



## STUDENT MONITORING SYSTEM WITH RFID & SMS NOTIFICATION FOR STUDENT OF ENHANCED CURRICULUM IN THE ARTS PROGRAM

Analyn R. Mendoza  
College of Computer Studies  
TrimexColleges, Biñan, Laguna, Philippines

Mheiane M. Velasco  
College of Business & Accountancy  
TrimexColleges, Biñan, Laguna, Philippines

Epiphany V. Rosco  
College of Business & Accountancy  
TrimexColleges, Biñan, Laguna, Philippines

ElthoneJohn Tiongco  
College of Business & Accountancy  
TrimexColleges, Biñan, Laguna, Philippines

Louie F. Agustin  
College of Computer Studies  
Trimex Colleges, Biñan, Laguna, Philippines

**Abstract:** This study describes the improvement of a Enhanced Curriculum in the Arts Program Student Monitoring System with RFID & SMS Notification. The existing usual going in and out of the school, that to be monitored by using the protect at the gate every time they went to school. This includes the time unnecessarily bump off by way of the students as they are being monitored with the aid of the guards and checked their identification cards. This is the foremost goal of our machine RFID tags should be worn via the Students and they will simply skip thru the RFID reader to become aware of their information and saved the file of their time in and time out to the database. SMS notification is used to ship to their dad and mom for complacency purposed. The proposed task will be two a huge help to the mother and father of the students particularly in Enhanced Curriculum in the Arts Program two to without problems monitor the entrance and exit of the students. The Student Monitoring System with RFID & SMS Notification is without difficulty process in which the Coordinator will use the computer and the machine to Monitor the Students. The effects of the software evaluation performed have met the goals of the researchers and therefore priceless sufficient to be persevered and developed..

**Keywords:** RFID; Monitoring System; SMS Notification; Enhanced Curriculum; Arts Program

### I. INTRODUCTION

The Student Monitoring System with RFID & SMS Notification is without difficulty process in which the Coordinator will use the computer and the machine to monitor the Students. The effects of the software evaluation performed have met the goals of the researchers and therefore priceless sufficient to be persevered and developed. The system will furnish an immediate result of the review of the students and dad and mom that will assist the school in enhancing their monitoring. The overall mean of the machine comparison implied that the developed learn about was very beneficial and can be of excellent help to the Enhanced Curriculum in the Arts Program. The consequences of contrast from the college students and parents introduced enhancement for their usage. The Student Monitoring System with RFID & SMS Notification is without difficulty process in which the Coordinator will use the computer and the machine to monitor the Students. The effects of the software evaluation performed have met the goals of the researchers and therefore priceless sufficient to be persevered and developed. The system will furnish an immediate result of the review of the students and dad and mom that will assist the school in enhancing their monitoring. The overall mean of the machine comparison

implied that the developed learn about was very beneficial and can be of excellent help to the Enhanced Curriculum in the Arts Program. The consequences of contrast from the college students and parents introduced enhancement for their usage.

### II. RELATED WORKS

#### RFID Imparted Student Monitoring System

P.DevaPriya, N.NandhiniDevi, S.SwathiPriya, Mrs. D. Divya (International Journal of Computer Trends and Technology (IJCTT) – Special Issue April - 2017 ISSN: 2231 – 2803) .Student monitoring is necessary to decorate security for children. In present time, mother and father are concerned about their youth due to mishaps and missing of children. The existing device consists of three fundamental units, a bus unit, parent unit and a school unit. The bus unit the system is used to observe when a toddler boards or leaves the bus. This information is communicated to the parent unit as nicely as faculty unit. In the proposed system, RFID tag is trouble to each student. While getting into the bus, the use of GSM mother and father will mechanically get hold of the SMS from the machine that inform their kids enter/exits from the bus. The machine called “RFID IMPARTED STUDENT MONITORING DEVICE” is used

to sending the messages to the parent's mobile phone while the school bus entry/exit the school.

