Utilization of Short Message Service System using GSM Model towards Wards Academia Routine Monitoring

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Abstract- *Record tracking mechanism is a ever ending open challenges faced by all man handling sectors and ways the path to create automated tools. It consumes most of our regular timing knowingly or unknowingly in all areas of our regular routines. The aim of this paper is to provide the student's record tracking especially rewards information to the end user. This system is capable to record student's routines using interactive inputs, creating reports and to provide wards information to end users in particular parents. GSM network is utilized to enhance this work and used to send SMS. Short Message Service (SMS) is a text message service component of phone, web or mobile communication systems, using exiting standardized communication protocols that allow the exchange of short text message between fixed line and mobile phone device. Present manual process of checking wards process at the end of each semester examinations consumes time from end-user and also it's a big time consuming task for the college administrative people. Using this project, end-user can easily receive updates about their wards from any remote location through SMS. An automated intimation to end-user about their wards is the objective of this project. This project eliminates the requirements of resources such as stationary materials, human resource for keeping of record.*

Keywords- GSM, Automated tool, SMS, Communication, Record Tracking

I. INTRODUCTION

Student Marks System (SMS) is a application software designed to introduce a conductive and structured information exchange platform for students integration, end-user, faculty in-charge and the administration of a school or college. Following are some of students monitoring activities that supports educational institutions to monitor students related activities

- Wards personal information's
- Wards Academic performance monitoring
    - Subject -wise monitoring
    - Overall Progress of Individual ward

Student's complete marks details are entered in this system by the administrator. The student registration should contain the information (like internal marks, students details etc). This is saved in the database. SMS can be useful in many areas like Universities, colleges, institutions. Private and government sector industries. Then he/she will receive an SMS regarding the concerned student academic marks from the college data base. The advantage of this project is that any person wants to know the marks he has to send just an SMS.

The main intention of this project is to design an automated application is to put the student's thoughts and actions into right path. To deliver wards status to the end-user mobile, GSM modem is required that acts as communication interface. Over the existing network modem transports device protocols transparently through a serial interface. The GSM modem is a wireless modem that works with a GSM wireless network. In this scenario wireless modem acts like a dial-up modem that sends and receives data through a fixed telephone line, wireless modem sends and receives data through radio waves. The project deals with GSM modem, micro-controller, PC to save wards data and MAX232. Interface MAX232 acts as voltage converter between the modem-controller and micro-controller- PC. The data from the PC will reach the microcontroller through serial communication and will be finally sent to the user mobile through GSM modem

II. INTRODUCTION OF GSM

Global system for mobile communication (GSM) is a globally accepted standard for digital cellular communication. GSM is the name of a Globally accepted standard for digital cellular communication is GSM . GSM means Global System for Mobile communication otherwise known as 2G or Second Generation technology. In 1982 a standardization group established to create a common European mobile telephone standard for a pan-European mobile cellular radio system operating at 900 MHz. Action behind this development is to make use of same subscriber units or mobile phone terminals throughout the world.

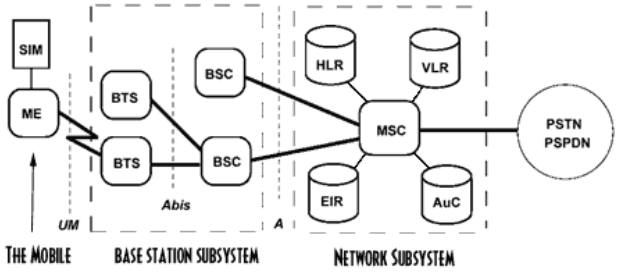

Fig.1 GSM Architecture

Major sub divisions of GSM network is as follows.

