RFID BASED BANKING SYSTEM

ABSTRACT

RFID is an acronym for Radio Frequency Identification. RFID is a member of Automatic Identification and Data Capture (AIDC) technologies and is a fast and reliable means of identifying just about any material object. 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. Primarily, the two main components involved in a Radio Frequency Identification system are the Transponder (tags that are attached to the object) and the Interrogator (RFID reader).Communication between the RFID reader and tags occurs wirelessly and generally doesn’t require a line of sight between the devices. RFID tags are categorized as either active or passive. Active RFID tags are powered by an internal battery and are typically read/write, i.e., tag data can be rewritten and/or modified. An active tag's memory size varies according to application requirements; some systems operate with up to 1MB of memory. Passive RFID tags operate without a separate external power source and obtain operating power generated from the reader. This project uses passive tags. The reader has three main functions: energizing, demodulating and decoding. The antenna emits radio signals to activate the tag and to read and write data to it.

In this project, the RFID module reader typically contains a module(transmitter and receiver), a control unit and a coupling element (antenna). This module is interfaced with the micro controller and when the card is brought near to the RFID module it reads the ID CODE in the card and then compares with the ID CODE present in the system and if it matches then the door gets opened in clockwise direction and the person gets in and after sometime the door gets automatically closed. Every time we make a transaction we need to enter user id and password using KEYPAD. For a successful match of the Id transaction is enable else denied. If the password is not matching after three successive failures the system gets locked itself and further transaction are denied. The transaction denial is indicated by hooting a buzzer. The significant advantage of all types of RFID systems is the noncontact, non-line-of-sight nature of the technology. Tags can be read through a variety of substances such as snow, fog, ice, paint, crusted grime, and other visually and environmentally challenging conditions, where barcodes or other optically read technologies would be useless. This project can provide security for the industries, companies; etc.

This project uses regulated 5v, 500mA power supply. 7805, a three terminal voltage regulator is used for voltage regulation. Bridge type full wave rectifier is used to rectify the ac output of secondary of 230/12v step down transformer. The RFID module requires a separate +5v power supply

BLOCK DIAGRAM



