Mobile Attandance Project

By

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1.INTRODUCTION

In this project contains only Mahmud Sami Ünlü duties. I focused on attandance project product hardware and product software. In our life teacher problems with taking attandance at the class. I try to measuere how much time to take the hardcopy signiature attandance at 34 student class. It takes 15 minutes start to end. Also each students distraction while sign the attandace sheet. Because of the those issue we develop this project.

Also this project can be use small businees.

In project video on my youtube channel.

2. Determination of Hardware and Software

The identification done with school cards.The school cards contains RFID chip and each RFID chip has Unique Identification (UID). Also we need to show to students how much attand the class, his/her name, couse code, and other information.

I need WiFi, UART, SPI, I2C low cost, low energy and accessible MCU.

Because of those requirement I chose ESP8266ex and packed ESP-12E.

The web site (Ramazan and Muhammed) want to communicate JSON-Parser so I decide to write C language because of the JSON and other libary.

Figure 1 : ESP-12E Packed

3. PROTOTYPES

In this prototype I use ESP-01 Packed, Atmega 328p ,RFID, 20x4 LCD

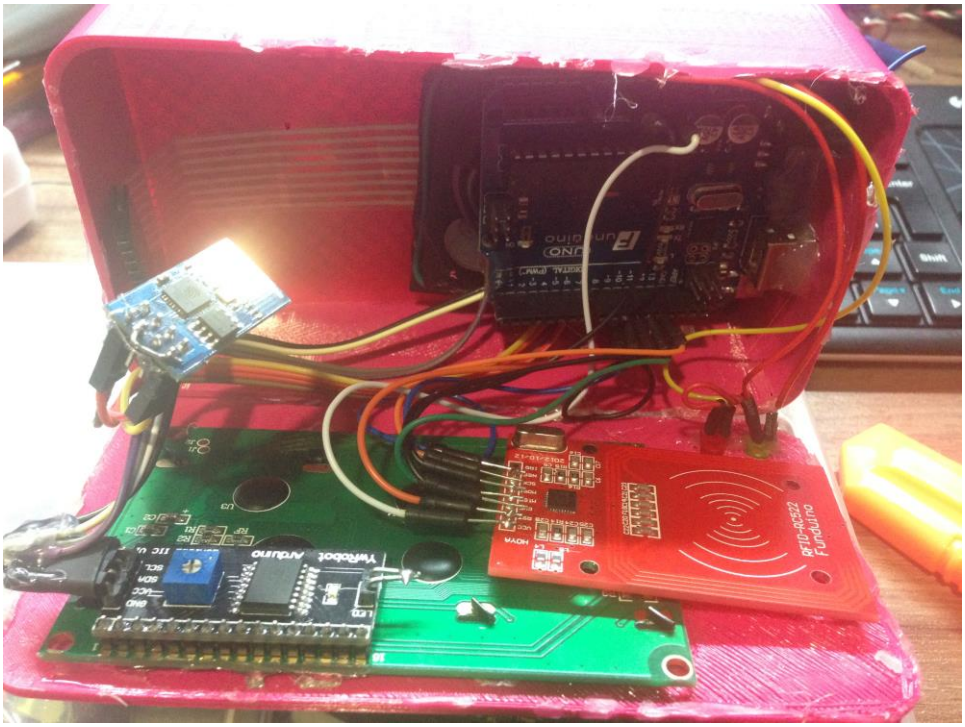

Figure 2.1 : 1st Prototype inside attandace project

Figure 2.2 : 1st Prototype outside attandace project

In this prototype I use Lolin NodeMcu Development board (ESP-12E),

84x48 GLCD, Buck Converter and RFID

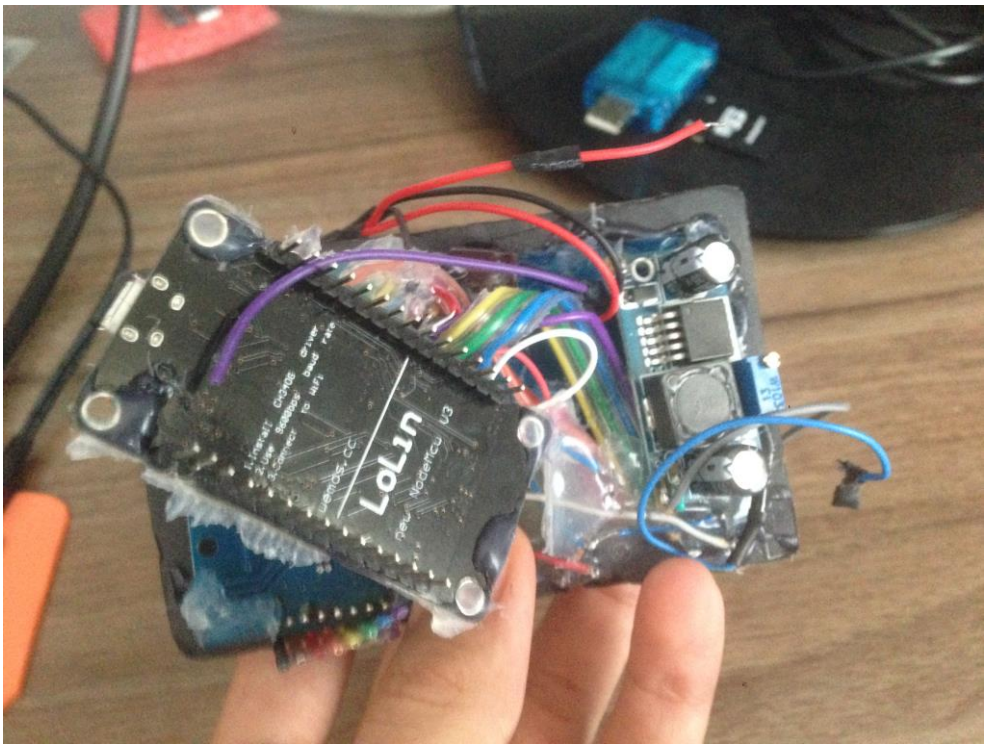

Figure 3.1 : 2nd Prototype backside attandace project

Figure 3.2 : 2nd Prototype frontside attandace project

In this prototype I use ESP-12E, 84x48 GLCD and RFID,Buck Converter

Figure 4.1 : 3th Prototype component placing.

