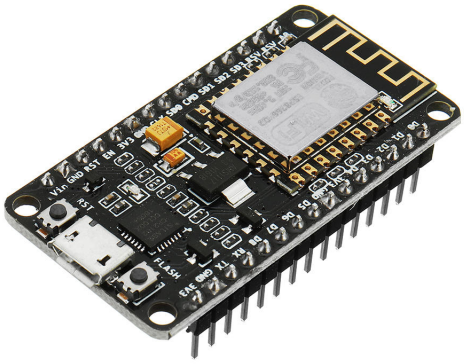
HO CHI MINH CITY UNIVERSITY OF TECHNOLOGY

Report Assignment: APPLICATION OF ESP8266 NODEMCU v1.0



Lecturer:
NGUYEN TRAN HUU NGUYEN

Course:
HARWARE LAB CODE

June 11^{th}, 2019

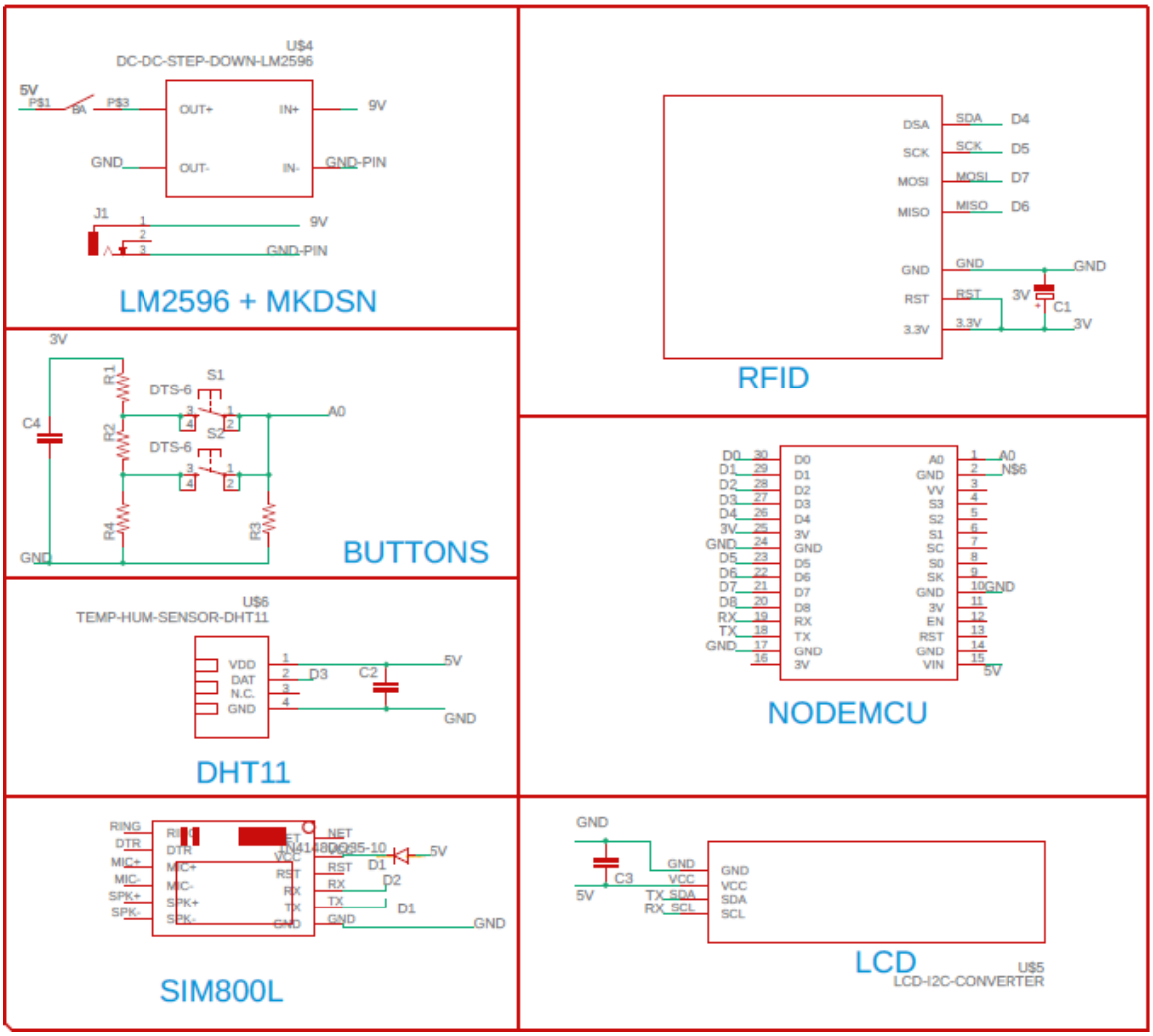
GROUP MEMBERS

NAME	*ID*
NGO QUI THU	1652595
NGUYEN HOANG LONG	1752324

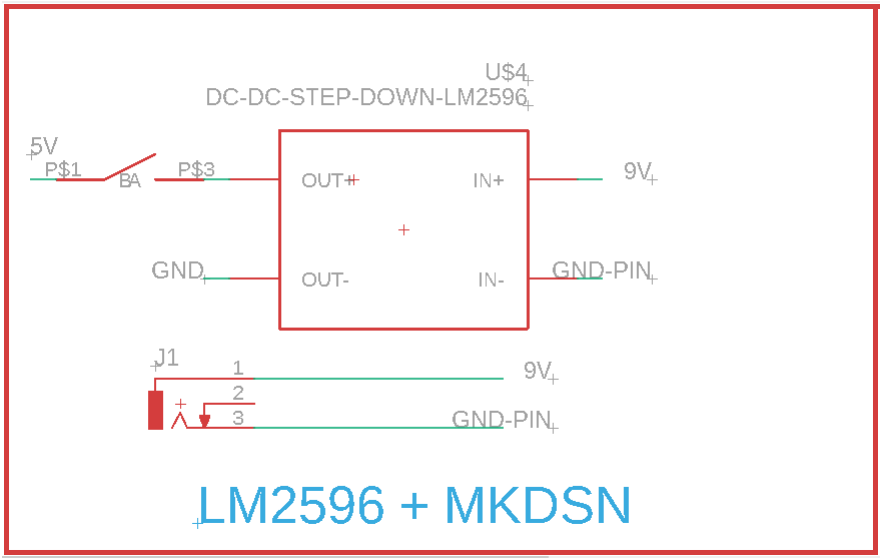
Contents

1 Schematic

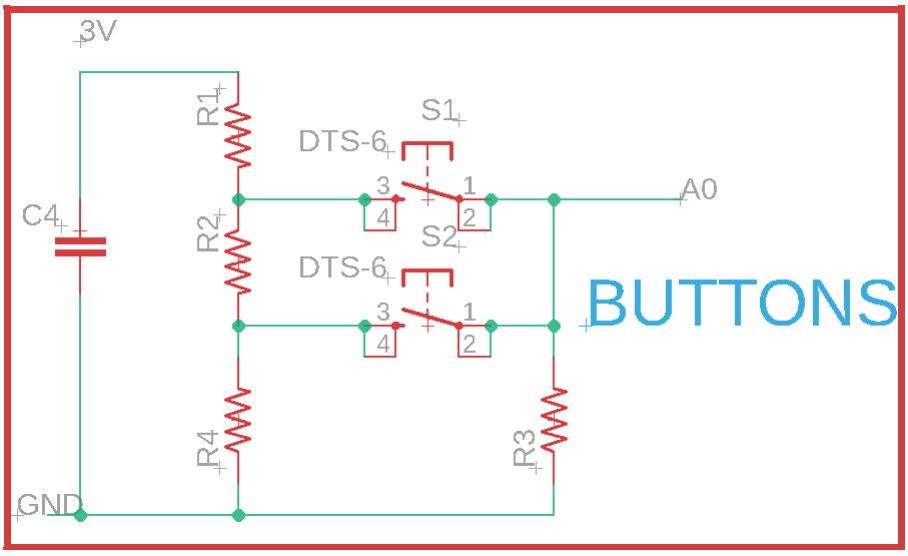
1.1 Schematic of all components



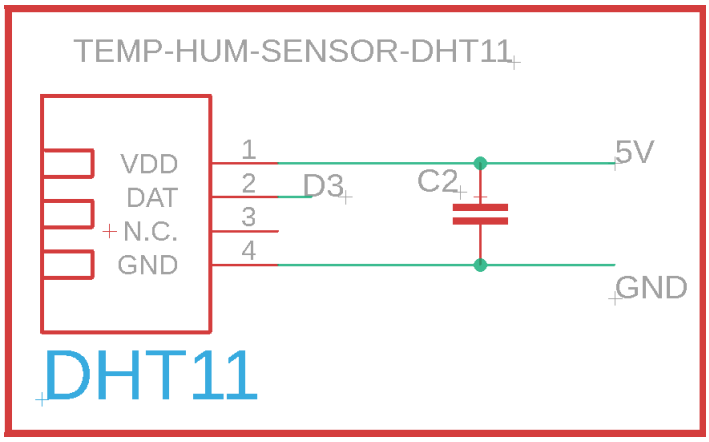
