effectiveness, and availability, as most individuals own phone.

2. PROBLEM STATEMENT

Most university students in Tanzania do not get their examination result in time once they are available for checking. This is because the result are either available for checking in the school notice board or website. As most of the student once result are released are not near the school, they have to arrange with those who are in school for checking. And those school which use website, it is expensive to use internet and availability of internet in many local areas is very low. With an SMS application the students get their results on the fly once released.

3. PURPOSE OF CHOOSING THE TOPIC

In Tanzania, several service providers offer mobile services which include SMS. Most times the cost attached to sending a SMS is relatively small, and most providers do not charge when receiving SMS. All these contribute to what makes SMS a really cost effective means of disseminating information.

Till today, especially in the developing countries, there still exists the problem of checking examination results as students still throng notice boards in anxiety. Although most universities, even those in the less developed countries now make examination results available on their websites. The level of internet availability in less developed countries is still low and quite expensive. Even in the developed countries where most homes have internet access, SMS is still a faster and cheaper means of dissemination examination results as well as other information.

Pramsane and Sanjaya (2006) stated that universities can provide educational services based on SMS such as grade release, enrollment information, university announcement and internship opportunity. An advantage SMS offers is that students can receive valuable information on the fly without requesting for it. This is done by pushing the information to the students (sending it to their phones), or working on a request sent from a student to produce the desired information(pulling).

3.1 Advantage of the proposed system

The advantages of SMS results are the same with that of any other SMS application.

- *Convenience* – Users get their results at their own convenience.
- *Accessibility* – Users can access their results from any location (as long as they are within a network service reception area).
- *Portability* – Results can be received and checked from any GSM phone. All GSM phones support SMS.
- *Saves time* – SMS is on the fly. It reduces the throughput of result checking as websites are sometimes unavailable due to congestion, or server down time. SMS provides a faster means of sending and receiving such information.
- *Cheaper* – SMS is generally economical.
- *Less human resources required* – Results are processed automatically.

- *Mobility* – It is obvious that most mobile phone users have their phones with them everywhere they go, most people often leave their computer at home, or work sometimes, but they will always have their phone on them.

4. DEFINITION OF KEY TERMS

PHP: (Hypertext Preprocessor**)** a scripting language widely used to write web applications

MySQL: An open source relational database management system

GSM(**Global System for Mobile Communication**: originally from **Groupe Special Mobile**) is the world's most popular standard for mobile telephony systems.

SMS(**Short Message Service**) is the text communication service component of phone, web or mobile communication systems, using standardized communications protocols that allow the exchange of short text messages between fixed line or mobile phone devices.

Mobile phone is an electronic device used to make mobile telephone calls across a wide geographic area

5. OBJECTIVES

This project has two types of objectives: main objectives and specific objectives.

5.1 MAIN OBJECTIVES

The main objective of this project is to deliver student grades to their phones, after they have requested

5.2 SPECIFIC OBJECTIVES

The specific objectives of this project is

- The administrator to have the ability to upload student grade sheets in form of an excel document to the database.
- Ability to have a default password assigned initially to each student grade that they are expected to change
- Ability of the student to get his/her grade after after requesting by using password.

6. HYPOTHESIS

The implementation of an SMS based examination result checking system is expected to provide examination results in its mobility, students are expected to access their examination result, wherever they are and on the fly.

7. LITURETURE REVIEW

Most universities now provide examination results on their website and this is a very common practice. When results are made available on the website, students have to login by providing a username or ID and password before they can view their result. This ensures that examination results are protected from unauthorized access. Although websites are readily accessible and provide options like printing and saving, these benefits could easily be inaccessible if a user does not have access to the internet.

While websites seem to be a very good option in countries where internet is readily available, its impact can be less felt and it can be quite inconvenient and expensive in countries with poor internet access. In such places, students will have to visit cyber cafes where they have to pay to check their grades.

Apart from using websites to provide students with their examination results, other means include IVRS (Interactive Voice Response System) and email.

IVRS

Interactive Voice Response System is a self guided result checking system. In this system, a student dials a number and listens to computer generated or recorded voice direction. The voice instructs the student on what action (usually by pressing keys) to take to supply the needed information. The supplied information is then used to generate the student's result, which is spoken to the user.

Email

While email seems to be another intuitive means of sending results and other information to students, even without them requesting for it. It requires internet connection, and although several mobile phones allow accessing of emails on them, it is seldom used by mobile phone users.

8. METHODOLOGIES

8.1 INTRODUCTION

In the development of this system, the study will follow all necessary and accepted steps in developing a system which is known as System Development Life Cycle (SDLC).

The development of this software is going to be done by a Rapid Prototype Approach, where by a version of the system software will be and installed to the server. The members will use the system to test its usability and collecting any more requirements that will be included in the next version of the system when the proceeding one is not okay, till the users are okay with the system.

8.2 **REQUIREMENTS DETERMINATION**

The study will get the requirements by interviewing the key stakeholders of this system. The interviewed personnel's may include students, lectures and staff in the student records office.

8.3 SYSTEM DESIGN

The modeling tools which will be used in designing system software are: Data Flow Diagram (DFD), and Entity Relationship Diagram (E-R Diagram).

8.4 PROJECT DEVELOPMENT METHODOLOGY

8.4.1 **PLANNING**

To use this system as an independent SMS service, must obtain the necessary hardware and software requirement, which primarily are:

- A modem with sms sending and receiving capabilities, that supports communication with a computer, and a supported SIM card.
- A computer system to host the SMS application.
- A network connection to the database server.

8.4.2 **SYSTEM IMPLEMENTATION**

- Database will be created by using MySQL database.
- The program will be written by using PHP. Gateway for sending SMS which run on PHP will be used.

8.5 SYSTEM TESTING

The system will be tested by 1st year informatics students and they will be give a questionnaire to test its usability.

9. TIME LINE AND BUDGET

9.1 TIME LIME

ACTIVITIES	2010		2011					
	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE
Decide topic of interest								
Writing a proposal								
Submission of a proposal								
Requirements collection								
Designing System								
Implementing System								
System testing and evaluation								
Project report presentation								
Project report submission								

9.2 BUDGET

S/N	ITEM	QUANTITY	DESCRIPTION	UNIT PRICE (Tshs)	TOTAL (Tshs)
1	Requirements collection costs		Costs while collecting requirements		50000/=
2	Stationeries costs		Plain papers, typing, printing, photocopy and binding		50000/=
3	GSM Modem costs	1	For communication between application and users(phones0		49000/=
4	Testing costs		Costs while testing the application		50000/=
					199000/=

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