

# 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);  
mfrc522.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 (!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();
}
```



