



Shri Vile Parle Kelvani Mandal's

SHRI BHAGUBHAI MAFATLAL POLYTECHNIC



SYNOPSIS ON:-
QUESTION PAPER LEAKAGE PREVENTION
SMART LOCKER
(LOCATION BASED UNLOCKING)

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ABSTRACT

In the today's era students often have to face the problem about examination being postponed/cancelled due to the leakage of question paper. Because the Board or University will send question papers to exam centre/colleges before the exam starts and in that process of handling the question papers for the various exams, maximum cases of question paper leakage take place. To stop this malpractice of leaking the question paper "QUESTION PAPER LEAKAGE PREVENTION SMART LOCKER (LOCATION BASED UNLOCKING)" i.e "LOCATION & GSM BASED SECURITY SYSTEM FOR EXAMINATION PAPER" is developed. GSM modem is connected to the box containing question papers along with the microcontroller. The location of the exam centre or college is pre defined in the system. So when the locker (containing the question papers) reaches the exam centre, it checks/ compares the current location with the stored location of the exam centre in the system. If the location matches the locker sends a real-time OTP SMS on an authorized pre-programmed mobile number (ex: principal's mobile number). When this OTP is entered correctly only then the locker opens for a predefined time (in which you can collect the question papers). If you enter 3 consecutive WRONG OTPs then the system will get LOCKED! After which nothing can be done unless the system is RESET. ALSO if Somebody STEALS the locker itself and tries to open it forcefully (by hitting or hammering it) then it also has a vibration sensor that senses this hitting/hammering and AGAIN sends a REAL-TIME SMS on the Authorized mobile number. This SMS will contain the GOOGLE MAPS LINK for the CURRENT LOCATION of the locker, so that the locker can be traced.

INTRODUCTION

The driving force behind this project was the intention to make a "Problem Solving Project". During the examination season, there is a chance of leakage of question paper. In day-to-day life, many cases are known to be heard about question paper leakage and due to this, exams are postponed. Hence such incidents have a serious negative impact on the society. To avoid such leakage of question papers, it is necessary to provide them security. For this purpose we can implement the system named as QUESTION PAPER LEAKAGE PREVENTION SMART LOCKER (LOCATION BASED UNLOCKING). This system helps us to provide the security to question papers & also used for providing the security to the important documents. If problems related to exams are avoided using such systems, then we can say that, education is fairly implemented.

WORKING PRINCIPLE:

The location of the exam centre is pre-defined in the system. When the locker (containing the question papers), reaches the exam centre, it checks for the location (at every 5 seconds) and if it matches, the system sends an OTP on a pre-defined authorized mobile number by means of SMS. The OTP is entered using the keyboard of the system. A correct OTP opens the door of the locker for a predefined interval of time and then closes it automatically. Continuously 3 wrong OTP entries, locks the system. ALSO if the locker is stolen or somebody tries to open it forcefully at some other location by hitting it etc. Then the vibration sensor senses the vibrations and sends an SMS on the pre-programmed mobile number, This SMS contains the GOOGLE MAPS LINK for the current location of the locker.

OTHER APPLICATIONS & FUTURE IMPROVEMENTS:

