

## **SECURITY SYSTEM USING SMART CARD TECHNOLOGY**

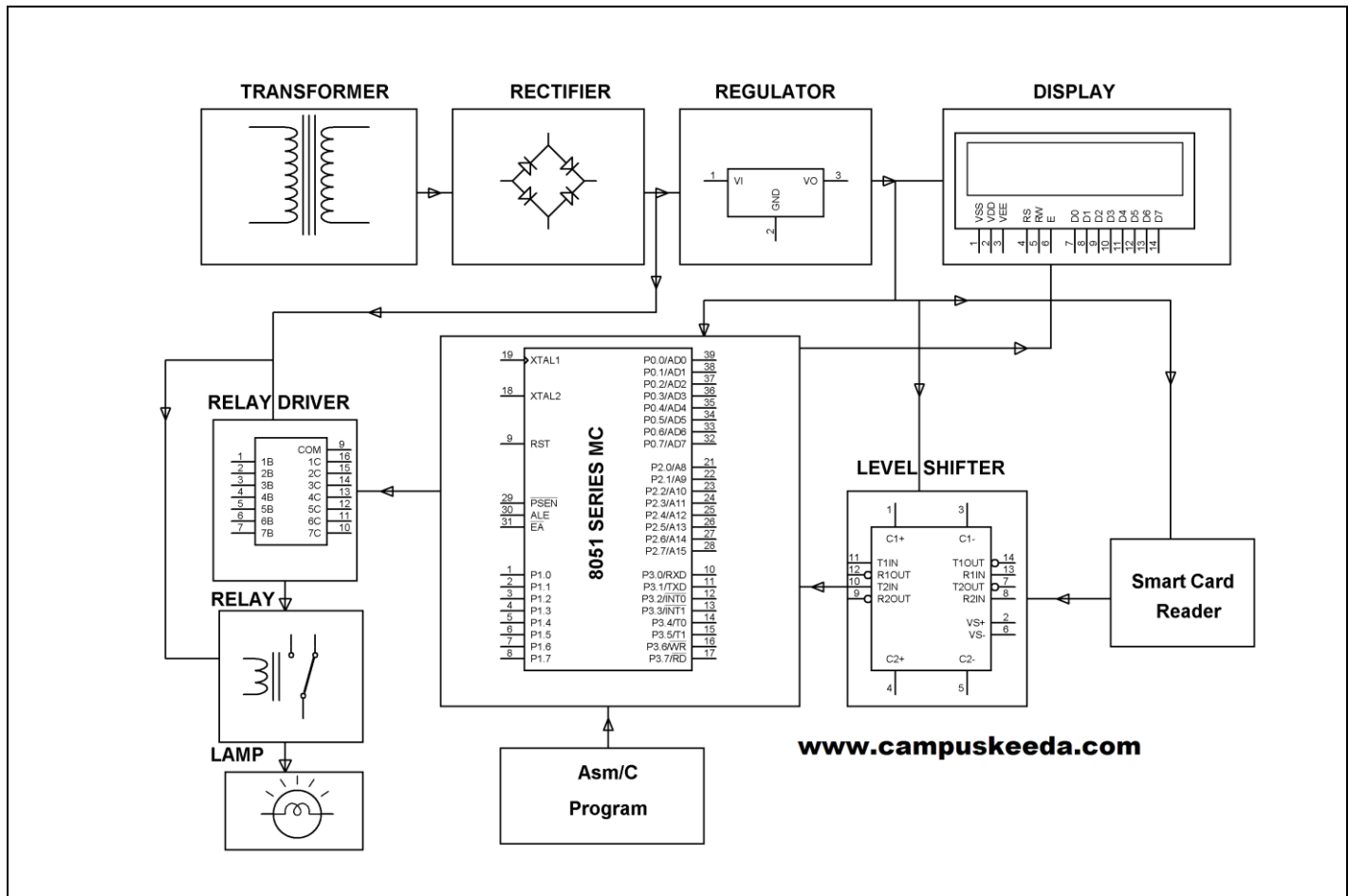
### **ABSTRACT**

This project is designed to gain access to an area or control a device by using a valid smart card only. The security of any organization is the top most priority for the concerned authorities. For this reason only, the authorized person with a valid smart card is allowed to operate the device/ to access a secure area. Earlier, human supervision was required to monitor all these parameters, but with this proposed system no supervision is required as only authorized persons are provided with valid smart cards to operate devices.

A smart card reader is provided to read data from the card assigned to the authorized personnel. The smart card reader is interfaced to an 8051 family microcontroller. Whenever the data read by the smart card matches with the data on the microcontroller then LCD would display that the card is authorized and a relay is used simultaneously to switch ON a lamp (indicating a device or access to secure area). If an invalid card is inserted in the smart card reader, it displays that the card is not authorized and the load (i.e. lamp) remains OFF indicating that the user is not authorized to access the particular area/device.

This project can be enhanced further by integrating GSM modem such that any attempt of unauthorized access is made, then an alert SMS is sent to the concerned department. Further it can be upgraded to RFID / Thumb / IRIS identification system for higher degree of security system.

## BLOCK DIAGRAM



### HARDWARE REQUIREMENTS:

8051 series Microcontroller, Smart card reader, Smart cards, Level Shifter IC, Relay driver IC, Relay, LCD, Resistors, Capacitors, Diodes, Led, Transformer, Voltage regulator, Crystal, Lamp

### SOFTWARE REQUIREMENTS:

Keil compiler

Language: Embedded C or Assembly