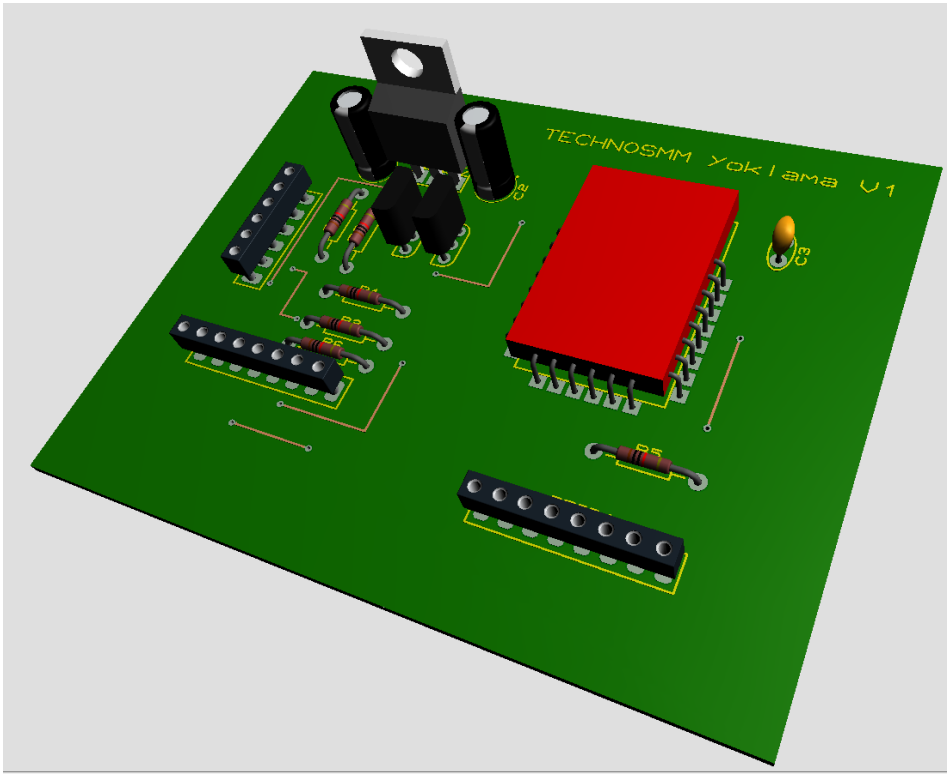

Figure 4.2 : 3th Prototype 3D circuit modeling

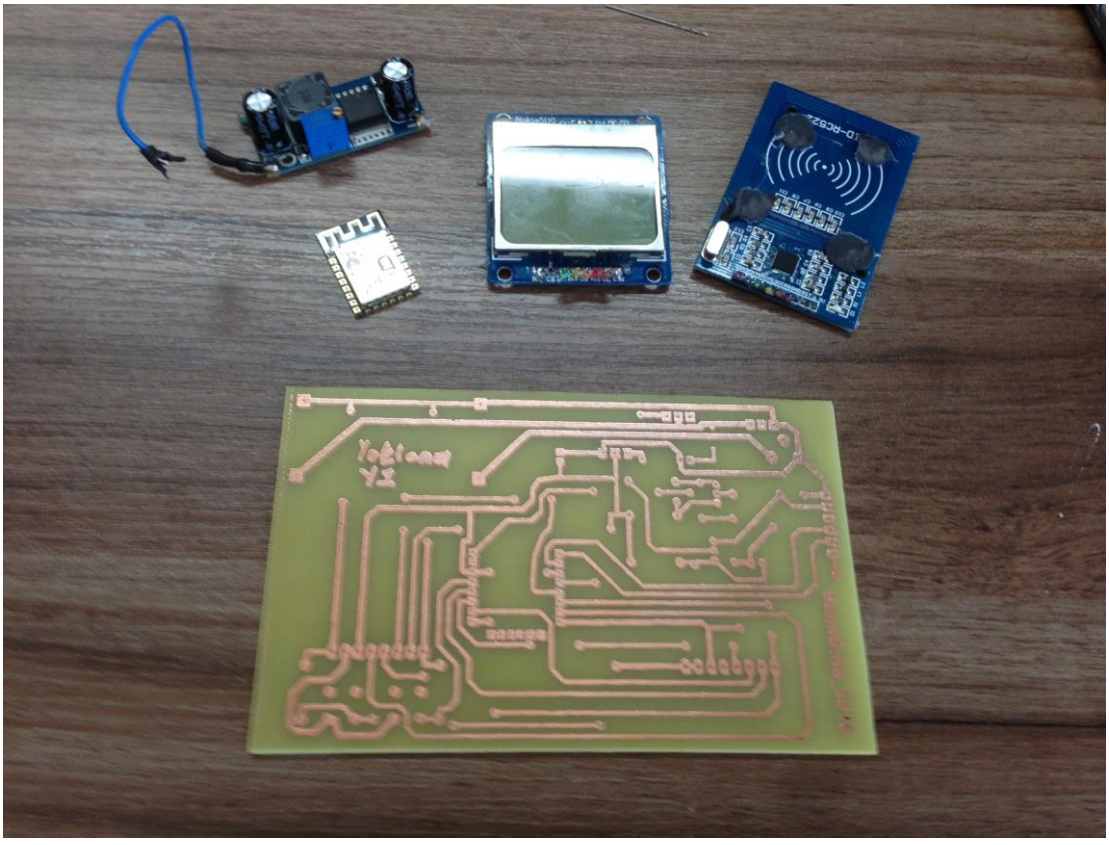

Figure 4.3 : 3th Prototype PCB design.

