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ELECTRONIC PROTECTION FOR EXAM PAPER LEAKAGE

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ABSTRACT

The examination is a very important aspect of education system. Every year we get the news regarding postponed/ cancelled exam because of paper leakages. So, we require a design which is manageable and compact for "examination paper leakage security framework" that will be a protected framework using ARM processor. In this circuit GSM kit, electromagnetic lock, ke ypad, and RFID module would be utilized . The "Electronic Control Box" will be an embedded framework which can be implemented using ARM proceccor. Whether anybody tries to open that box previous and afterwards the time duration of the RFID swipe, the framework communicates to the university powers by sending and SMS through the GSM. Therefore, we can immediately recognize that the question papers have been leaked. We have proposed an framework to identify theft and avoid the leakage of exam papers before exam date. In this recommended system, the exam papers which are placed inside "the electronically locked box" will be sent to the authorised examination centers. The box will be unlocked after a predefined time, date and only by administrator. The exam papers will be placed in the sub-boxes. Secret ID secures these boxes the administration will send an SMS with the password which can openthe specific sub-boxes.

Key Words: Paper, leakage, protection, Exam, Theft, etc

I.INTRODUCTION

The system we use now a days is very conventional and has been in use for many years . This system contains "the sealed boxes" comprising the exam papers that will be dispersed to the examination centers. This framework includes a lot of restrictions that might lead to exam papers leakage at different instances same time the box is moved from "printing area to examination centers". This happens because of not difficult tampering of sealed boxes and more interference of people. Another technique that is in use today includes the mailing of the exam papers from the university to particular college's former to then the examination. The colleges take the Xerox of the exam paper and then the examination methodology follows. We do know that this specific strategy also includes lots of limitations and restrictions. The sever interruption might occur, the website might have a chance to be hacked, and more than 100 colleges must take Xerox that includes the threats such as framework failure, energy failure, and the paper leakage. The knowledge or basic information required

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for proposed framework that includes the electronic security may be taken from current devices like Electronic lockers, automated teller machines. This framework includes the incorporation of specific electronic peripherals that operates on the methodology depends on GSM, UART, RFID and I2C. In some security systems they provide you with a locking mechanism but it cannot detect any malicious practices which can happen during transport of the papers. Also if box is opened at any time forcefully a message will be send to authorities (Co-Ordinator and University) that will drastically reduce response time. In doing that we are using GSM module where GSM is an all inclusive acknowledged standard for computerized cell communication. GSM utilizes narrowband Time Division Multiple Access (TDMA) for giving voice and content based administrations over cell phone systems. [1] There are technologies that offers you a pin configuration to provide some sort of security but this pin can also be leaked or can be easily given to any non-authorized person this can be avoided by using RFID card as a passkey to unlock the box which is not as easy as it is to give pin to someone else. By using this technology we will provide more security than other systems. RFID based access –control system allows only authorized persons to open the locker with GSM technology .Basically an RFID system consists of an antenna or coil ,a transceiver and a transponder programmed with unique information .There are many different type of RFID systems in the market . GSM is a globally accepted standard for digital cellular communication and is a common European mobile telephone standard for a mobile cellular radio system. [2]

II.BLOCK DIAGRAM

The university will first send the exam paper to the college in a secure device referred to as the "Electronic Control Box." This electronic control box is an embedded system, potentially designed using an ARM processor that includes a built-in real-time clock (RTC) to monitor its operations.

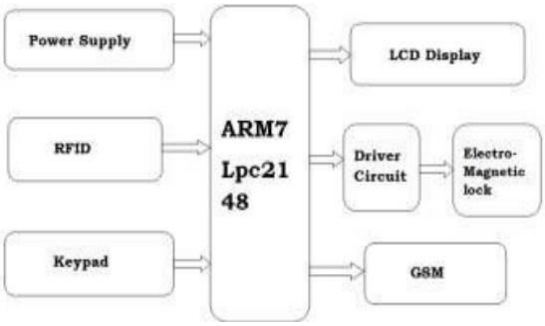


Fig1 : Block Diagram

The university management will send a unique secret key to the college's main authority ten minutes prior to the examination. Along with this key, the university will provide an official RFID card as well as a dummy RFID card. The authorized personnel will swipe the official card; if valid, the system will verify the secret ID. The chief examiner will then enter the secret using a university-issued keyboard. If the secret ID is correct, the electromagnetic lock will disengage, allowing access to the Electronic Control Box.

This system includes two transceivers:

1. Transceiver 1: An embedded system connected to the Electronic Control Box.
2. Transceiver 2: A module linked to the university's management system, handling both software and hardware.

The initial security level relies on an RFID card with a unique identifier assigned to

each college. The Global System for Mobile Communications (GSM) will be employed to notify university management immediately in case of unauthorized access attempts. Additionally, the keypad serves as a second layer of security, requiring a match of time, date, and secret key.

III.CONCLUSIONS

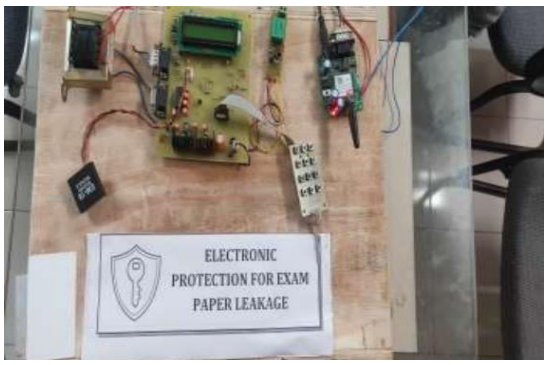
The Electronic Protection System for exam papers effectively prevents leakage without requiring direct oversight of exams or confidential documents. Teachers need only an RFID card and a password to securely manage the entire examination process. This approach reduces the likelihood of exam delays, alleviating pressure on the examination department and minimizing the need for re-examinations.

IV.FUTURE SCOPE

This system can be adapted for various applications requiring document security. It could be implemented in banks for enhanced security measures or used to protect sensitive and confidential information at the national level.

V. FINAL RESULT

The final result of the circuit is given below



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