1.2 Schematic for supply power



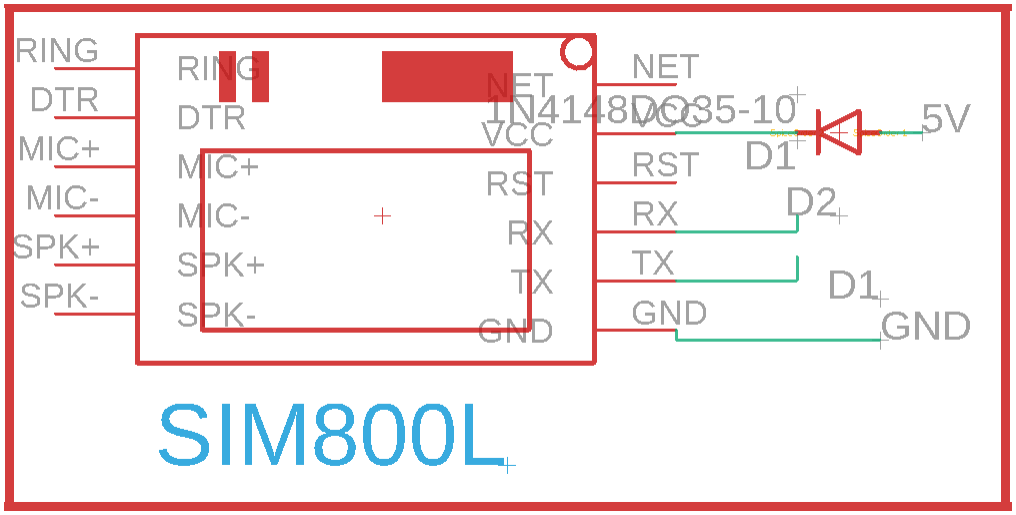
1.3 Schematic for buttons



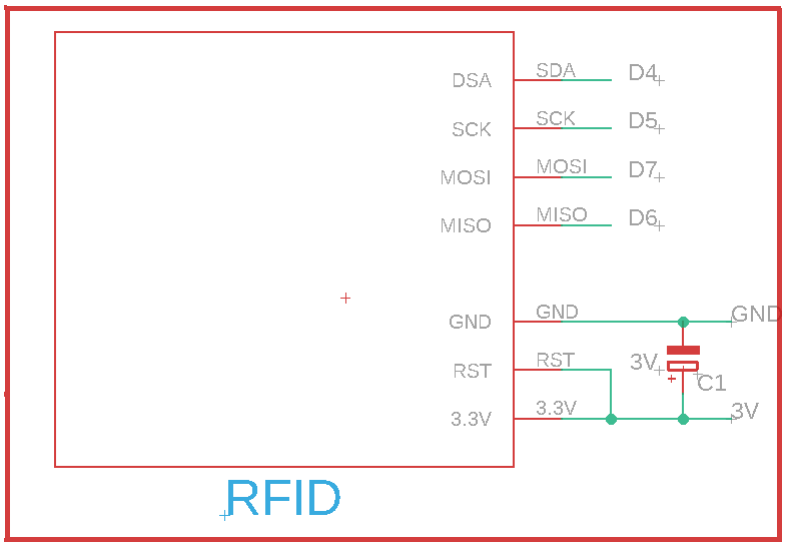
1.4 Schematic for DHT11 sensor



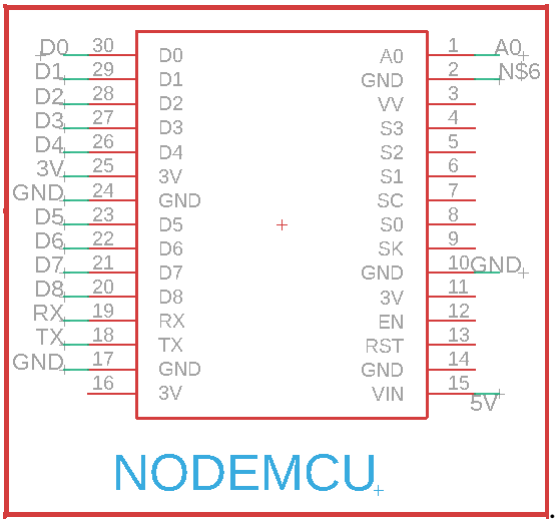
1.5 Schematic for SIM800L



1.6 Schematic for RFID

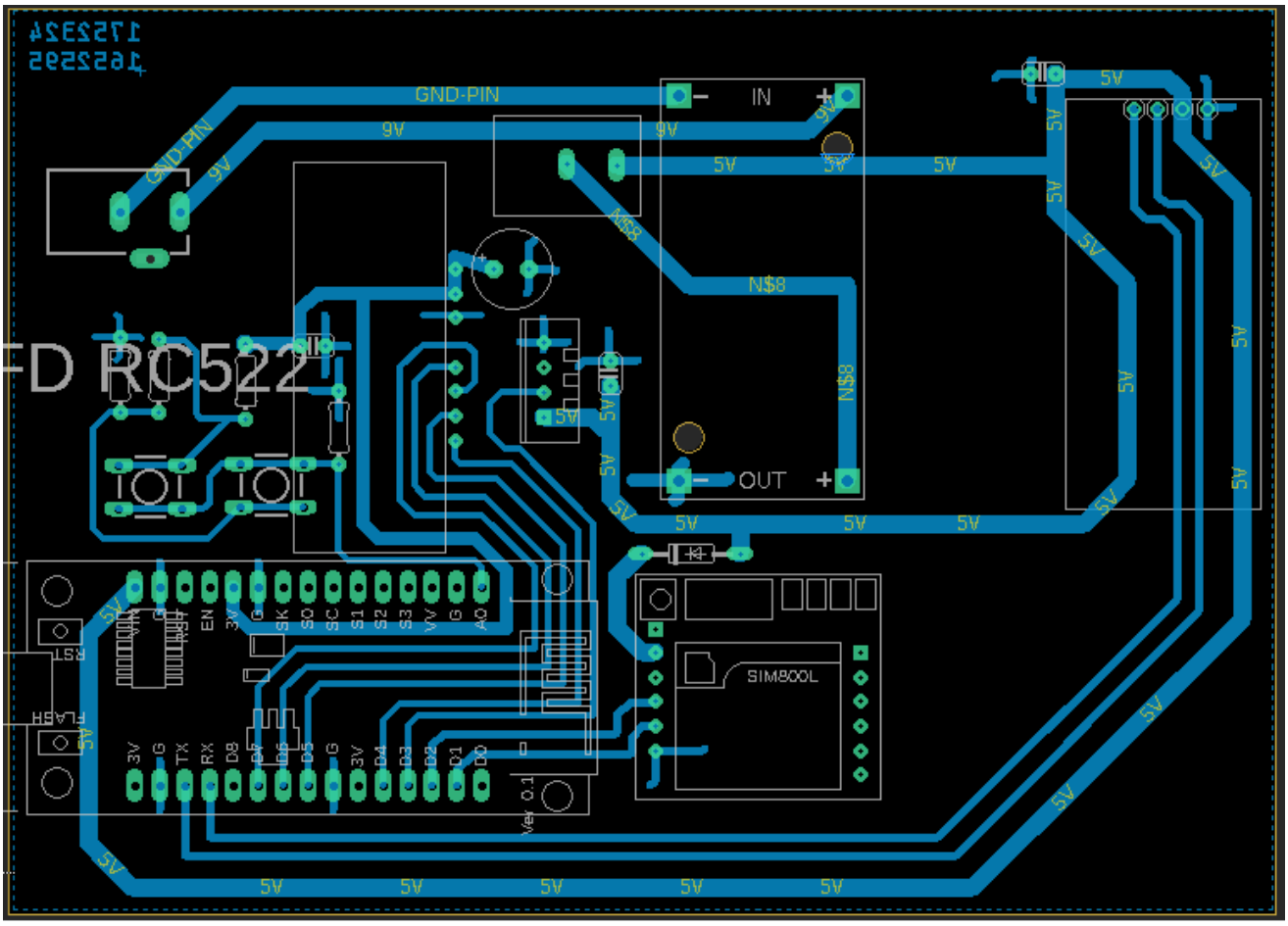


1.7 Schematic for NodeMCU

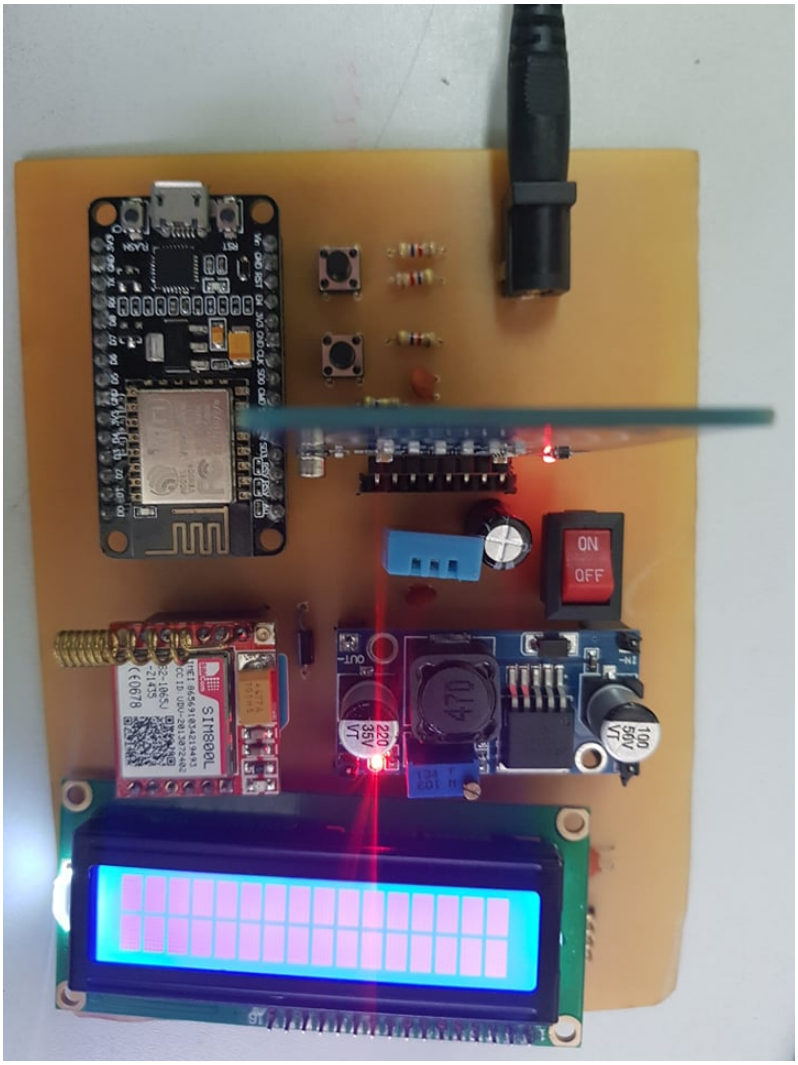


1.8 Schematic for LCD

2 Board



3 PCB Implementation



4 User manual

4.1 Connection

- The system will automatically connect to Wifi in 10 seconds and Server 10 seconds.
