A desktop application developed by S. K. Jain, U. Joshi, and B. K. Sharma (2010) , in which all the list of registered students in a particular course will be displayed when the lecturer start the application. The attendance is done by clicking a check box next to the name of the students that are present, and then clicked on register button to mark their presence. But in this also, human involvement for attendance tracking is needed.

2. Bluetooth Based Attendance System

In 2013, Vishal Bhalla, Tapodhan Singla, Ankit Gahlot and Vijay Gupta , have proposed the attendance system which can take attendance using Bluetooth. In this project, attendance is being taken using instructor's mobile phone. Application software is installed in instructor's mobile telephone enables it to query student's mobile telephone via Bluetooth connection and through transfer of student's mobile telephone Media Access Control (MAC) addresses to the instructor's mobile telephone, presence of the student can be confirmed. The problem of this proposed system is student's phone is required for attendance. If student didn't carry the mobile phone with him without mobile phone his presence will not considered in Bluetooth Based Attendance System. The second problem of this proposed system is , in case of students' absent if his mobile is given to his friend then also present is marked, so presence of student is not necessary only phone should be in coverage area.

3. NFC based Attendance System

(Media Anugerah Ayu, "TouchIn: An NFC Supported Attendance System in a University Environment", 2014) In this paper author presents the implementation of an (AMS) Attendance Management System that is based on Bluetooth and NFC technologies in a multiuser environment. It uses fingerprint & the Bluetooth address of the NFC enabled phone of the user to authenticate the identity of the user. A Java based desktop application receives the NFC tag IDs, other information associated with the mobile phone and the user and submits them to an analyzer for the interpretation of the user's behavior. But in this case, student must be having NFC enabled phone to mark presence in the class room.

4. Fingerprint based Attendance System

In 2013, Seema Rao and Prof.K.J.Satoa proposed one new system for employee attendance using fingerprint. This system checks one fingerprint template with all templates stored in the database, like wise it checks for all employee which will take more time. The main

problem in this case is it is very time consuming as it check one fingerprint with all the temple stored in the database.

(Neha Verma, Komal Sethi and Megha Raghav, 2013) Fingerprint recognition based identification system is designed for student identification. This system is being designed for taking attendance in institutes like NIT Rourkela. In this system, fingerprint template matching time is reduced by partitioning database. In this system all students of every class has to stand in a long queues to make attendance, again this system is suffering from fingerprint device , and one most important disadvantage is that it is work within short distance.

5. Iris Based Attendance System

In 2010, Seifedine Kadry and Mohamad Smaili has proposed one system. In this paper, a wireless iris recognition attendance management system is designed and implemented using Daugman's algorithm (Daugman, 2003). This system based biometrics and wireless technique solves the problem of spurious attendance. It can make the users' attendances more easily and effectively. The system is based on RF wireless technique, it is too expensive.In this system all students of every class has to stand in a long queues to make attendance, and most important disadvantage is that it is work within short distance and it is expensive system.

6. Face Recognition based Attendance System

(Muthu Kalyani.K and Veera Muthu.A, 2013) has proposed Face Recognition based Attendance System, where we use a CCTV camera to be fixed at the entry point of a classroom, which automatically captures the image of the person and checks the observed image with the face database using android enhanced smart phone. It is typically used for two purposed. Firstly marking attendance for student by comparing the face images produced recently and secondly, recognition of human who are strange to the environment i.e. an unauthorized person. For verification of image, a newly emerging trend 3D Face recognition is used which claims to provide more accuracy in matching the image database, The main problem of this system is recognized face will compare with all the entire database for authenticate the individual attendance.

7. Mobile Based Attendance System

In 2013, Dr. S. Ramnarayan REDDY, Deepanshu GOYAL and Ankit BANSAL, tried to implement a system which overcomes the limitations of the existing approach by taking

the attendance through teacher's mobile phones. Doing the same work on mobile phone not only saves our resources but also enables the user to get easy and interactive access to the attendance records of student. This system is implemented on S60 Symbin platform, so teacher must be having S60 Symbin platform mobile phone and human involvement for attendance taking is there

8. RFID based Attendance System

BISAM-BIS attendance Management System by BIS Software Development Services PVT Limited presents an attendance management for schools and colleges. The system can send SMS and email alert to parents/guardians of the students automatically. The student will register at the gate by touching RFID device with their RFID tag and send the data to BISAM server in the school. The server will process the attendance data and send an SMS to the parents/guardians of the absentee student through BISAM SMS gateway server. The system also has Time Manager Software for managing employees' attendance and HR related functionalities.

