

RFID - Based Attendance System

Code:

```
#include <SPI.h>
#include <MFRC522.h>

#define SS_PIN 5
#define RST_PIN 22

MFRC522 mfrc522(SS_PIN, RST_PIN);

// 🔥 Attendance Status Variables
bool mukulStatus = false;
bool shinyStatus = false;
bool raushanStatus = false;
bool sumairaStatus = false;

String getUID() {
    String uid = "";
    for (byte i = 0; i < mfrc522.uid.size; i++) {
        uid += String(mfrc522.uid.uidByte[i], HEX);
        if (i != mfrc522.uid.size - 1) uid += " ";
    }
    uid.toUpperCase();
    return uid;
}

void setup() {
    Serial.begin(115200);
    SPI.begin(18, 19, 23, 5);
    mfrc522.PCD_Init();

    Serial.println("Welcome To NeoGen Innovators!");
    delay(2000);
    Serial.println("RFID Attendance System Ready");
    Serial.println("Please Scan Your Card");
    Serial.println("-----");
}

void loop() {

    if (!mfrc522.PICC_IsNewCardPresent()) return;
    if (!mfrc522.PICC_ReadCardSerial()) return;
```

```

String cardUID = getUID();

if (cardUID == "4 52 D8 EA FB 73 80") {
    handleAttendance("Mukul", mukulStatus);
}
else if (cardUID == "4 85 28 7A 68 19 90") {
    handleAttendance("Shiny", shinyStatus);
}
else if (cardUID == "B3 6D 8C 25") {
    handleAttendance("Raushan Kumar", raushanStatus);
}
else if (cardUID == "63 84 15 2D") {
    handleAttendance("Sumaira", sumairaStatus);
}
else {
    Serial.println("Unauthorized Access!");
    Serial.println("-----");
}

delay(2000);
Serial.println("Please Scan Your Card");

mfrc522.PICC_HaltA();
mfrc522.PCD_StopCrypto1();
}

void handleAttendance(String name, bool &status) {

    if (!status) {
        Serial.println(name + " - Check-In Successful");
        Serial.println("Status: Present");
        Serial.println("Have a productive session!");
        status = true;
    }
    else {
        Serial.println(name + " - Check-Out Successful");
        Serial.println("Status: Logged Out");
        Serial.println("Thank you for your work today!");
        status = false;
    }

    Serial.println("-----");
}

```

Code with Excel Sheet:

```
#include <SPI.h>
#include <MFRC522.h>
#include <WiFi.h>
#include <HTTPClient.h>
#define SS_PIN 5
#define RST_PIN 22
MFRC522 mfrc522(SS_PIN, RST_PIN);

// 🔒 WiFi Credentials
const char* ssid = "Vijay-2.4G";
const char* password = "77887788";

// 🌐 Google Script URL
String googleScriptURL =
"https://script.google.com/macros/s/AKfycbxMilmvdBVn
9-_hvjWpG_INQG_oX3kdqAxVocDdGpbtl-eLbuTfvgBr
qu2D6mD4Fu-Y/exec";

// 🔥 Attendance Status Variables
bool mukulStatus = false;
```

```
bool shinyStatus = false;  
bool raushanStatus = false;  
bool sumairaStatus = false;  
  
String getUID() {  
    String uid = "";  
  
    for (byte i = 0; i < mfrc522.uid.size; i++) {  
        uid += String(mfrc522.uid.uidByte[i], HEX);  
        if (i != mfrc522.uid.size - 1) uid += " ";  
    }  
  
    uid.toUpperCase();  
  
    return uid;  
}  
  
void connectWiFi() {  
    WiFi.begin(ssid, password);  
  
    Serial.print("Connecting to WiFi");  
  
    while (WiFi.status() != WL_CONNECTED) {  
        delay(500);  
    }  
}
```

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

Serial.println("\nWiFi Connected!");

}

void sendToGoogleSheet(String name, String status) {
if (WiFi.status() == WL_CONNECTED) {
HTTPClient http;

String url = googleScriptURL + "?name=" + name +
"&status=" + status;

http.begin(url);

int httpResponseCode = http.GET();

Serial.print("Data Sent. Response Code: ");

Serial.println(httpResponseCode);

http.end();

}

}

void handleAttendance(String name, bool &status) {
if (!status) {
```

```
Serial.println(name + " - Check-In Successful");

Serial.println("Status: Present");

Serial.println("Have a productive session!");

sendToGoogleSheet(name, "Check-In");

status = true;

}

else {

Serial.println(name + " - Check-Out Successful");

Serial.println("Status: Logged Out");

Serial.println("Thank you for your work today!");

sendToGoogleSheet(name, "Check-Out");

status = false;

}

Serial.println("-----");

}

void setup() {

Serial.begin(115200);
```

```
SPI.begin(18, 19, 23, 5);

mfr522.PCD_Init();

Serial.println("Welcome To NeoGen Innovators!");

delay(2000);

connectWiFi();

Serial.println("RFID Cloud Attendance Ready");

Serial.println("Please Scan Your Card");

Serial.println("-----");

}

void loop() {

if (!mfr522.PICC_IsNewCardPresent()) return;

if (!mfr522.PICC_ReadCardSerial()) return;

String cardUID = getUID();

if (cardUID == "4 52 D8 EA FB 73 80") {

handleAttendance("Mukul", mukulStatus);

}

else if (cardUID == "4 85 28 7A 68 19 90") {
```

```
    handleAttendance("Shiny", shinyStatus);

}

else if (cardUID == "B3 6D 8C 25") {

    handleAttendance("Raushan Kumar", raushanStatus);

}

else if (cardUID == "63 84 15 2D") {

    handleAttendance("Sumaira", sumairaStatus);

}

else {

    Serial.println("Unauthorized Access!");

    Serial.println("-----");

}

delay(2000);

Serial.println("Please Scan Your Card");

mfrc522.PICC_HaltA();

mfrc522.PCD_StopCrypto1();

}
```

