**Assingment-1**

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| Date | 22 September 2022 |
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| Project Name | Industry-Specific Intelligent Fire Management System |

**Smart Locking Door System Using RFID Sensor and Arduino Board**

**PROGRAM**

#include <SPI.h>

#include <MFRC522.h>

#define SS\_PIN 5

#define RST\_PIN 9

#define RELAY 3 //connect the relay to number 3 pin

#define BUZZER 2 // connect the buzzer to 2 pin

#define ACCESS\_DELAY 2000

#define DENIED\_DELAY 1000

MFRC522 mfrc522(SS\_PIN, RST\_PIN); // Create MFRC522 instance.

void setup()

{

Serial.begin(9600); // Initiate a serial communication SPI.begin(); // Initiate SPI bus mfrc522.PCD\_Init(); // Initiate MFRC522 pinMode(RELAY, OUTPUT); pinMode(BUZZER, OUTPUT); noTone(BUZZER); digitalWrite(RELAY, HIGH);

Serial.println("Put your card to the reader for scanning ...");

Serial.println();

}

void loop()

{

// Look for new cards if ( ! mfrc522.PICC\_IsNewCardPresent())

{

return;

}

// Select one of the cards if ( ! mfrc522.PICC\_ReadCardSerial())

{

return;

}

//Show UID on serial monitor

Serial.print("UID tag :"); String content= ""; byte letter;

for (byte i = 0; i < mfrc522.uid.size; i++)

{

Serial.print(mfrc522.uid.uidByte[i] < 0x10 ? " 0" : " "); Serial.print(mfrc522.uid.uidByte[i], HEX); content.concat(String(mfrc522.uid.uidByte[i] < 0x10 ? " 0" : " ")); content.concat(String(mfrc522.uid.uidByte[i], HEX));

}

Serial.println();

Serial.print("Message : "); content.toUpperCase();

if (content.substring(1) == "AB CD EF GH") // enter your own card number after copying it from serial monitor

{

Serial.println("Authorized access"); Serial.println(); delay(500); digitalWrite(RELAY, LOW); delay(ACCESS\_DELAY); digitalWrite(RELAY, HIGH);

}

else {

Serial.println(" Access denied"); tone(BUZZER, 300); delay(DENIED\_DELAY); noTone(BUZZER);

} 