The proposed system includes monitoring the child's motion to and from school. Children security is of at most importance to their parents. Despite the quality protection measures, children, due to their lack of competencies to defend themselves, might also quit up in a state of affairs that endangers their life. The statistics of toddler is sent to their respective parents. School administrators and dad and mom recognized the need for better measures to make certain the security of the children-

- 1) Parents is anxious about the children's safety. Monitoring the pupil will make overcome the drawback of safety.
- 2) Implement the monitoring system using RFID (Radio Frequency Identification Reader) can offer additional protection utility for children. However the present systems are now not powerful adequate to prevent the crime in opposition to children. RFID system has appropriate accuracy and safety make it a perfect records collection. One of the main advantages of the use of RFID is to furnish get right of entry to real-time data improving the efficiency and safety, significantly decreasing administration cost. This paper gives a system to monitor the daily bus pickup/drop-off of children to decorate the typical protection of the daily bus transportation to/from school. The gadget goals at routinely detecting when a baby boards or leaves the bus and issue an alert message when a baby does not board or leave the bus to limit the parents' issues about using the bus for the daily transport of their young people except being lost or forgotten. The paper proposed a bus protection system which was once designed to manipulate the entering/exiting of students from the bus.

<https://www.ijctjournal.org/Special%20issue/NCRTTC-2017/NCRTTC-P148.pdf>

### **RFID Based Student Attendance Monitoring System with GSM Module Incorporated**

M. Mustapha, M. Abdul kadir, M. A. Sarki and S. P. Omale (University of Maiduguri Faculty of Engineering Seminar Series Volume 9, Number 2 November 2018 Seminar Series, Volume 9(2), 2018 two ).Due to challenges of the manual method of taking attendance at schools in Nigeria, an automatic attendance machine needs to be adopted. The challenges encompass situation in preserving the attendance list over a duration of time, pointless time wastage in getting the correct variety of attendees, coupled with unsuitable documentation as students insincerely writing for an absentee among others. This paper implements Radio Frequency Identification (RFID) pupil attendance monitoring device which presents the functionalities of registering students and recording attendance. On the point of passing into the lecture room, the students have to register their attendance the use of very own non-public RFID tag. The RFID reader then reads and transfers the code of the respective tags to the controller. It compares the tags code with database saved in the microcontroller and get entry to command is displayed on the LCD. A GSM module is integrated in the system which gives a messaging platform for informing parents/guardian of students of their ward attendance in school. A prototype of the gadget has been correctly fabricated.

Radio Frequency Identification (RFID) refers to the use of radio wave to become aware of and track the tag

implanted into an object or a residing being (T. S. Lim et al, 2009). It is wireless identification techniques used for clever system that can be used to identify, secure, monitor and do object inventory. Today in most institution Lecturers take attendance with the aid of calling out names or passing a sheet of paper. Both way have respective drawbacks. For this reason, college needs to create a system to monitor student's attendance and document it to their mother and father automatically. This undertaking is to simplify attendance record machine by using the usage of Radio Frequency Identification (RFID) technological know-how which can be transferred to the parents by GSM network systems. Radio frequency identification (RFID) interface with Global System for Mobile conversation (GSM) module is an automated identification module in which data are retrieved from or store onto RFID tags thru a non-physical contact process and messages are been sent to the smartphone numbers that have been saved in the database.

The primary thing of the RFID device is RFID tags, RFID reader, middleware, a backend database and a GSM module. A tag can either actively transmit signals to the reader or be passively activated by using an RFID reader. Through its antenna, the RFID reader reads the data saved on those tags when in its vicinity (Nairan et al. 2013). The middleware consists of of the factors that transmit data from the reader to the backend administration system. It consists of hardware factors such as cable and connectivity ports and software program factors such as filters that monitor community performance of the system. Individual tag identifies are stored in the database so as to distinctively pick out the roles of each tag. The GSM Module presents a Short Text Message (SMS) platform in which parents/guardian of students can be notified of their wards attendance in school.

The various fields of application of Radio Frequency Identification technological know-how is increasing on an everyday basis, such as stock control, product tracking through manufacturing and assembly, parking lot access and control, Bank Locker Security System, Automatic Toll Collection System (ATCS), Library Management device (LMS), Attendance Management System etc. (Salunke et al 2013, Dhanalakshmi and Mamatha, 2009). The focus of this paper work is on the development of an attendance administration gadget the usage of Radio Frequency which will monitor attendance for a crew of students.

This paper helps to keep away from human involvement in maintaining the attendance document goals at doing away with problems and drawbacks related with traditional method. Therefore, the system performance is no longer limited to scholar attendance record only, it additionally sends SMS message to their parents.