II. Review of literature on Use of Mobile Phone

Mobile phone is a necessary and required technological instrument which is applicably suited for teaching and learning process.The advancement and wide usage of mobile phones have promoted them to become the learning media.

If used positively, a mobile phone is a good learning tool that allows students to move around with their learning materials (example, lecture notes, tutorials and e-books), surf the internet (example, online help) and access installed apps for various uses. Despite of the vital role that is played by mobile phones as a learning tool, there still challenges that could emanate from using mobile phones such as cheating during exams and distraction during lecture hours,when wrongly used at certain location like in the lecture room or exam room by student of ourhigher institutions of learning, it could result to adverse consequences that would affect the accomplishment of themandatory educational goals.**Owuamanam and Owuamanam (2002)** studied on students' tolerance and opined that poor attitude and commitment to their work in school results into failure and sometimes school dropout because their attention used to be shifted to different issues. This study surveyed the relationship between the students' use of mobile phone and the academic activities of the teacher in the lecture room. This is done with reference to the individual using them, the location (lecture rooms) of their usage and the educational implication associated with it.**(Ling 2005).** It is believed that mobile phones have the

potential of having a central place in the daily lives of undergraduates. But research shows that there is difference between students' performance and commitment to academics in lecture rooms between those who use mobile phones during lecture hour.**Siragusa and Dixon (2008),** have studied attitudes of students towards the use of mobile phones and the perceived social pressure and likely consequence. The study revealed a high usage of mobile phones and found that students found the usage pleasant, helpful and easy. But on the contrary, others said they experience feelings of anxiety, distraction and that it sometimes takes too much of their attention that could have been allotted to other facet of the main school programmes. Thus, there are challenges and implications that require to be addressed.**James (2011)** has put it briefly, when he pointed out that mobile phone as tool for information distribution is good no doubt, but its uncontrolled access especially by the adolescence, may not be in their best educational interest as there is guaranteed to be failure.**Amaal Al Masri** , find that the positive use of mobile phone is a good learning tool that allows students to move around with their learning materialsTherefore integration of mobile phones into instruction has increased in the Universities.**Amali Ismaila, Onche. O, Bello Muhinat and Hassan, Ibrahim (2012),** hypothesize that, recently school authorities have noted the increase in the use of mobile phones by students to cheat during examination. The results from the study, It shows that the use of mobile phones in constantly unfair during lectures. This is an indication that mobile phones have become negative influence that affects students' commitment to their academic work. This would have been the cause of failure of some student in their courses.**Lawal W, Akinrinmade A. F, Ijarotimi O. (2013)**The motive behind taking mobile phones in the examination room by the desperate candidates is to illegally get access to answers.Taking into consideration that, some unauthorized users of mobile phones may not be uncovered by invigilators during examination, better equipment for detecting unauthorized usage of mobile phones during examination time is needed

III. Different Mobile Detector

Today's mobile phones have increasingly become hi-tech. Mobile phones have storage capacity, Random Access Memory (RAM), Internal memory and Extended memory, Processing power (CPU), Wireless network connectivity (such as, Wi-Fi and Bluetooth), Built-in sensors, GPS, Camera and operating systems, just to mention the few. Mobile phones allows running of small computer programs (mobile apps), which provide variety

of features including; viewing and editing of text files in different formats such as word and pdf, instant charting, web browsers, dictionaries, scientific calculators and so forth.

Now days the most problem of world is unauthorized use of mobile phones in prohibited area like examination halls confidential rooms, prisons, Colleges, schools, hospitals, petrol bunk etc. Whereas many project is designed to detect the mobile phone where the mobile communication is strictly prohibited like Examination Hall, Hospitals, places of important meeting. Most Universities have tried to explicitly state in their exams regulations, that mobile phones are strictly prohibited in the examination rooms. The motive behind taking mobile phones in the examination room by the desperate candidates is to illegally get access to answers. Checking manually pockets of students before entering in Examination hall and there is chance of having the cell phone with the person if he is not checked properly, however it would be hectic and time consuming for large number of students. So to avoid this problem, an automatic detection of cell phone is introduced. Is as follows.

