RFID BASED BANKING SYSTEM

ABSTRACT

Radio Frequency Identification (RFID) Card Readers provide a low-cost solution to read passive RFID transponder tags up to 2 inches away. The RFID Card Readers can be used in a wide variety of hobbyist and commercial applications, including access control, automatic identification, robotics navigation, inventory tracking, payment systems, and car immobilization. The RFID card reader read the RFID tag in range and outputs unique identification code of the tag at baud rate of 9600. The data from RFID reader can be interfaced to be read by microcontroller or PC.

This project can be used for security purpose where it gives information about the authorized persons and unauthorized persons. This project is mainly used in banks where the persons will be given an ID CODE to access his/her locker system or his/her account. This can be applied in real time systems to know about the persons who can access the banks. For the persons without an ID CODE cannot access the system.
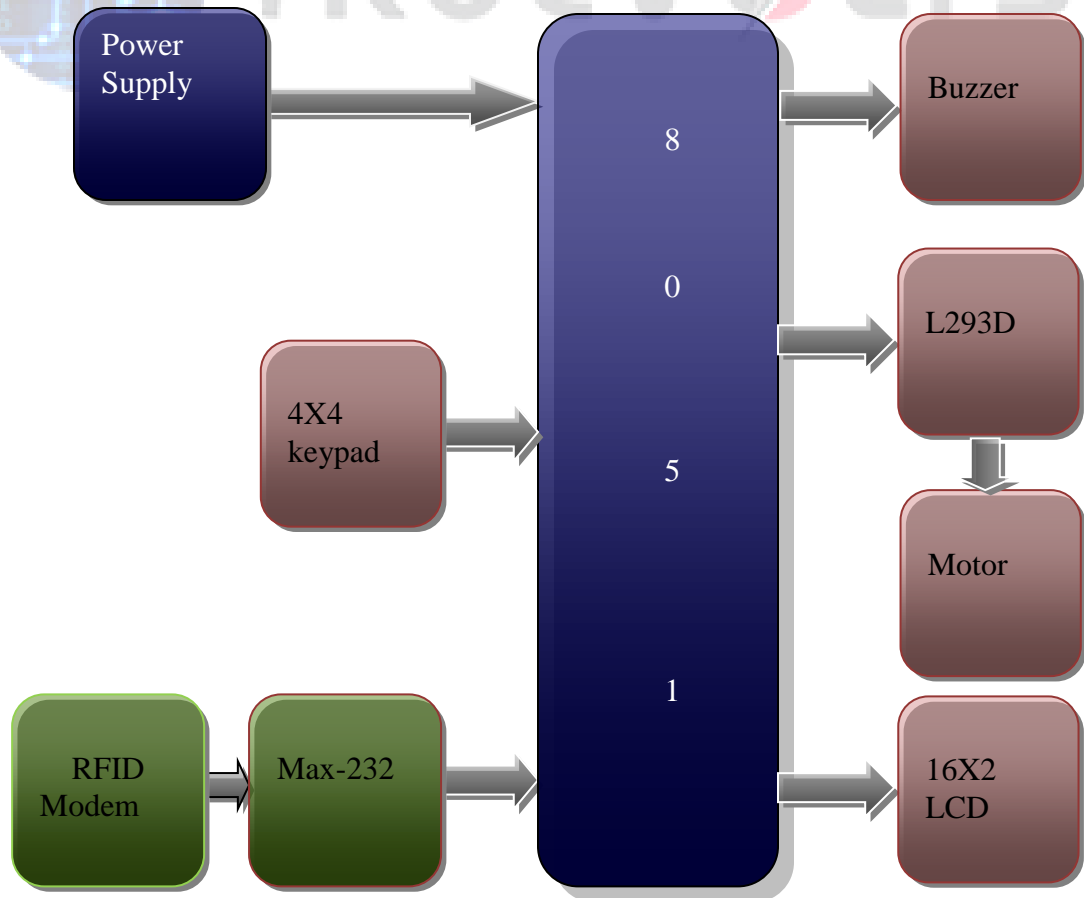
This project is built on 8051 micro controller. Which consists of an RFID card reader and a keypad, the authorized person who want to enter into the locker need to show the card to the reader, if the reader find the card to be authorized, then it allows the user to pass through the next authentication step, which is a password using a keypad, when the user enters the authorized password, then the micro controller matches the ID number with the password entered by the user, then it allows the user to access the locker by opening the door. Here to open and close the door we use an L293D H-bridge with a motor. If the user shows un authorized card or unauthorized passkey, then the system will be locked and turns ON a security alarm.

In this project 7805 is a regulator and it avoids noise spikes in power supply. RFID modem is connected microcontroller through serial port. These RFID modem works under 9600 or 4800 baud rates. 16X2 LCD connected to microcontroller through digital I/O lines.

APPLICATIONS:

- Security systems
- Banks
- Commercial purpose

BLOCK DIAGRAM:

Power Supply	→	8051	→	Buzzer
4X4 keypad	→		→	L293D
RFID Modem → Max-232	→		→	Motor
			→	16X2 LCD

POWER SUPPLY BLOCK DIAGRAM:

Step down Transformer	→	Bridge Rectifier	→	Filter	→	Regulator	→	Output