- If the connection fail, the system will continue until user want to reconnect.

4.2 Login and Features

- After connect Wifi and Server, the system will request user to insert ID card to log in the system, there is total 4 different actions that normal user can work with and 3 features only admin accept.
- There are 2 buttons, one scrolls down the menu of features and one selects the features.
- The is a red button to turn on and turn off the system, the source requires is 12V.
- The system can be affect by outside condition to work with Server and Connection.

The table below show 7 features of the system:

Features	Name	Description	Note	User
1	SHOW DATA	Show current Temperature and Humidity base on DHT11	May have signal inferences	All users
2	SEND SMS	Send current Temperature and Humidity to Admin phone		All users
3	INSERT CARD	Insert new user to FLASH memory of NodeMCU, keep permanent until admin delete it		Admin only
4	DELETE CARD	Delete a card		Admin only
5	CLEAR CARD	Delete all user except admin		Admin only
6	UPDATE DATA	Update current Temperature and Humidity to MQTT server, new data can be displayed on mobile phone	Require Wifi Connection and Server Connection	All users
7	LOG OUT	Logout the current account, start new log in ID		All users

4.3 Guide

1. Turn on the system and wait until Wifi and Server connected or maximum 20s.
2. Insert your ID.
3. Using button to select desired features.
4. Turn off or log out the system.

4.4 Github

https://github.com/quithu165/NodeMCU_Project.git

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