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22K-4149

DIGITAL LOGIC DESIGN PROJECT

OBJECTIVE

The objective of this project is to develop an automated attendance management system that can efficiently and accurately record and manage attendance data for a group of individuals, while minimizing the need for manual data entry and reducing the risk of errors.

COMPONENTS USED

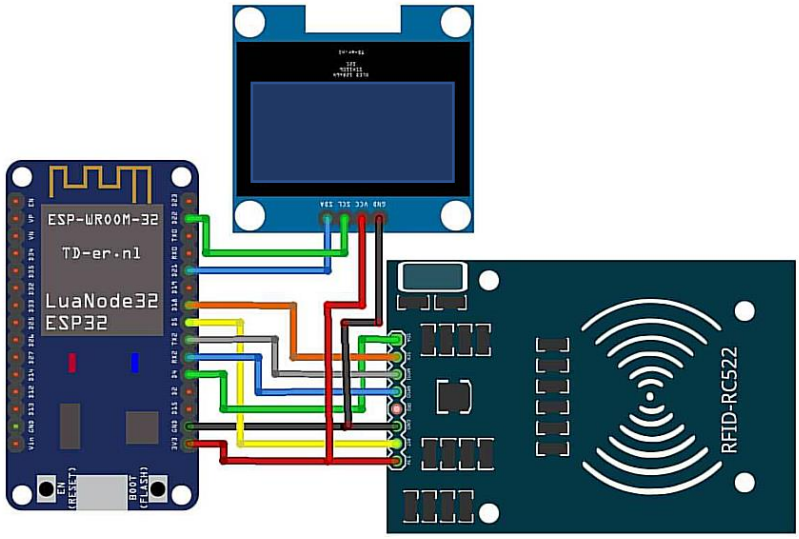
HARDWARE COMPONENTS

S.N	COMPONENTS NAME	DESCRIPTION	QUANTITY
1	ESP32 Board	ESP32 ESP-32S Development Board	1
2	0.96 Inch OLED Display	0.96 Inch OLED Module 128x64 SSD1306 Driver I2C Serial Self-Luminous Display Board	1
3	RFID Module	RFID-RC522 Module	1
4	Jumper Wires	Male to Male Jumper Wires	10
5	Breadboard	Solderless Breadboard MIni	1

SOFTWARE COMPONENTS

- Arduino IDE
- XAMPP server
- PHP Source Code
- RFID-RC522 Library

CIRCUIT DIAGRAM



CONNECTIVITY TABLE

ESP32	RFID MFRC522 / RC522
GPIO 4	SDA/SS
GPIO 18	SCK
GPIO 17	MOSI
GPIO 16	MISO
GND	GND
GPIO 5	RST
Vcc/3.3v	3.3V
ESP32	0.96"OLED Display
GPIO 22	SCL
GPIO 21	SDA
GND	GND
Vcc	3.3V/Vin for 5V

ABSTRACT

The goal of this project is to develop an automated attendance management system that leverages RFID technology, an ESP32 microcontroller, and an OLED display to efficiently and accurately record and manage attendance data. The system will allow users to swipe RFID cards to register attendance, with real-time updates displayed on the OLED display. The project will cover topics such as RFID technology, microcontroller programming, data management, and user interface design, and will provide a practical application of these concepts to a real-world problem.