- SS- Switching System
- BSS - Base Station System
- OSS- Operation and Support System

Switching System holds the major responsibilities like call processing and subscriber-related functions. The switching system includes HLR, MSC, VLR, AUC and EIR. Radio-related functions are carried our in BSS. Base Station System consists of base station controllers (BSCs) and the base transceiver stations (BTSs). Operation and Support System monitors and controls the network operations with the support of operations and maintenance center (OMC) and to the BSC, otherwise implementation of OMC is known as OSS. The purpose of OSS is to offer the customer cost-effective support for centralized, regional, and local operational and maintenance activities that are required for a GSM network. An important function of OSS is to provide a network overview and support the maintenance activities of different operation and maintenance organizations.

III. PROPOSED SYSTEM

The framework of this proposed system is the overcome the manual operational difficulties faced by users of the existing system while receiving reports about their wards and automates the process in a computerized manner. Basic information like end-user mobile numbers details are collected and maintained in secured process. The latest technology will be used in the proposed system to automate the pc operations through SMS and easy retrieval of the stored data. The main authenticated function is to done pc operations by authenticated person.

A. SYSTEM ARCHITECTURE:

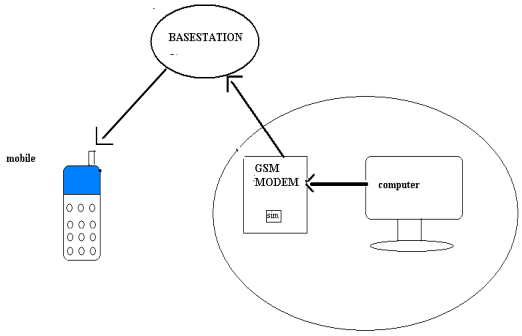

Fig.2 GSM based SMS architecture

B. MODULE DESCRIPTION:

1. Managing Students:

Managing Students modules deals with collection of Student basic information likes name, address for communication, previous academic qualification, department details and other necessary details. Automated registration number generation carried our internally. Mainly this modules deals with new student admission process, viewing existing data and removing students roll while leaving the institutions.

2. Managing Subjects:

Managing subjects' modules deals with semester wise subject code entry along with subject name for current semesters operated in this module. Operations like elective selection are carried out with the support of already listed subject information. Wards progress entry like modification, deletion for current semester internal and final result of previous is executed in this module.

3. Managing Marks:

Up-to date semester manipulation like addition, modification, deletion and record viewing for individual students is executed in this module.

4. Managing through SMS :

Short Message Service (SMS) is a communications protocol allowing operational team to interchange short text messages between mobile telephone devices and end-user. In SMS module, attributes like contact information and text message are taken in to operation. The GSM Reads the message and sends the details of the particular student's internal mark information from database.

IV. SIMULATION RESULTS

Students Details:

The Student Details form contain the Students details, such as students register number, student name, parents mobile number, students mobile number .It also allow the modification of students details.

Subject details:

The Subjects details form contains the subject's name, subject's code, semester wise subject's details. It also allows the modification of subjects' details.

Add Marks:

This form allows the admin to adding marks of the student's semester wise internal marks.

Update Marks:

This form allows the admin to modifying marks of the student's semester wise internal marks.

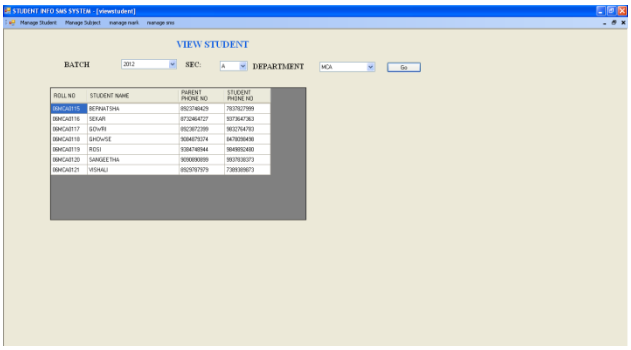

Fig.3 Students Details Form.