<http://www.unimaid.edu.ng/Journals/Engineering%20Journal/Vol%209%20No.2%20Nov%202018/4%20Musa%20RFID%20EEE.pdf>

### **iNotified: An SMS and RFID-Based Notification System of Lipa City, Batangas, Philippines**

Mr. Philip Villamin Mojares ( Proceedings are on hand @ IISRC-International Journal of Information Technology & Computer Science ( IJITCS ) (<http://www.ijitcs.com>) (ISSN : 2091-1610 ) , Volume two

No : 12 two Issue No two : 2.). In the advent of technology, communication turns into quicker and simpler in a faucet of a fingertip. In an educational institution two per two se, two conversations between parents and school two is very challenging and two vital one. It wants full effort to recognize one another. One of the issues of the mother and father is that if their children are honestly attending or no longer in the college during their type period. This is one of the challenges that Lipa City Colleges is confronting, since at present, the college has no way of presenting the instant records to the dad and mom if their children are in or out of the college premises in a specific time. Hence, the researcher performed this machine improvement study which is regarded a new science which helped the faculty to clear up the hassle in monitoring the students' whereabouts. Specifically, it aimed to 1.) Design device two which will two maximize two the use two of two SMS two module two and RFID two sciences 2.) two Develop a gadget which will guarantee the privacy and protection of records saved in a database. 3.) Determine the advantages of the usage of the SMS Module and RFID technology as a technique of communication between the parents and the faculty 4.) Test and evaluate system in terms of its performance, functionality, usability, reliability and extensibility. This software was designed and developed using one of a kind programming languages and technologies such as Java (J2EE), two Visual Basic two 2010 two (VB.Net), MySQL two (DBMS), two RFID two and two SMS two Module.

It additionally utilized descriptive research plan which intends to present facts concerning the nature of popularity of a state of affairs as it exists at the time of the learn about and to describe existing conditions, occasions or systems based on the impressions or reactions of the respondents of the research. On the different hand, the Likert scale was used to check and evaluate the gadget in phrases of its functionality, usability, reliability, extensibility and performance. The software manner fashions used in this learn about have been evolutionary prototyping and intense programming (XP) due to the fact the phases of development were quickly with focal point on excessive software program quality. After testing and evaluation, the machine was discovered to be functional, usable, reliable, and extensible and performed well.

Technologies emerged to introduce many distinctive methods of advancement. Computers are of these examples that are now in existence that can do whatever easily. two Since conversation technology has become an important section of modern society, it brings a protection and assurance of records via the networks. As the world advances, technological development arises in the discipline of Information Technology. One of which is the pc software technologies which useful resource human for day by day needs. Some applications tend to entertain, some reduces human effort, some reduces complexity and resource for decision making and some tend to automate guide system. Automation turns into a section of the IT two advancement; too many two builders two create an application two that two automates guide system. TwoAutomating a guide machine has many advantages. It speeds up the system of the system, it can function more than one method at a time, and it additionally reduces the error. two As humans have a tendency to assume then act, it consumes time. two Tend to emerge as tired, human rests and also tends to create errors,

thus, inconsistencies will exist. Since that are a lot of advantages the pc automation has to offer, it has a massive affect the way people accomplishes task, it is used through different fields such as business, hospital, government, faculties and the like. The two developing two benefits two of two the science two are now on two its two full top two in view that two extra and two greater two tactics two are being automated. With the increasing demand of automated system, enterprises like faculty prefer to have its own gadget powered via the computer system. two One system which performs an essential function in the operation of the school is the so-called attendance monitoring machine which is designed basically to screen the log-in and log-out of the students. Lipa City Colleges is one faculty in the Philippines which needs to absolutely automate its enterprise transactions.

Though, some of the methods of the two said school are now automated such as students' file keeping, payroll, enrollment, grading and library management, the monitoring of the college students are now not yet developed. The school has no two way of finding out two if two the two college students are two internal the two school premises two which two is very two essential two statistics on the aspect of two the parents or guardians. It is in the effect that the researcher has determined to plan a machine entitled iNotified: two An SMS and RFID-Based Parent Notification System of Lipa City Colleges, Lipa City, Batangas, Philippines. This application evolves the desires of the parents of Lipa City Colleges in monitoring whether their youth are in the school or not in particular time. It gives the dad and mom to have statistics about the presence of their young people in school. Two It tackles the time in and time out of every pupil as well as sending of SMS notification and generating the attendance record for the parents. Using RFID, a student requires to login in the system on a day by day basis. The scanning of the ID is a need to due to the fact it suggests students' data in the system. If the manner is successful the scholar will be allowed to enter in the campus. Then the next technique is sending SMS notification on students' guardian on what time their youth come to school. If the pupil leaves the campus logging-out is required. In this case, there is also a textual content message sends to the parents in order to be aware of if their young people are truly attending the class. Because logging out of each pupil is considered vital it will additionally determine the time out of the scholar in the school.