1. Novel Mobile Detector Sensing Alarming and Reporting System (Jan 2012)

k.mohan dece, build a mobile phone detector in prohibited area, The objective of the System is to find the mobile phone in and around some distance in restricted areas such as prisons, Colleges, schools, hospitals, petrol bunk etc. When any one mobile is used in the prohibited place this Device will detect that mobile signal through the antenna. In that particular place when a mobile signal is received, the receiver in this device will receive the signal through the antenna. When mobile receive the signal at the particular place, the alarm makes the sound for indication of the mobile and one LED will glow for the indication then with this device GSM Module is attached to send the Short Message service (SMS) to the registered number in the microcontroller. This detector is used to detect the presence of mobile. When it detects any mobile, it gives a signal to the PIC16F877A microcontroller. The controller when receives this signal will turn ON the buzzer circuit and will also send the detected message to some particular mobile numbers via the GSM module. Also the information is displayed in the LCD module as “MOBILE DETECTED”

2. Design and Implementation of Intelligent Mobile Phone Detector (July 2012)

An intelligent mobile phone detector designed by Mbaocha C., was able to detect the presence of GSM signals emitted from a mobile phone within the radius of 1.5 meters. A device had a capability to detect calls, SMS and video transmission even though a mobile phone is in silent mode. Moreover, a device was able to restrict the detected mobile phone from accessing services through jamming which blocks the desired frequency. However,

the device was unable to discriminate two distinct phones operating in the same frequency.

3. Design and Implementation of Cell-Phone Detection based Line follower Robot (October 2014)

Kanwaljeet et al , developed a line follower robot designated to detect the use of mobile phones in restricted premises. Among other things, a robot is composed of a cell phone detector circuit which detects both incoming and outgoing calls, SMS and video transmission even if the mobile is in silent mode. When the robot detects RF signals transmitted from the mobile phone, it stops moving and sounds a beep alarm and the LED blinks for notification until

3. Mobile Sniffer and Jammer (2014)

A mobile sniffer and jammer developed by Sujith et al , has a capability to detect the use of GSM mobiles in examination halls and other do not disturb areas. The sniffer circuit consisted of RF detector, GSM module and Peripheral Interface Controller (PIC). The device continuously detects the RF signal level and produces a warning message when the RF level increases.

4. Centralized Mobile Detection Using Arduino Duemilanove (ATmega328) (Aug 2014)

Jawad Ahmad Dar , design the mobile detection instrument that automatically detects the activities cell phones in Examination Hall and displays this information on GUI on remote computer (administrator) interfaced with mobile detector, like detection messages, Room no, location etc . Firstly he design the detector to detect presence of activated signal, then he design RF transmitter and receiver to interface this detector with remote computer using arduino Duemilanove (micro controller),then he program microcontroller and design motor control for detector so that it should rotate appropriately, then he design LDR module. He put detector in examination hall, in hall we also make use of LED and buzzer and simultaneously it displays messages to administrator during any malicious activity. The moment the detector detects RF transmission signal from an activated mobile phone, it starts sounding a beep alarm and the LED blinks. The alarm continues until the signal transmission stops, and simultaneously acknowledges system administrator at remote location

IV. Proposed System

From all Attendance management system, it is observed that system is being developed only for attendance is being taken. Whereas researcher planned to use RF technology for two purpose, one is for attendance taking and second is for detecting Use of mobile phone in the class room. So there is no chance for use of mobile phone while lectures is going on, it will improve the students concentration on lecture rather than the mobile phone activities.The objectiveof proposed system are to improve the attendance in the class and also improve the physical concentration on the lecture instead of unwanted use of mobile phone activities.