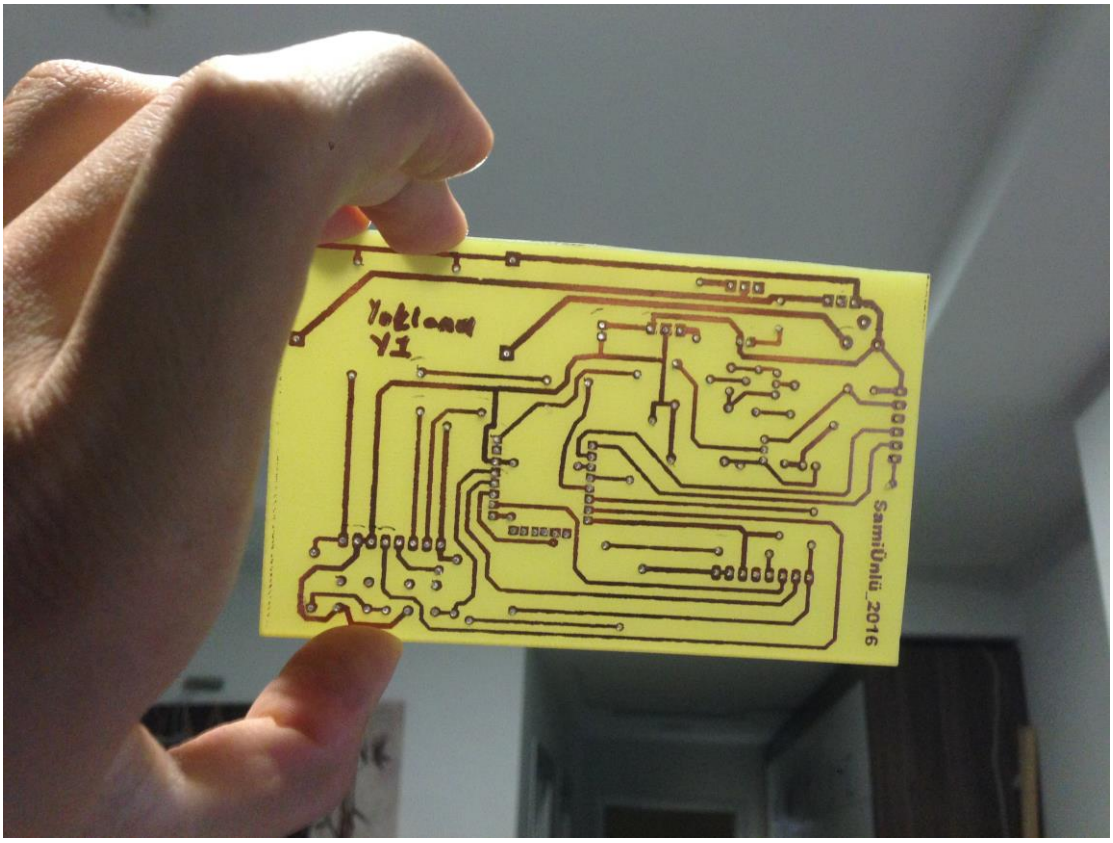

Figure 4.4 : 3th Prototype 3D circuit modeling

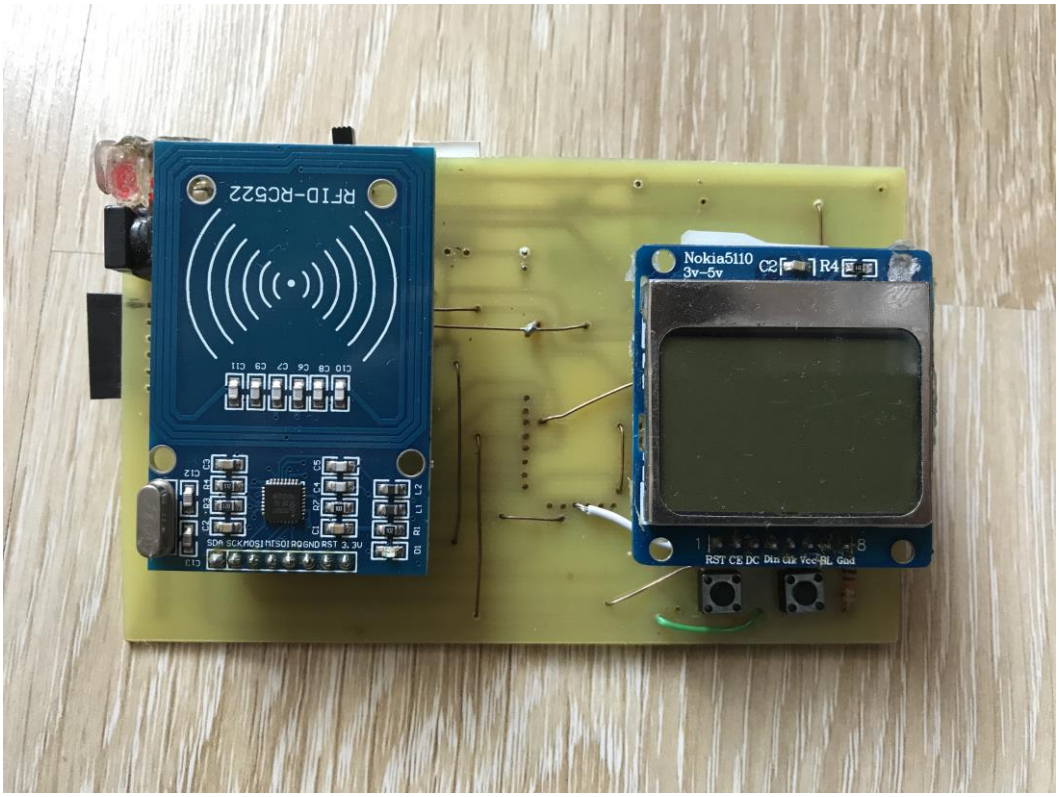

Figure 4.5 : 3th Prototype assembled front side.