<https://studylib.net/doc/8791495/inotified--an-sms-and-rfid-based-notification-system-of-l>.

## 2.1 DESIGN OF THE STUDY

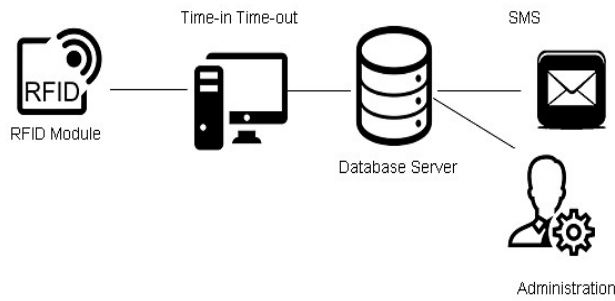


Figure 1 -System Architecture

When requirements are already known, plan for the gadget is created. In this stage, the device architecture is presented. It is no longer a detailed design and includes solely the essential elements of the system, which gives a thought of the gadget to the user. The plan will assist in growing the system quicker and better.

2.2 Context Flow Diagram

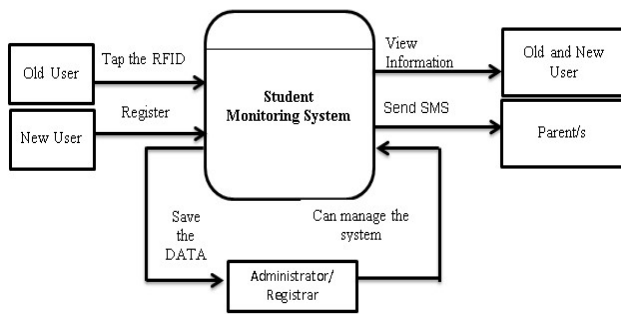


Figure 2 - Context Flow Diagram

This figure indicates that Student monitoring the usage of RFID for Enhanced Curriculum in the Arts Program run as an application; this device will supply an environment-friendly output and complete report.

2.3 Database Schema

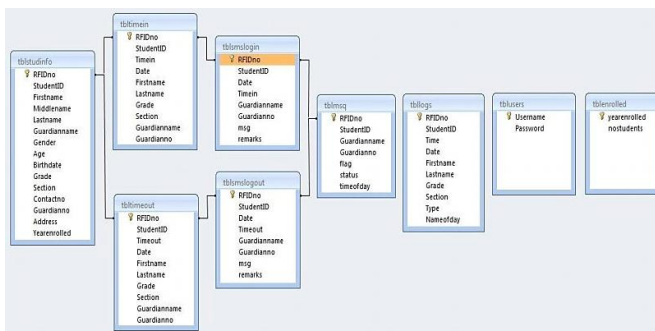


Figure 3- Database Schema

A database schema represents the logical configuration of all or phase of a relational database. It can exist each as a visible illustration and as a set of formulation acknowledged as integrity constraints that govern a

database. These formulas are expressed in an information definition language, such as SQL. As part of a records dictionary, a database schema suggests how the entities that make up the database relate to one another, such as tables, views, saved procedures, and more.

