

## **ABSTRACT**

*Radio Frequency Identification* (RFID) is identify technology that expected can replace the barcode. Compared to barcode that using light as reading media, RFID use the radiowave at certain frequency as identify carrier. This case make RFID more eminent because its character that contactless, non-loss reading and real time. The frequency used by this system included in un-licenced frequency in category of Industrial frequency, Scientific and Medical (ISM).

This final project design a model of room security system using RFID technology and Microcontroller of MCS 51 as its control, and Visual Basic 6 as software which is used to note the access of that room. In this research is designed Control Access System that will make a note for people who access the room. If user (tag holder) come near the room, tag will send Id that will be shown up at application program that have been made, then user enter password, and fill form that have been provided by that application. After that form has been filled all, the application will command microcontroller to unlock and open the door. If password entered wrong thrice continuously, so application will command microcontroller to active the alarm.

This room security system will be discussed in final project, how ID from delivered tag, reader process the accepted data, microcontroller process command that accepted from application, then execute that command to unlock the door and turn on the alarm.