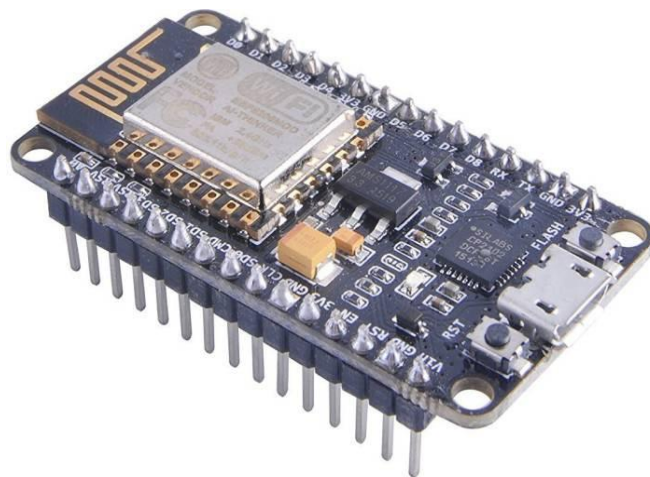# HO CHI MINH CITY UNIVERSITY OF TECHNOLOGY

Report assignment: Application of ESP8266 NodeMCU

Lecturer:
NGUYEN TRAN HUU NGUYEN

Course:
Computer Harware Lab