III. Flowchart

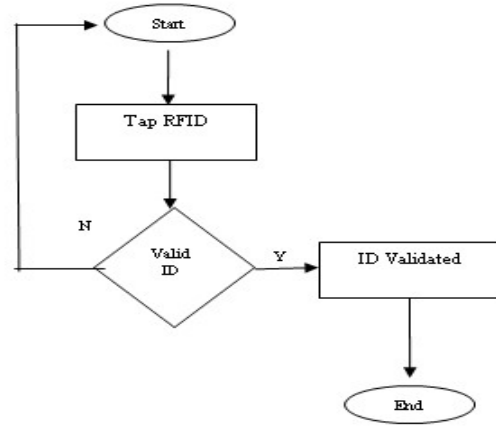


Figure 4 - RFID

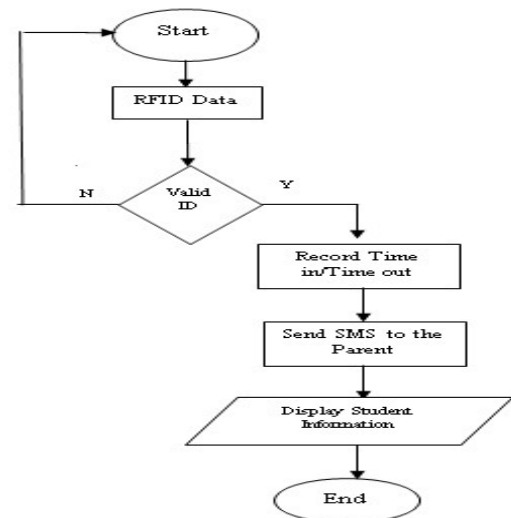


Figure 5 – Student Time In/Time Out

**IV. RESULT AND DISCUSSION**

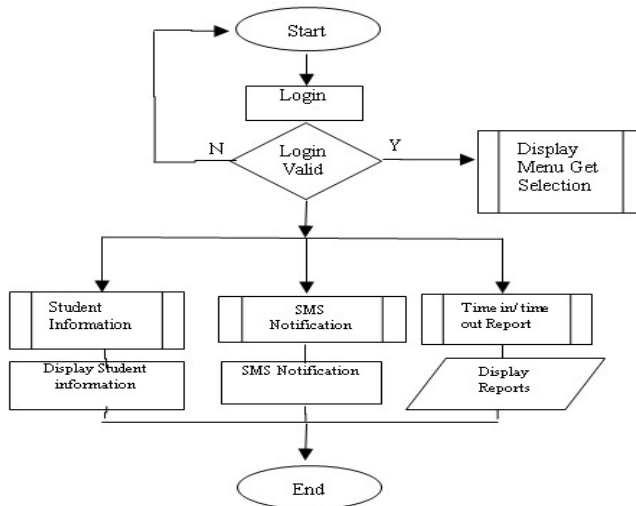


Figure 6 – Administration

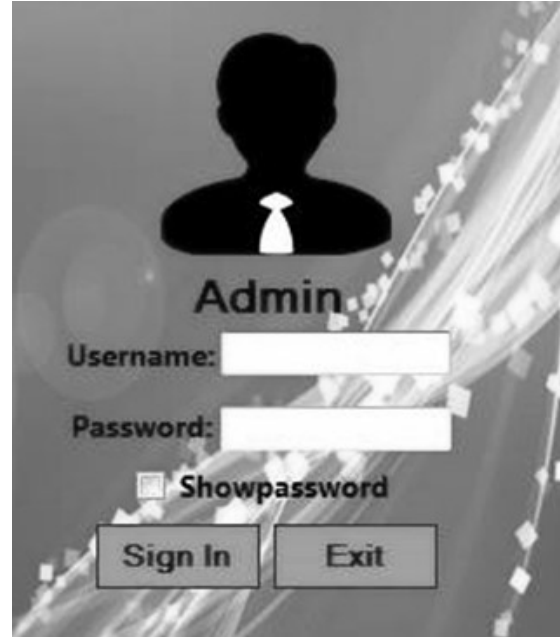


Figure 8 – Administration Module

Only the Admin can see or update the student information.