V. Framework of Proposed System

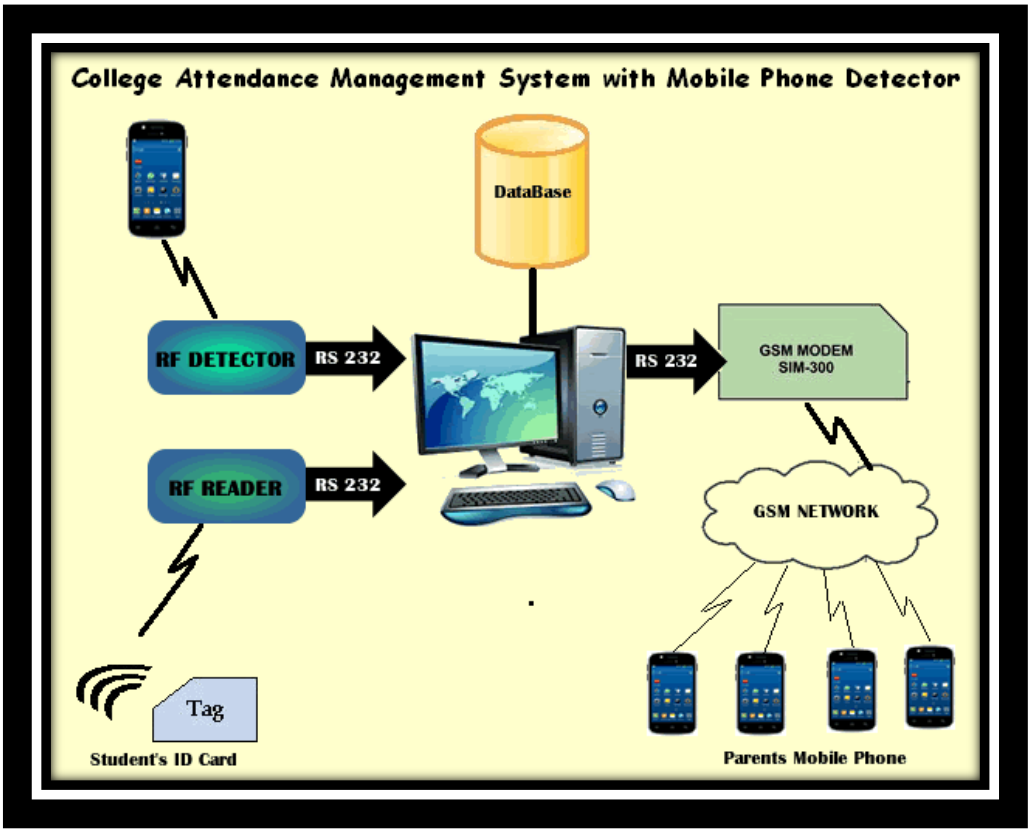

Diagram: Proposed System

The proposed CAMS with MPD framework automates the student attendance regularly, The RFID sensor will detect the student in the class room and mark the attendance. If student use mobile phone, the RF detector detect the mobile phone and report will be sent to the respected HODs, teachers and student's parents through SMS, Bulk SMS and Email. It is very essential to every parents should know about their sons/daughters. Researcher identifies the need of a CAMS framework using RFID.

Components Required for Proposed System

1. **RFID Tag**
2. **RFID Reader**
3. **GSM Module SIM 300 with RS 232**
4. **Database**

1. RDIF Tag:

An RFID tag is comprised of a microchip containing identifying information and an antenna that transmits this data wirelessly to a reader. The RFID chip will contain a serialized identifier, or license plate number, that uniquely identifies that item, similar to the bar codes system. A key difference, however is that RFID tags have a higher data capacity than their bar code counterparts. An RFID tag can be placed on individual items, cases or pallets for identification purposes, as well as on fixed assets such as trailers, containers, totes, etc.

Diagram:RFID ID card having ID Tag

2. Radio Frequency Identification Reader (RFID Reader)

RFID reader is a device used to gather information from an RFID tag, which is used to track individual objects. Radio waves are used to transfer data from the tag to a reader. RFID is a technology similar in theory to bar codes. However, the RFID tag does not have to be scanned directly, nor does it require line-of-sight to a reader. The RFID tag it must be within the range of an RFID reader, which ranges from 3 to 300 feet, in order to be read. RFID technology allows several items to be quickly scanned and enables fast identification of a particular product, even when it is surrounded by several other items.RFID technology uses digital data in an RFID tag, which is made up of integrated circuits containing a tiny antenna for transferring information to an RFID transceiver. The majority of RFID tags contain at least an integrated circuit for modulating and

demodulating radio frequency and an antenna for transmitting and receiving signals. Frequency ranges vary from low frequencies of 125 to 134 kHz and 140 to 148.5 kHz, and high frequencies of 850 to 950 MHz and 2.4 to 2.5 GHz. Wavelengths in the 2.4 GHz range are limited because they can be absorbed by water.

3. GSM moduleSIM300 with RS 232

This is a plug and play GSM Modem with a simple to interface serial interface. Use it to send SMS, make and receive calls, and do other GSM operations by controlling it through simple AT commands from micro controllers and computers. It uses the highly popular SIM300 module for all its operations. It comes with a standard RS232 interface which can be used to easily interface the modem to micro controllers and computers.