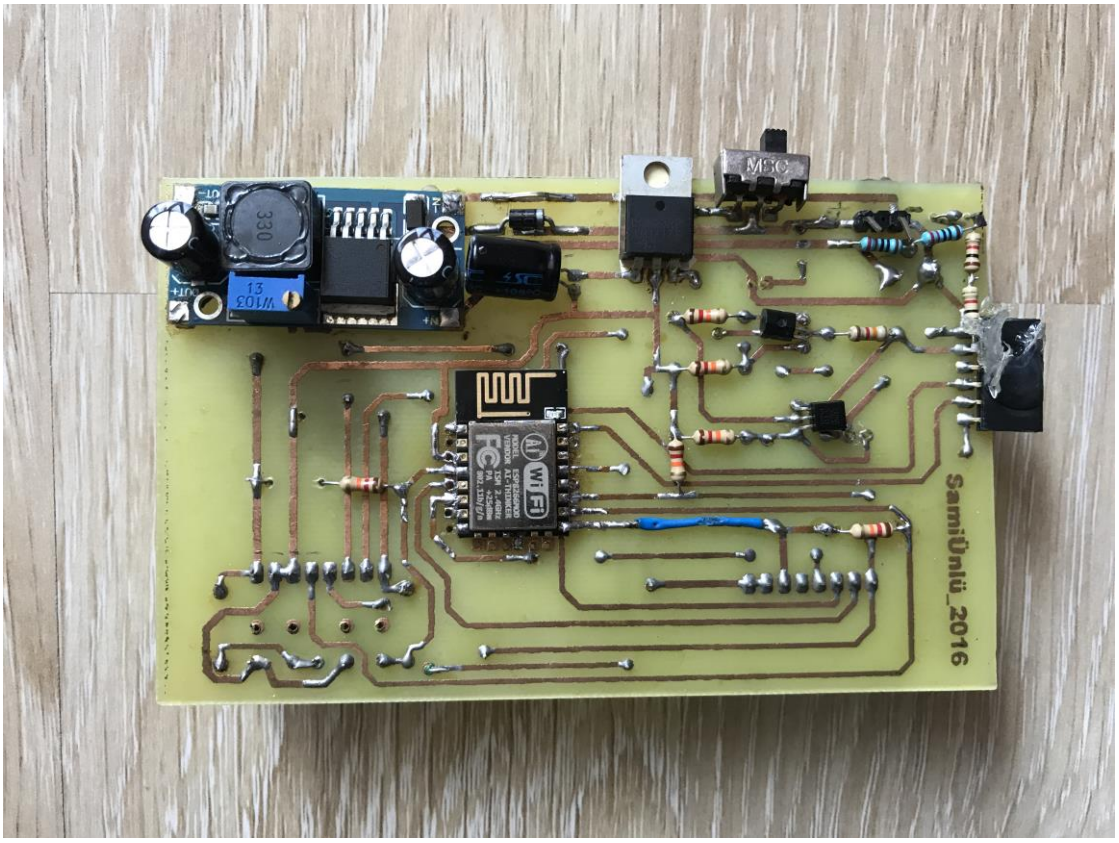

Figure 4.6 : 3th Prototype assembled back side.

4. FEATURES

- **Auto update firmware from server**
- **Alternative WiFi (Multiple Wireless Station)**
- **User Defined Configuration from server (Wireless name, password and to epprom)**
- **Low Energy**
- **Fast Responsive (<300ms)**

4. CONCLUSION

As a result, this project provided us to taking attandance without error and quick response. Also quick acces to student attandance.

6. DISTRIBUTION OF DUTIES

Mahmud Sami Ünlü:

- Determine the hardware and PCB design .

- Design algorthim, and apply to C language

- Optimise the power consumption, protocol.

Ramazan Polat:

- Website stuff.

Muhammed Kanlıdere:

- Website stuff.