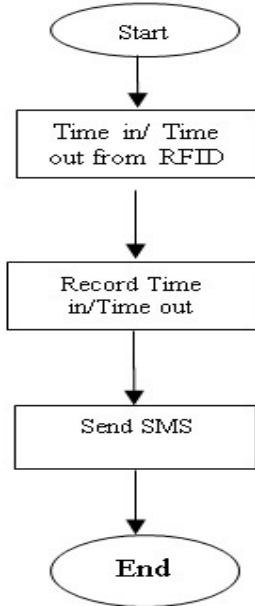


Figure 7 – SMS



Figure 9 - Main Module



Figure 10 – Student Time In



Figure 11 – Student Time Out

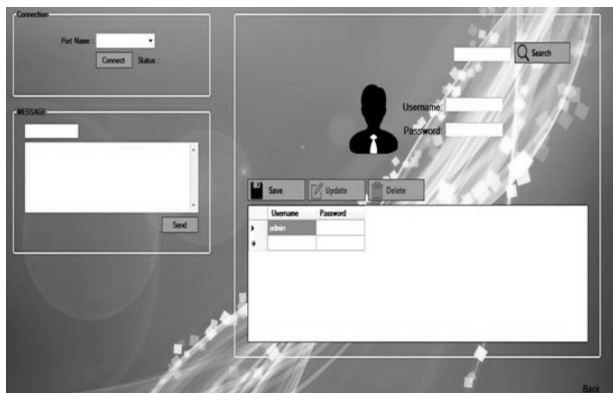


Figure 12 – Settings

Settings show the form of how to send a message. Port Connection represents how to connect to the GSM.

#### 4.1 Project Structure

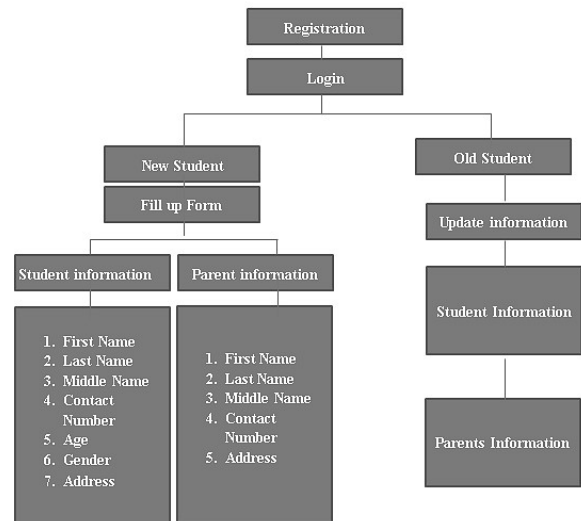


Figure 12 –Project Structure

### V. SUMMARY AND CONCLUSION

#### SUMMARY

Based on the information gathered through the proponents, they have complied and examined, through careful analysis of the guide primarily found the gadget that the Student Monitoring System with RFID & SMS Notification for Enhanced Curriculum in the Arts Program needs to have a system to reveal the student time in/ time out. To make this possible, the proponents put into effect an “RFID & SMS Notification” to screen the students. The proponents interviewed to provide other ideas about the subject matter and a survey form to comprehend how positive and how a whole lot the software reached the predicted outcome. The main feature of the software is to provide a Student Monitoring System to be used for the complete academic year.

#### VI. CONCLUSION

The Student Monitoring System with RFID & SMS Notification is without difficulty process in which the Coordinator will use the computer and the machine to monitor the Students. The effects of the software evaluation performed have met the goals of the researchers and therefore priceless sufficient to be persevered and developed. The system will furnish an immediate result of the review of the students and dad and mom that will assist the school in enhancing their monitoring. The overall mean of the machine comparison implied that the developed learn about was very beneficial and can be of excellent help to the Enhanced Curriculum in the Arts Program. The consequences of contrast from the college students and parents introduced enhancement for their usage. The Student Monitoring System with RFID & SMS Notification is without difficulty process in which the Coordinator will use the computer and the machine to monitor the Students. The effects of the software evaluation performed have met the goals of the researchers and therefore priceless sufficient to

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## REFERENCES

- [1] M. Mustapha, M. Abdul kadir, M. A. Sarki and S. P. Omale "RFID Based Student Attendance Monitoring System with GSM Module Incorporated," University of Maiduguri Faculty of Engineering Seminar Series Volume 9, Number 2 November 2018 Seminar Series, Volume 9(2), 2018.
- [2] P.DevaPriya, N.NandhiniDevi, S.SwathiPriya, Mrs. D. Divya"RFID Imparted Student Monitoring System," International Journal of Computer Trends and Technology (IJCTT) – Special Issue April - 2017 ISSN: 2231 – 2803.
- 814/Sales\_and\_Inventory\_System\_Thesis\_Documentation.
- [3] Mr. Philip VillaminMojares "iNotified: An SMS and RFID-Based Notification System of Lipa City, Batangas, Philippines," Proceedings are available @ IISRC-International Journal of Information Technology& Computer Science ( IJITCS ) (<http://www.ijitcs.com>) (ISSN : 2091-1610 ), Volume No : 12 Issue No : 2 .