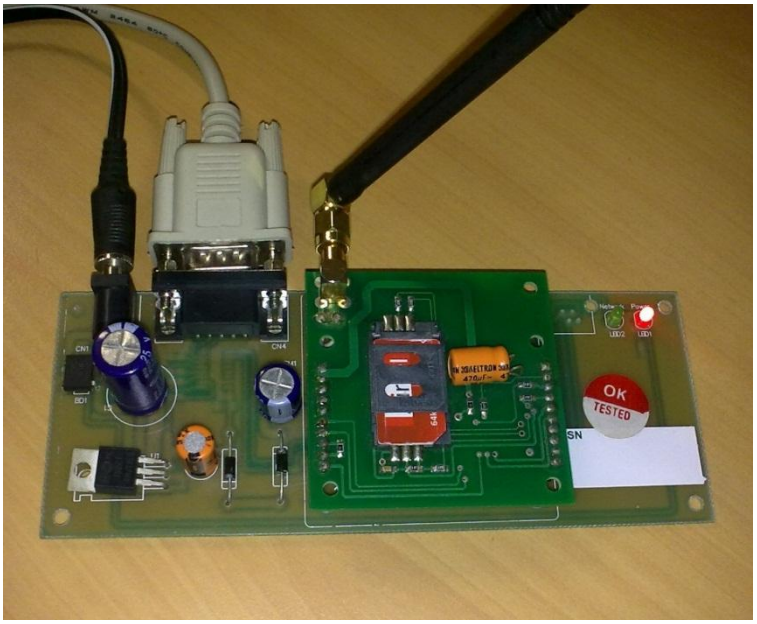

Diagram: GSM moduleSIM300 with RS 232

Features

- Uses the extremely popular SIM300 GSM module
- Provides the industry standard serial RS232 interface for easy connection to computers and other devices
- Provides serial TTL interface for easy and direct interface to microcontrollers
- Power, RING and Network LEDs for easy debugging
- Onboard 3V Lithium Battery holder with appropriate circuitry for providing backup for the modules' internal RTC

- Can be used for GSM based Voice communications, Data/Fax, SMS,GPRS and TCP/IP stack
- Can be controlled through standard AT commands
- Comes with an onboard wire antenna for better reception.
- Board provides an option for adding an external antenna through an SMA connector
- The SIM300 allows an adjustable serial baud rate from 1200 to 115200 bps (9600 default)
- Modem a low power consumption of 0.25 A during normal operations and around 1 A during transmission
- Operating Voltage: 7 – 15V AC or DC (board has onboard rectifier

The modem consists of all the required external circuitry required to start experimenting with the SIM300 module like the power regulation, external antenna, SIM Holder, etc.

RS-232

RS-232 is simple, universal, well understood and supported but it has some serious shortcomings as a data interface. The standards to 256kbps or less and line lengths of 15M (50 ft) or less but today we see high speed ports on our home PC running very high speeds and with high quality cable maxim distance has increased greatly.

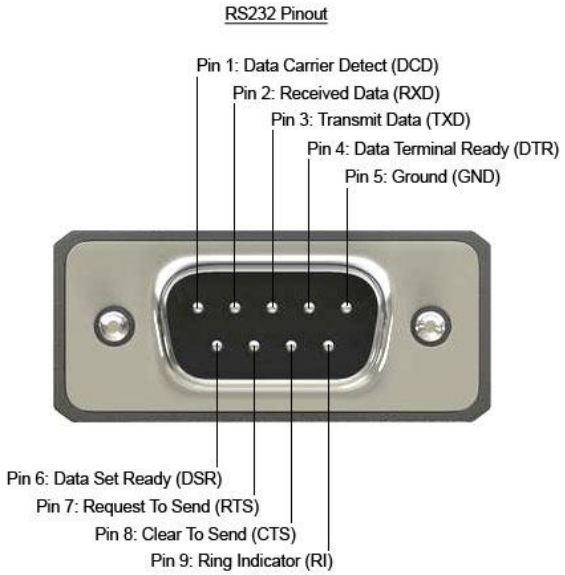

Diagram: RS 232

4. Database

A database is a collection of information that is organized so that it can easily be accessed, managed, and updated.

VI. Conclusion

Today, all the parents has anxiety about the use of mobile phone, less attendance and lower academic performance of their children.There is a requirement of computer-based student attendance management system with Mobile Phone detection facility, which will assist the faculty for maintaining attendance of presence and also system will detect the illegal use of mobile phone.

Various computerized system which is being developed by using different techniques for "Attendee System" and "Mobile Phone Detection System". Based on this review a new approach for "College Attendance Management System with Mobile Detector" is proposed to be used for various colleges or academic institutes.

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