June 12th, 2019

GROUP MEMBERS

NAME	ID
Ngo Nguyen Thuan	1752525
Nguyen Huu Trung Nhan	1752392

Contents

1 Schematic

1.1 Schematic for supplies power

1.2 Schematic for buttons

1.3 Schematic for SIM800L

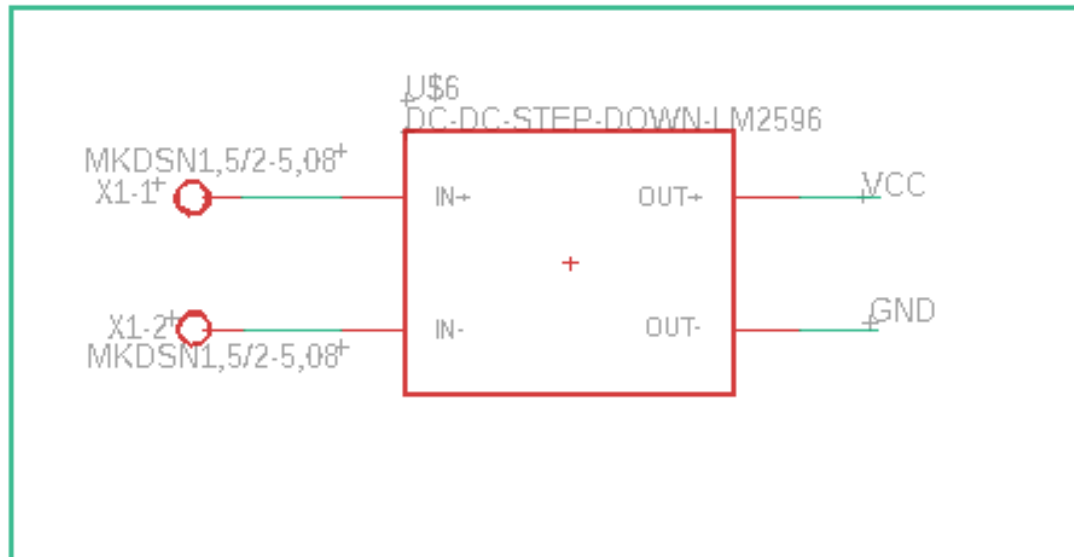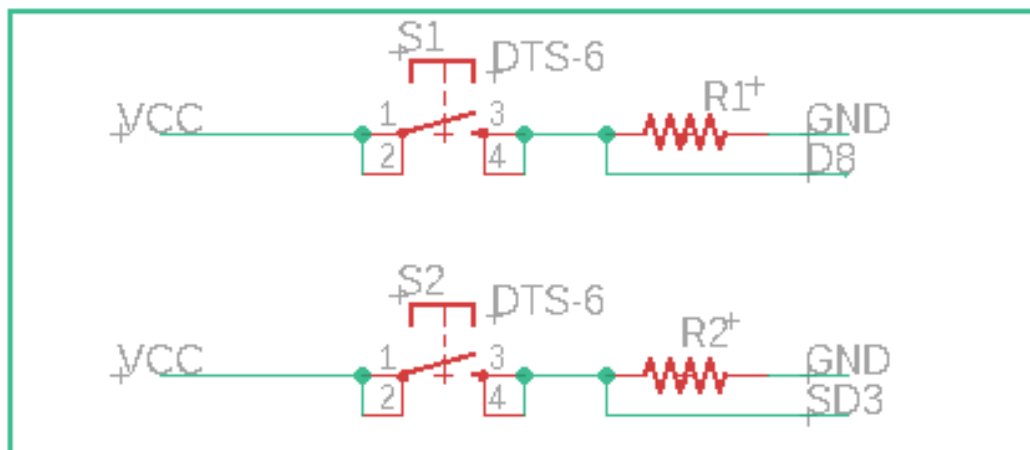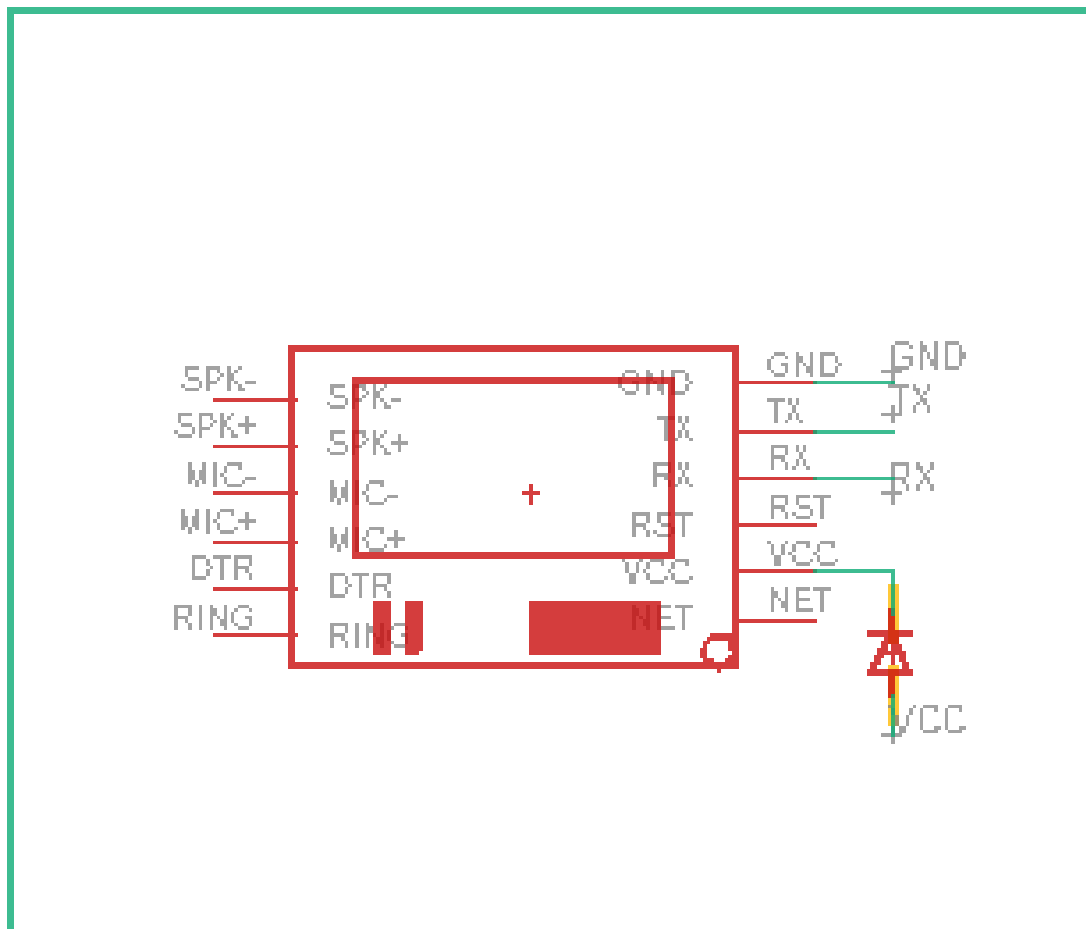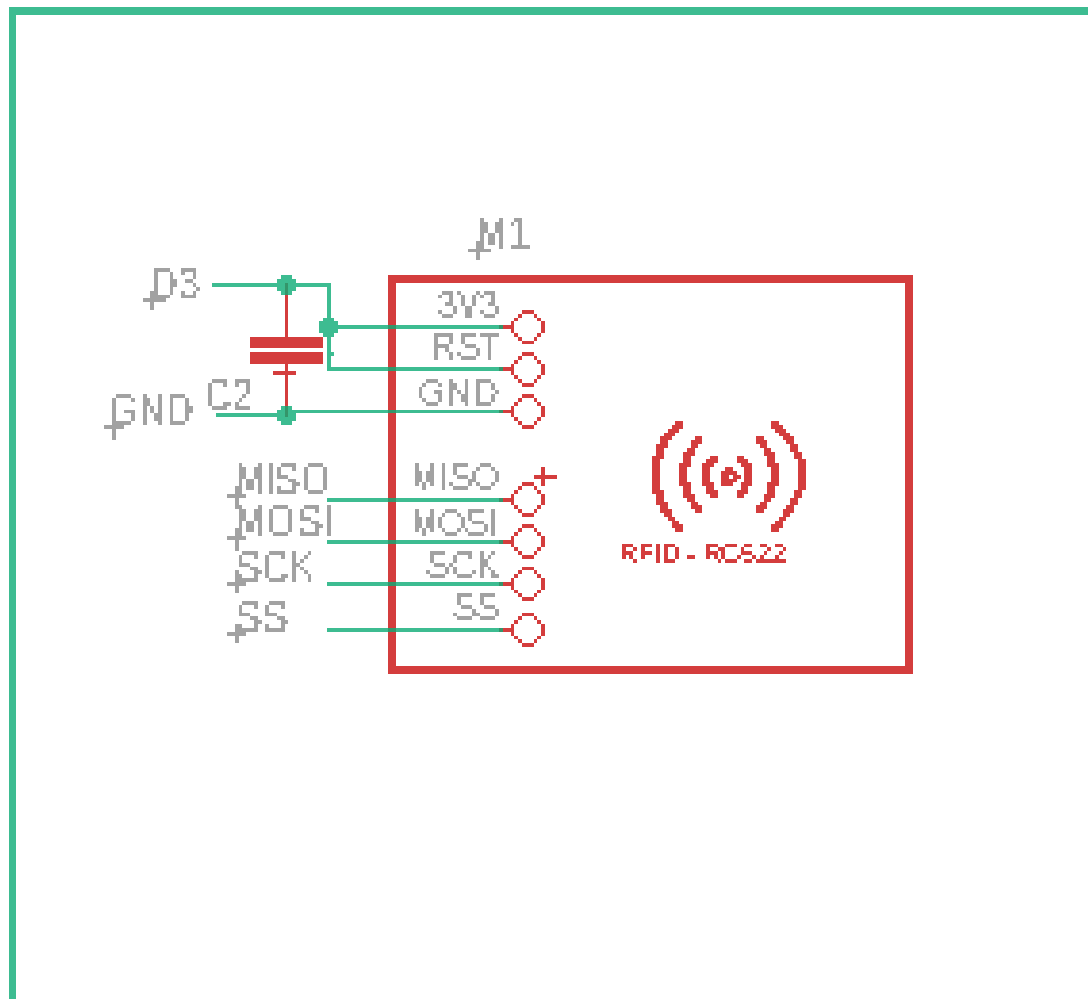## 1.4 Schematic for RFID

