**SCHOOL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES**

**MICROPROCESSORS SEMESTER PROJECT**

**RFID DOOR LOCK SYSTEM**

**Group members:**

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**SUBMITTED TO: ABRAR UL HAQ**

**RFID DOOR LOCKING SYSTEM**

**Goal Statement:**

By doing this project we able to understand how to interface different modules with the atmega16A and how we can form our own simple microprocessor. This project is simple the advancement of the door locking system. As in this we used the database by using the Wi-Fi module and store the information of the cards that enter through this RFID sensor.

**Introduction:**

Radio frequency identification (RFID) is a prominent technology for a wide array of applications, from inventory tracking to payment processing. In the field of security, RFID door lock systems are utilized for access control, as they provide a reliable, consistent experience with trackable data.

In order to function efficiently, an RFID door locking system requires RFID tags, antennas, an RFID reader, and a transceiver. In this system, the user's credential (usually a keycard or fob with an RFID chip) contains unique identifying information called a tag. Each RFID (Radio Frequency Identification Device) tag has a unique value.

**Working of RFID:**

The RFID works when the card comes in a range of the RFID reader, the tag transmits that unique code to the receiver wirelessly. The RFID receiver receives the tag value and sends this to the AVR ATmega8 serially.

**Project Components**

* ATmega16
* LCD
* MAX232
* ESP8266 wifi module

**Flow Chart:**

***RFID Sensor***

**LCD Sensor**

Display the ID number

**WIFI Server**

Information stored on server

Atmega16A

**Correct than door**

With the servo motor open ,If Incorrect then the alarm beeps

**List of Relevant Industries:**

* Motor Companies
* Xilinx
* Electronic Companies
* Remote Automation
* Palmtop

***The End***