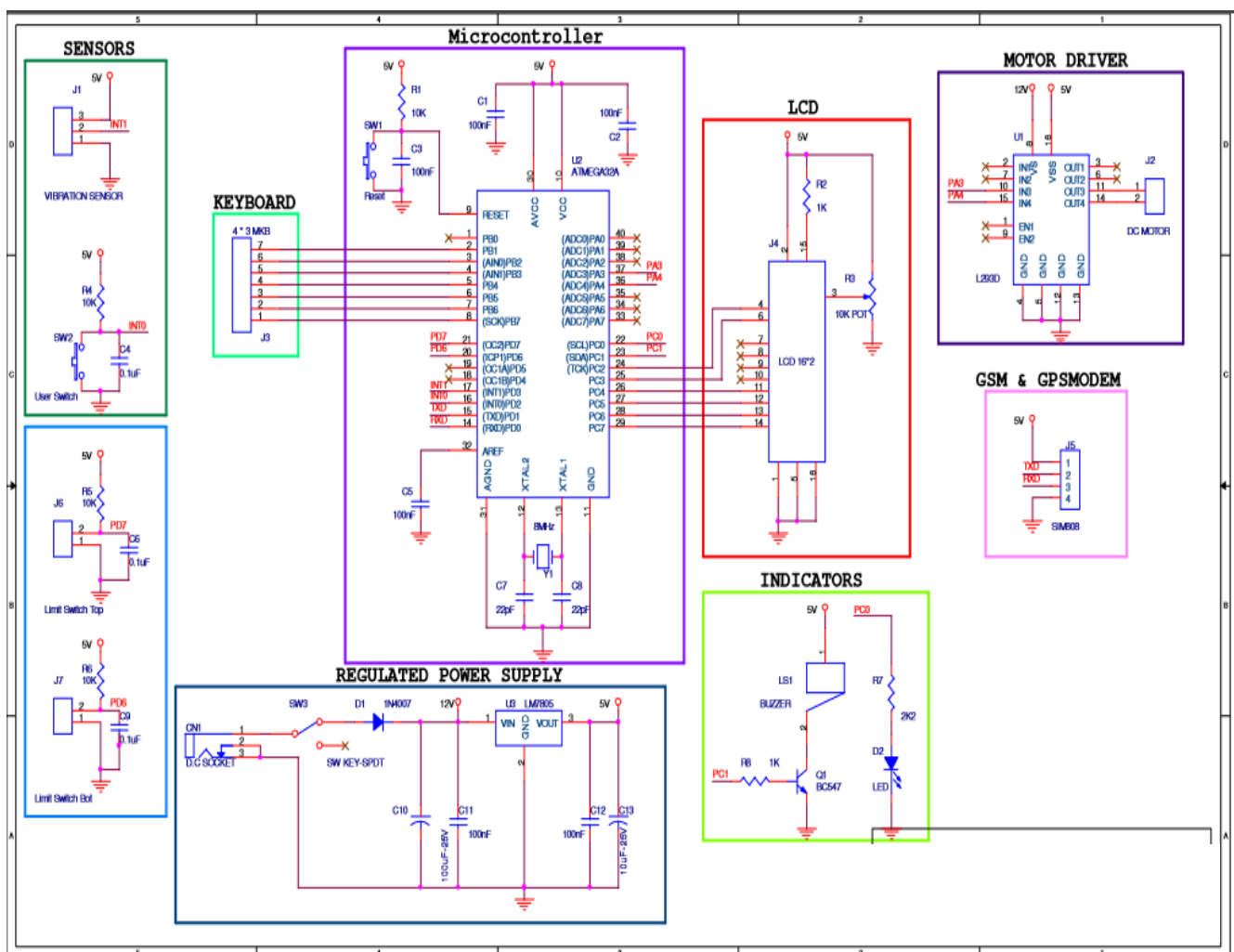
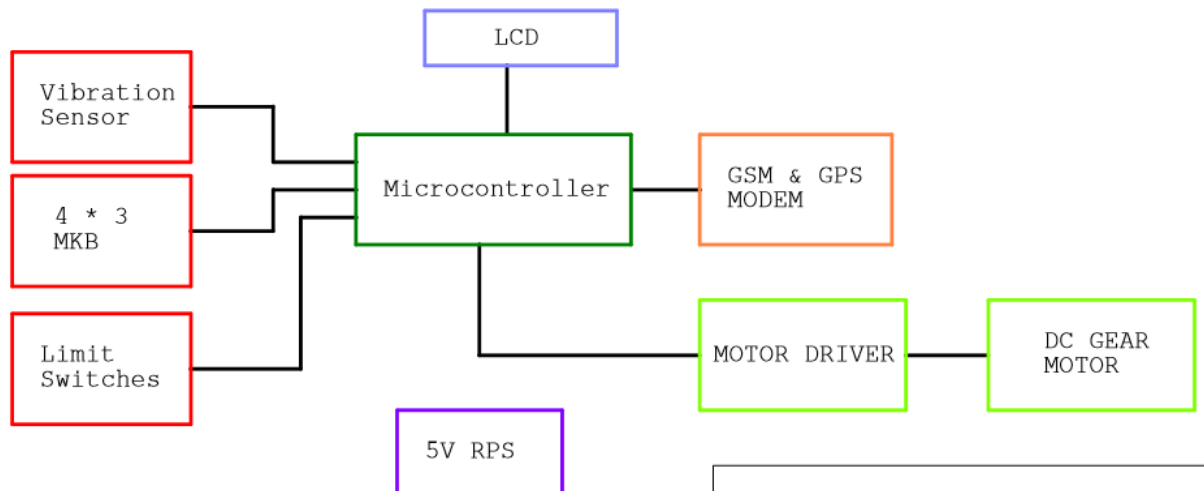
- 1) In ELECTIONS to store EVM and BALLOT machines (so only on reaching the correct polling booth the locker is opened).
- 2) Can be used by BANKS for transportation of CASH.
- 3) Can be used by MILITARY for transportation of CONFIDENTIAL MATERIAL.
- 4) Personal USE.
- 5) Question paper leakage prevention.

FUTURE IMPROVEMENTS:

- 1) SELF powered system
- 2) LIVE tracking
- 3) Multiple OTP and OTP sequence
- 4) Encryption
- 5) Finger print / IRIS scanner / Facial recognition can be added to the system to increase the level of security.

CIRCUIT DIAGRAM

FUNCTIONAL BLOCK DIAGRAM



LIST OF COMPONENTS

Sr. No.	Name Of Component	Description	Quantity	Price per component(Rs)	Total (Rs)
	Diodes	IN4007	1	1	1
	Capacitor	Various values		1	13
	Resistor	Various values		1	7
	Transistor	Bc547	2	2	4
	Crystal	8MHz	1	5	5
	IC Atmega	32A	1	120	120
	Pcb board	1	1	10	10
	LCD	16*2	1	100	100
	Push buttons	-	2	2	4
	Switch	SPDT	1	5	5
	Buzzer	-	1	10	10
	Motor Driver	L293D	1	40	40
	DC Gear motor	100RPM	1	80	80
	DC Jack	-	1	10	10
	Variable resistor	10k	1	2	2
	Power supply	12v/1amp	1	150	150
	Vibration Sensor		1	195 90	285
	IC 7805	7805	1	7	7
	GSM Module	SIM 808	1	1650	1650
	IC Stand	40PIN	1	5	5
	Heat Sink	-	1	5	5
	Keypad	4*3	1	70	70
	LED's	Red, Green	2	3	6
	Wire	2meter	2	5	10
					Total(Rs)=2599/-

REFERENCES

WEBSITE:[1]<https://electronicsforu.com>
[2]<https://www.youtube.com>