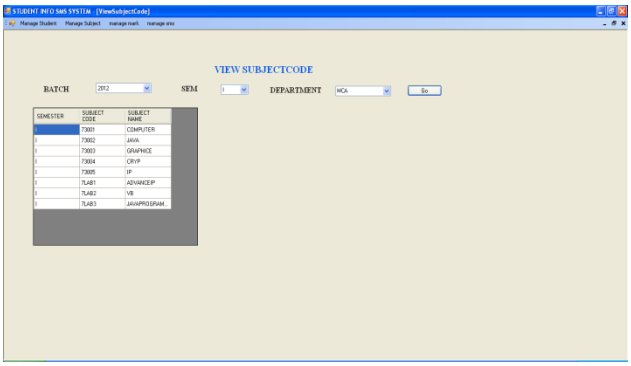

Fig.4 Subjects Details Form.

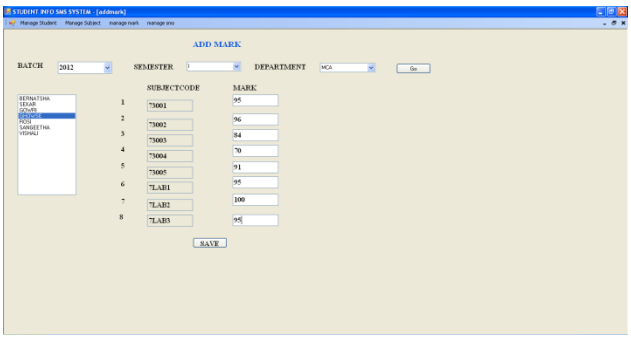

Fig.5 Students Marks Form.

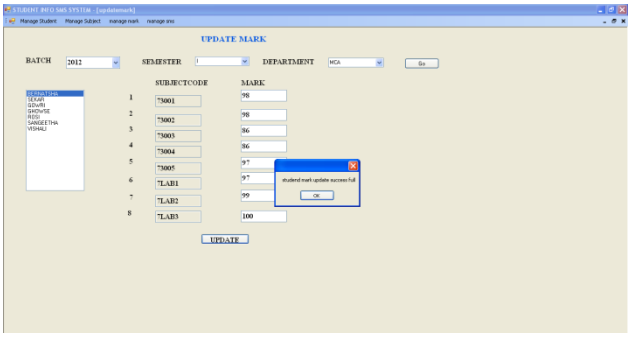

Fig.6 Students Mark Update Form.

SMS Display Section:

This form contains the student details and subject's details, and also contains the SMS sending and receiving details.

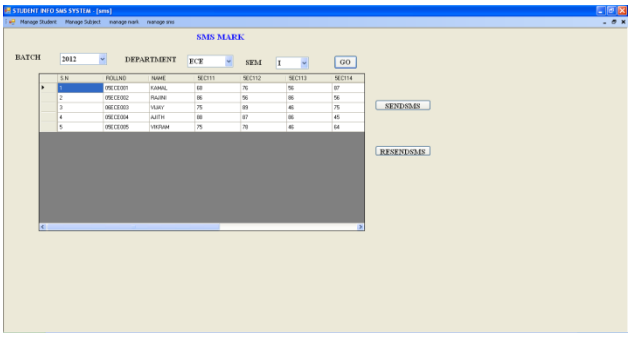

Fig.7 SMS Details Form.

V. CONCLUTION

GSM based Parents tracking of the student Internal Marks via college System. The transmitting section comprises of C# and GSM modem receiving section is the GSM based mobile phone. The introduction of wireless technology in the field of communication, the communication becomes more efficient and faster, with greater efficiency and the message communicated with less errors and maintenance. This model is useful in day today activates of service sectors such as chain restaurants, health care , wealth management franchisee about the need and special discounts can be displayed at all

branches including franchisee. As like in educational sector the students, faculty and administrative can be communicated with in no time about wards any up-dations. It can be set up at public transport places like railways, bus station, airport, roadside for traffic control especially in emergency situations, the features of this is very easy to operate and cost efficient system. Latency involved in using of papers in displaying of notices is avoided and the information can be updated by the authorized persons.

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