Attendance System User Guide

This guide explains how to use the RFID-based Attendance System integrated with a web dashboard.

**1. System Overview**

This system uses ESP32, RFID reader (MFRC522), OLED display, and buzzer to read card IDs and send attendance data to a PHP-MySQL web server. Each device is linked to a location via MAC address.

* Device scanner: Connect to Wi-Fi AP and scan attendance using MiFare RFID card.
* MiFare RFID card: Generic and low-cost card

**2. Setup Instructions**

**2.1 Device Setup (ESP32)**

* Only if no WiFi AP configured or unable to connect to the network or move to a new network ESP32 will create its own access point called **AttendanceAP**.
* Connect to **AttendanceAP**, open web browser and navigate to **http://192.168.4.1** to enter your Wi-Fi credentials (2.4 GHz network only) and save. On mobile device please disconnect your data option and only connect to the AP.
* ESP32 will reboot and try to connect to the internet.
* If connected successfully, the OLED will display the device MAC and prompt for card scanning.
* Move closer to the WiFi AP to get better connectivity if unable to connect.

**2.2 Register Device**

* If no Device scanner available yet in the dashboard, please add one.
* Log in to the web dashboard. (<https://slumberjer.com/ipgktar>) username: **admin**, password: **abc123**
* Go to **Register Device (first time only for new device only)** using device MAC address. The address is on the screen with all capital letters and numbers.
* Enter device MAC address (without colons) and assign a location.

**2.3 Register Users**

* Go to **Registered Users (first time only for new user)**.
* Click **Register New User**.
* Enter card ID (**shown when scanning on unregistered card**), user name, and optional student ID.

**3. Recording Attendance**

* When a registered card is scanned on a registered device:
  + **Check-in** is recorded if no entry yet today.
  + **Check-out** is recorded if check-in already exists.
* If the card is not registered, a message will prompt to register and use the admin dashboard to register the card.

**4. Viewing Attendance**

* Go to **Dashboard (https://slumberjer.com/ipgktar/dashboard.php).**
* Select a device and date.
* View attendance with card ID, username, time-in, and time-out.
* You can delete individual entries.
* Page auto-refreshes every 5 seconds if a device is selected.

**5. Admin Notes**

* Timezone is set to **Asia/Kuala\_Lumpur**.
* Data is stored in:
  + tbl\_user for user information
  + tbl\_attendance for attendance logs
  + tbl\_devices for registered devices

**6. Troubleshooting**

* **No Wi-Fi**: ESP32 will fall back to AP mode.
* **MAC Not Found**: Register the device first.
* **Card Not Found**: Register user card in the user panel.

For more info or customization, contact the system administrator.

**Wiring Diagram**

Here's how to connect each component to the ESP32:

| MFRC522 | ESP32 | |
| --- | --- | --- |
| SDA | D21 | |
| SCK | D18 | |
| MOSI | D23 | |
| MISO | D19 | |
| IRQ | Not connected | |
| GND | GND | |
| RST | D22 | |
| 3.3V | 3.3V | |
| SSD1306 OLED (I2C) | | ESP32 | |
| VCC | | 3.3V | |
| GND | | GND | |
| SDA | | D4 | |
| SCL | | D15 | |

| Buzzer | ESP32 |
| --- | --- |
| + | D2 |
| - | GND |