1.5 Schematic for LCD

```
I2C_LCD   U$7

                        SCL   J1.4    SCL
                        SDA   J1.3    SDA
                        VCC   J1.2         VCC
                        GND   J1.1
                                         ╪ C1
                                           GND
```
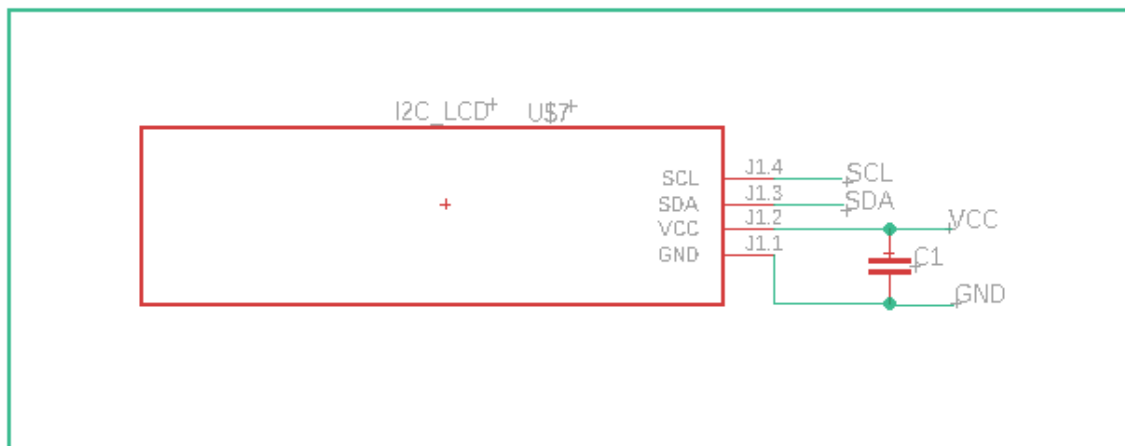
1.6 Schematic for NodeMCU

```
        1    A0              D0    30
GND     2    GND             D1    29    TX
        3    VV              D2    28    RX
SD3     4    S3              D3    27    DAT
        5    S2              D4    25    SS
        6    S1              3V    25    D3
        7    SC              GND   24    GND
        8    S0              D5    23    SCK
        9    SK              D5    22    MISO
GND    10    GND             D7    21    MOSI
       11    3V              D8    20    D8
       12    EN              RX    19    SCL
       13    RST             TX    18    SDA
GND    14    GND             GND   17    GND
VCC    15    VIN             3V    15    D3
```
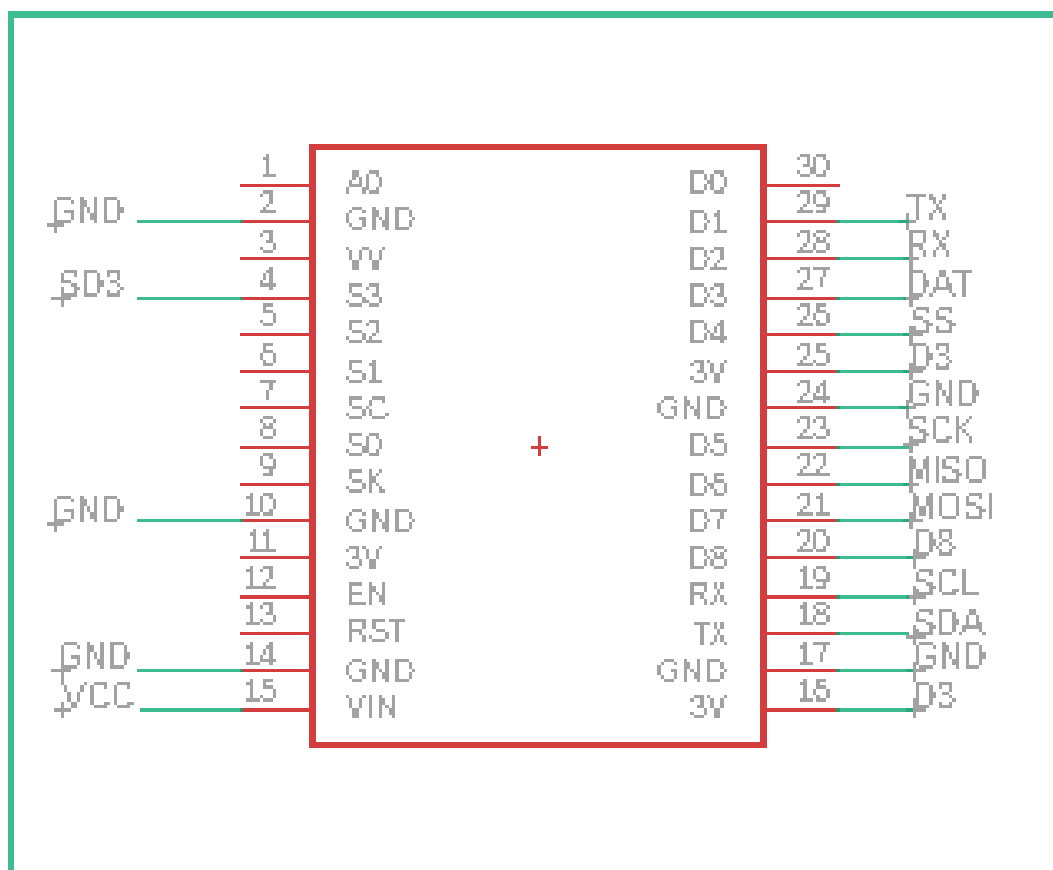
1.7 Schematic for DHT11 sensor
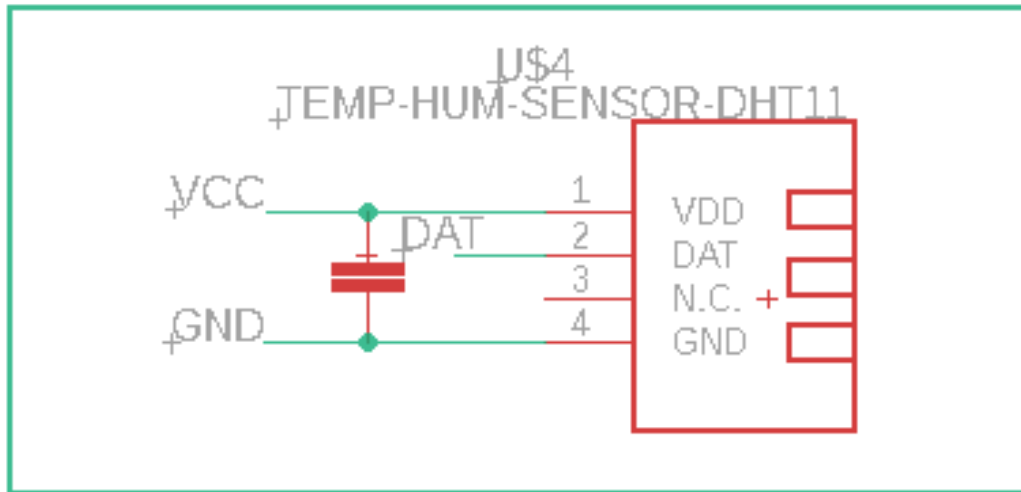
2 Function

Our program has five main functions:

- Show temperature and humidity

- Send messages

- Add new ID keys

- Delete existed ID keys

- Exit program

3 Instruction

Firstly, we must use core key to log in to our board. We have two buttons: 1 for scrolling down and 1 for selecting.

First function: When we select, it will show us the temperature and humidity on LCD. Furthermore, we also send the data of temperature and humidity to one app on our phone. When we press the selecting button, the data will be updated and sent to phone and LCD.

Second function: when we press the button, the message will send to the phone which we force to. And the content of message is written before that. When sending success, the LCD will show us "success".

Third function: We design the system can add 10 ID keys at most. After adding, we can use those keys to log in the system in the beginning. Specially, the core ID key can't be added and ID keys which were added before also can't be added because they have already existed in the system.

Fourth function: We can delete existed ID keys in the system. Furthermore, we can't delete the core ID key and ID keys which have not been added to the system.

Fifth function: We log out the system and let the system be in rest.