

LISTING PROGRAM

```
//#include <EEPROM.h>

#include <Wire.h> // i2C Conection Library
#include <LiquidCrystal_I2C.h> //Memanggil i2C LCD Library
#include <SPI.h>
#include <RFID.h>

#define SS_PIN 10
#define RST_PIN 9

RFID rfid(SS_PIN,RST_PIN);

int serNum[5];      //Variable buffer Scan Card
int cards[][5] = {  //ID Kartu yang diperbolehkan masuk
    bool access = false;

LiquidCrystal_I2C lcd(0x27, 16, 2);
const int doorLock = 8; //Driver Selenoid Door Lock/Relay input ke pin D8

int alarm = 0;
uint8_t alarmStat = 0;
uint8_t maxError = 3;

unsigned long previousMillis = 0;
const long interval = 1000;
uint8_t pwMode=0;
uint8_t pwPos=0;
```

```

void setup(){
    Serial.begin(9600);
    lcd.begin();
    SPI.begin();
    rfid.init();

    pinMode(doorLock, OUTPUT);
    digitalWrite(doorLock, HIGH);

    lcd.setCursor (0,0);
    lcd.print(F(" RFID System "));
    lcd.setCursor (0,1);
    lcd.print(F(" Control Access "));
    delay (2000);
    lcd.clear();
    }
void loop(){

    lcd.setCursor (0,0);
    lcd.print(F(" -System Ready- "));
    lcd.setCursor (0,1);
    lcd.print(F(" Scan Your Card "));
    }

    if (currentMillis - previousMillis >= (2*interval)) {
        previousMillis = currentMillis;
    lcd.setCursor (0,1);
    lcd.print(F(" Scan Your Card "));

```

```
}
```

```
if(rfid.isCard()){
```

```
    if(rfid.readCardSerial()){
```

```
        Serial.print(rfid.serNum[0]);
```

```
        Serial.print(" ");
```

```
        Serial.print(rfid.serNum[1]);
```

```
        Serial.print(" ");
```

```
        Serial.print(rfid.serNum[2]);
```

```
        Serial.print(" ");
```

```
        Serial.print(rfid.serNum[3]);
```

```
        Serial.print(" ");
```

```
        Serial.print(rfid.serNum[4]);
```

```
        Serial.println("");
```

```
for(int x = 0; x < sizeof(cards); x++){
```

```
for(int i = 0; i < sizeof(rfid.serNum); i++ ){
```

```
    if(rfid.serNum[i] != cards[x][i]) {
```

```
        access = false;
```

```
        break;
```

```
    } else {
```

```
        access = true;
```

```
    }
```

```
}
```

```
if(access) break;
```

```
}
```

```
}
```

```

    if(access){
        Serial.println("Welcome!");
    lcd.setCursor (0,0);
        lcd.print(F(" Akses diterima "));
    lcd.setCursor (0,1);
        ACCEPT ();
    }

    else {
        Serial.println("Not allowed!");
    lcd.setCursor (0,0);
        lcd.print(F(" Akses ditolak "));
    lcd.setCursor (0,1);
        REJECT ();
    }
}

rfid.halt();
}

void ACCEPT () {
    digitalWrite(doorLock, LOW);
    lcd.setCursor (0,0);
        lcd.print(F(" Silahkan Masuk "));
    lcd.setCursor (0,1);
        lcd.print(F("Terkunci Dalam "));
    for(int i=5; i>0; i--){
        lcd.setCursor (15,1); lcd.print(i);
        delay (1000);
    }
}

```

```
    }  
    digitalWrite(doorLock, HIGH);  
    pwMode =0;  
    lcd.clear();}  
void REJECT () {  
    pwMode =0;  
    lcd.clear();  
}
```

